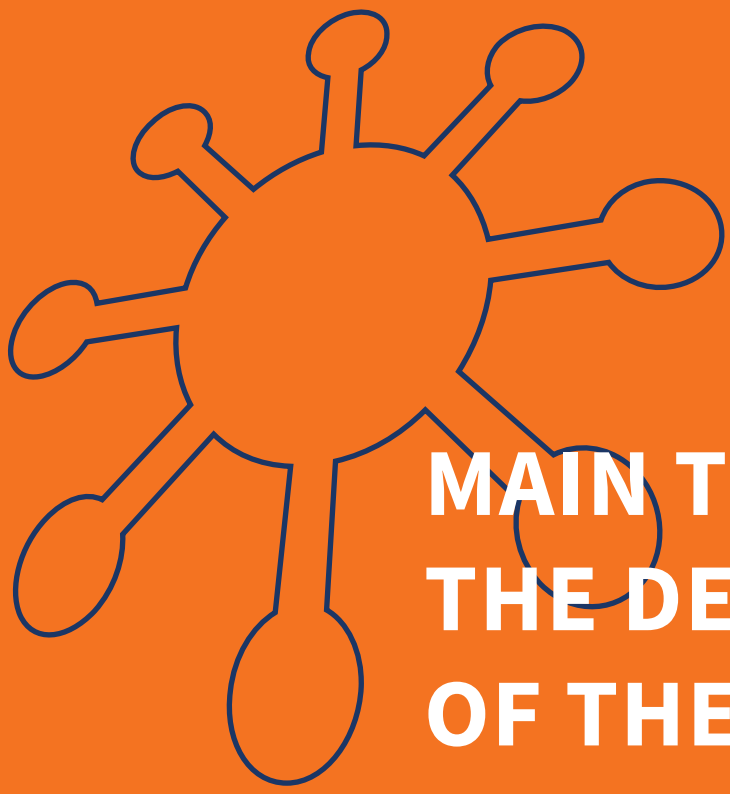


MAIN TRENDS IN THE DEVELOPMENT OF THE SOFTWARE INDUSTRY IN RUSSIA: ATTRACTING INVESTMENTS AND ENSURING TECHNOLOGICAL SOVEREIGNTY

MAIN TRENDS IN DEVELOPMENT OF THE RUSSIAN SOFTWARE INDUSTRY

Alexander Glazkov
CEO, Chairman to the Board of Directors, Diasoft

There are many specific features in development of software for financial services companies. As a leader of this industry, we are observing the following key trends:

— The need to substitute IT products of the foreign vendors that have left the Russian market. Financial institutions have to support their IT infrastructures under the following conditions: 1) termination of support services for previously installed IT solutions of foreign vendors; 2) shutdown of cloud services; 3) blocked supplies of foreign spare parts; 4) high risk of hacks on western systems. Some organizations have taken a wait-and-see attitude and are moving their previously installed solutions from western vendors into isolated network segments. However, the environment and products are changing, and digital transformation requires building up a continuous production process around IT products, without any downtimes. This is why Russian vendors have focused on development of completely import-independent IT solutions.

— Transformation and modernization of core banking systems. Digitalization in banking first of all means moving products and services to digital channels. Core banking systems of the previous generation were designed to support operations at bank branches and are not always fit to process requests from digital channels. With active development of remote customer service channels, the transaction load on accounting systems has increased significantly, and the capacity of core banking systems that were implemented 10 to 15 years ago has become insufficient. Besides, banks target to automate their routine operations, which excludes involvement of employees in back-office business processes. New-generation accounting systems are mostly built on the microservice architecture. This ensures high performance, scalability and reliability of IT systems, non-stop access to financial products, and the ability to independently update individual components without interrupting business operations.

— Growing interest in data processing technologies. Requirements to business manageability are constantly increasing, while we can manage only what we can measure. We need to drive value from data: not only to accumulate, but also to correctly process, structure and check validity of the data in order to make data-driven decisions and quickly respond to changing market conditions. I am speaking not about big data, but rather about digital solutions for applied use of data, namely about situation and analytical centers, modernization of operational reporting systems, etc.

— Conscious approach to creation of the IT architecture. For banks, digital transformation tasks have become much more complicated. Banks mainly focus on reducing the time-to-market of new products and correcting mistakes that were made during implementation of their IT architecture. Large banks also increase their focus on software development with the use of low-code tools, because there are no ready-made universal IT solutions that can fit all participants of the market.

3.1. Attracting investment

RUSSOFT began to pay attention to the problem of investments in the framework of its annual research in 2011. First of all, during the surveys, it was possible to determine the share of companies with external financing, as well as to clarify plans to attract investments in the next 2 years.

The fact that the lack of investment is one of the most serious problems of the industry was confirmed by the results of a survey conducted in early 2017 as part of the SAP-initiated study "Prospects for Russian IT Development in the Global Market." This study showed that for 52% of software companies, the growth of foreign sales is restrained by an insufficient marketing budget, and for 33% – by a lack of funds for the development of solutions that can be competitive in foreign markets. Moreover, software companies primarily lack "long money" – investments for 3-5 years.

The attraction of loans requires material collateral that software companies do not have due to the virtual nature of production, and therefore, usually companies need venture capital or access to the stock market. But even there, the attraction of investments is hindered by strict regulatory restrictions.

In 2017 changes in the questionnaire made it possible to estimate not only the share of companies with external financing but also the approximate volume of attracted investments. However, when extrapolating data from surveyed companies throughout the industry for four years (when summing up 2016-2019), there were too many fluctuations that in reality could hardly have taken place. Therefore, such extrapolation was not justified. This was especially true for the results of 2019, since in 2020 an insufficient number of companies (72) participated in the survey due to the pandemic, while the number of participating companies in previous years was 150-160.

Another change was introduced in the questionnaire in 2020 – respondents were able to indicate the total number of available financial investments and their need for investments. It was possible to use this addition to calculate total investments in the entire industry only in 2021 due to the participation in the survey of a record number of software companies (206). Such activity of respondents allows making careful estimates of the volume of investments in the software industry.

Calculations showed that the volume of external financing of software companies in 2021 numbered to approximately RUB 21 billion (USD 290 million), and the total investment – RUB 96,5 billion (USD 1.34 billion) with a demand estimated at RUB 260 billion (USD 3.6 billion).

For previous years it is possible to focus only on relative values, namely: the share of external investments in total investments, the share of actual investments in the number of investments required, the expected change in the current and next years.

If the same methods of extrapolation of survey data (by total revenue) are used, it appears that in 2020 there was a significant increase in both total investment and external financing.

According to the results of 2021, the total volume of investments in the software industry numbered to RUB 232 billion (USD 3.15 billion), which is 2.4 times more than in 2020. The need for investments was satisfied by 58%. This figure also increased significantly compared to 2020, when it was 37%.

External sources of financing account for 26.4% of all investments in 2021 (22% a year earlier). In absolute terms, these sources provided RUB 61 billion (USD 0.83 billion) in 2021, which is 2.9 times more than in 2020.

The volume of investments in the software industry increased due to the fact that the range of enterprises with investments significantly expanded – from 31% in 2020 to 51.5% in 2021 (from all software development companies surveyed by RUSSOFT). The share of companies that attracted external financing showed even bigger growth – from 7% to 21%. At the same time, each company also significantly increased the volume of its investments – from RUB 22 million to RUB 52 million (external – from RUB 4.5 million to RUB 13.6 million). The average was calculated for all companies surveyed. Some of them may not have given information about the investment, not because there were no investments, but because they did not want to report them.

The sharp increase in investments revealed as a result of the annual survey of software companies conducted by the RUSSOFT Association is confirmed by the research performed by the Moscow Innovation Agency, according to which in 2021 venture investments in Moscow set a historic maximum, increasing their volumes by more than three times compared to 2020: USD 1794 million against USD 536 million. As in previous years, the capital of Russia became the absolute leader in terms of venture capital investments in the country, occupying more than 70% of the market. In 2021, the growth of the Moscow market numbered to 235%, while the Russian market increased by 160%.

However, it turned out that about one in three transactions with a Moscow-based startup (registered in the capital) were made in foreign jurisdictions. At the same time, the share of such transactions in

the total number increased gradually: from 28% in 2019 to 33% in 2021. The attractiveness of Russian jurisdiction for venture market participants remained not very high due to its opacity and excessive regulation.

In this context, foreign financial markets were more attractive to entrepreneurs. In addition, the registration of a legal entity and the relocation of the company were often a requirement of a foreign investor. If a startup aimed at the development of a global business, this requirement had to be met. As a result, Russia recorded mostly early-stage transactions in 2021, and most major Round B and C + transactions were made in foreign jurisdictions, and their share grew steadily.

In the Moscow venture market, foreign investment for the first time in history exceeded the number of capital invested by Russian investors. The inflow of foreign investments became the driver of growth in the venture market as a whole. In 2021, the volume of foreign investments in Moscow startups grew more than nine times.

In 2021, private funds became the main drivers of market growth, unlike in 2020, when corporations played this role. The volume of investments of private funds in 2021 increased more than six times, and these investments accounted for more than 70% of total investments. Private funds increased capital, which allowed them to make transactions in excess of USD 10 million, the participation of Russian funds in joint transactions with foreign investors increased, and new "serial" funds appeared created by management companies operating portfolios of several funds.

Corporations also continued to build and develop their ecosystems (acquiring companies and embedding them in their business model) and actively invest in startups, although their share in total investments decreased compared to 2020 against the background of a sharp increase in investments of venture capital funds.

Investments in business software (B2B) increased significantly. First of all, investors invested in data mining developments that allow them to make balanced and grounded management decisions. Investments in low-code or no-code platforms made by investors also showed growth, thanks to which it became possible to create proprietary software products even not having programming skills.

The analysis of public reports also indicates a significant increase in investments in 2021 and, in particular, in external financing (a twofold and a threefold increase, respectively). More information on this topic is presented in the following section.

It is very difficult (almost impossible) to accurately calculate absolute values when accessing the volume of investments in the high-tech field or the size of the venture market. The variation of estimates depending on the method used is traditionally very wide. At the same time, if various sources indicate the growth by a several-fold factor, and if there were no obvious signs of a sharp increase in investment activity in previous years, then it is quite possible to talk about the investment boom in the software industry identified in 2021. Herewith, this boom started in 2020 (probably in the second half of the year). RUSSOFT determined the increased activity of investors according to the results of the survey conducted in 2021. However, analysts of the Association were in no hurry to draw unequivocal conclusions about the start of the investment boom, offering to wait for the results of 2021. As a result, our assumption was confirmed that the problem of investment deficit was solved.

3.1.1. Top events related to investments in the hi-tech sector

In addition to the results of the annual RUSSOFT survey of software companies, the level of investment activity in the industry allows performing the analysis of publications related to investments in the high-tech sector of the Russian economy. This analysis is performed both for events characterizing the situation as a whole, and for reports on the fundraising activities of specific enterprises.

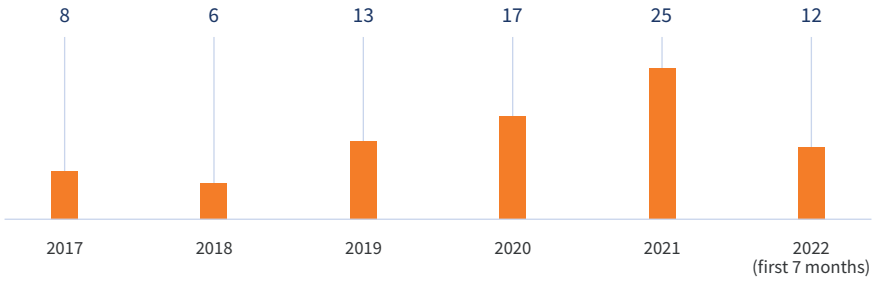
The number of reports on significant events related to investments in the high-tech sector of the Russian economy increased sharply in 2019. This growth continued in 2020-2021. No growth may be traced at the end of 2022 due to the high uncertainty in the entire Russian economy that arose as a result of the start of a special military operation in Ukraine. However, some pause in the number of publications occurred only during the three spring months.

Since the beginning of 2021, most reports were related to the allocation of funds from the state budget (in the form of subsidies, grants, direct funding). Of the total number of such reports (15), 8 were published in 2021 and 7 during incomplete 2022. 11 news were found on the creation or expansion of venture funds (all in 2021). Fundraising by way of IPOs or by additional issues of shares (or bonds) with placement on Russian stock exchange houses was reflected in 6 news reports (3 in 2021 and 2022).

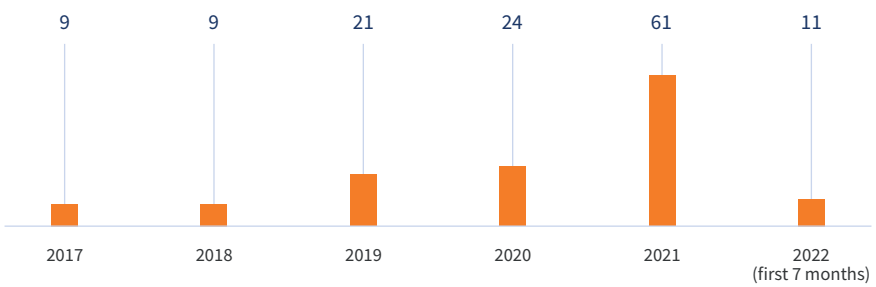
In previous years, some news offered hope for investment funds attraction from abroad. Such news appeared before the start of a special military operation in Ukraine, but, apparently, the announced plans for international cooperation in the next 2 years will not be implemented. It is still possible to rely on foreign financing from companies and investment funds of "friendly" countries (primarily Chinese), but this financing is unlikely to be large-scale. Consequently, in the foreseeable future software companies and other enterprises in the high-tech sector of the country's economy will have to rely only on domestic sources of investment. However, it can be assumed that it will be not the availability of financial means for investments in the hi-tech sector acting as the main limiting factor, but the availability of human resources.

"Friendly" countries can help admit Russian software companies to their markets, which will allow these companies to have more of their own funds that can be used to develop solutions and business as a whole.

The number of reports on significant events related to investments in the high-tech sector of the Russian economy in 2017-2022



The number of news reports on investments attracted by specific high-tech enterprises in Russia in 2017-2022



The number of news on investments attracted by specific companies allows judging the significant increase in investment activity in 2019 and the real investment boom in 2021. To add up the volumes of investments exceeding USD 1 million indicated in various publications, then by the end of 2021 those will be USD 736 million (RUB 54.2 billion). This is about three times more than a year earlier (USD 251 million or RUB 18,1 billion).

The total volume of investments with an investment number of less than USD 1 million per company can be estimated based on the results of the survey. If you extrapolate the obtained data on the companies surveyed throughout the industry, you come to the total growth of volume of such investments from RUB 38 billion in 2020 to RUB 73 billion in 2021 (almost 2 times). If you allocate only external financing, then the growth will be even more significant – from RUB 10.7 billion to RUB 34.7 billion (more than 3 times).

Starting from the beginning of 2021 commercial investment funds and private investors (companies and individuals) were most often mentioned as a source of investment. 53 corresponding news reports appeared during the period of one year and 7 months (44 in 2021 and 9 in 2022). State structures acted as a source of financing 7 times (6 in 2021 and 1 in 2022). Three reports on the placement of shares or bonds on the stock exchange in Russia were recorded (all of them relate to 2021, and the same number was recorded in 2020). Foreign investors were mentioned 10 times in 2021 and 2 times in early 2022.

The inter-industry capital flow became noticeable (investments in the IT sphere made by investors representing other industries). Such flow-over is reflected in 4 news reports in 2021 (not more than one report was registered in previous years).

Judging by the part of available news reports, you can identify the areas that are of interest to investors. In terms of the number of mentions during 2 incomplete years, the first place was occupied by Internet projects and cloud services (11 news reports). The following areas were mentioned 4 times: "Improvement of office and basic software," "Computer games," "Artificial intelligence" and "Robotization," 3 times – recognition systems (text, images, voice), one each – "Videoconferencing," "Backup," "Virtualization," "Medtech," "Solutions for the tourism industry," "Solutions for agriculture," "Internet Solutions for the oil and gas industry", “Internet of Things”, “Blockchain”, “Unmanned Aerial Vehicles”, “Enterprise Resource Planning”, “Information Security”.

It can be assumed that Information Security forms one of the most interesting areas for investors. However, enterprises representing this area of activity are very reluctant to disclose data on both their revenues and attracted investments.

In 2020, investors were most attracted by the automation of various types of activities (tourism, production, management, payments, etc.). Robotization and artificial intelligence were in the second place, and recognition systems (objects, faces, emotions, texts, etc.) occupied the third place. Office software and information security systems occupied the third and fourth places, respectively.

In the upcoming years big data technology will be actively developing within the fintech industry. These solutions will be foundation for advanced analytics in order to create deeply personalized offers. One of the projects co-developed by Innotech is a geo-platform which resorts AI to study the data from over 180 geo-layers. By bringing together anonymized information, the system identifies patterns to match the customers' and businesses' needs. Another trend deals with alternative payment mechanisms for international transactions. For example, amid the sanctions, the digital ruble can become an efficient transnational payment method.

Dmitry Kharitonov
CEO of Innotech Group

INNOTECH

3.1.2. Availability of investments in companies with different business models

Shares of surveyed companies with available investments in 2021 by categories

	Any investments	Attracting external funding
All companies surveyed	51.5%	21.1%
Size of companies		
Less than RUB 375 million turnover	49.6%	16.6%
More than RUB 375 million turnover	57.5%	32.5%
Business Model		
Products	50.5%	20.8%
Services	52.9%	22.1%
Share of exports		
No export	54.2%	20.8%
Less than 50%	50.3%	19.7%
More than 50%	58.3%	29.2%
Head Office Location		
Moscow	62.8%	25.5%
St. Petersburg	41.0%	20.5%
Other cities	49.4%	18.5%

At any breakdown of companies into categories, at least 41% of respondents reported on the existing investments and at least 16% – on the attraction of an external source of financing. The spread depending on the type of companies appeared to be not very wide. The companies with an export share in turnover of more than 50%, with a turnover of more than RUB 375 million, as well as enterprises with Moscow-based headquarters can be distinguished in terms of the availability of investments (including external financing). The size of the company has a particularly strong effect on external investments attraction.

The forced redrawing of the market, necessity to reduce the dependence from foreign software, rapid rebuild of the customers IT infrastructure, turbulence in the labor market: these are just fraction of the challenges that software developers had to face in 2022. Despite the difficulties, one of the main acquisitions of this time is the settlement of a new quality of relations between customers and software producers, which can become the basis for the development of the industry in long term.

Elena Bocherova
Executive Director
of Cyberprotect

CYBER PROTECT

3.1.3. Plans of software companies to attract investments and these plans implementation

The data of the annual survey allow RUSSOFT to determine not only the approximate volume of investments, but also the share of companies that would like to have external financing, but cannot attract it.

During the period from 2011 to 2018 there were at least 2 times (almost 2 times in one year) more companies that counted on external financing than those that received investments. For example, in conditions when 14% of surveyed companies expected to receive external financing by the end of 2017, in reality the share of investments received was only 6%. Accordingly, the assumption that the need for external financing is many times higher than the number of actual investments has received additional confirmation. Other sources confirmed an equally large gap, but, as a rule, they represented the entire high-tech sector of the Russian economy, or at least the entire IT industry (along with Internet companies).

By 2018, the results of surveys showed that companies began to more realistically assess the prospects of investments attraction. Available opportunities are still significantly overestimated by companies in terms of the volume of expected investments, but no big difference is observed any longer with relation to the forecasts on raising funds from external sources. For example, 11% of companies surveyed in 2017 and 12% of companies surveyed in early 2018 were counting on investments in 2018. The share of actual recipients is fully consistent with the forecast – 11%.

In 2020, the difference was again quite large: 12% of companies planned to attract external investments this year, but in fact only 7% of companies have actually attracted investments. However, there are some signs of recovery. Firstly, the total volume of investments (jointly with own funds of companies and the funds of their founders) has grown significantly. Since the survey performed in spring 2020, which was supposed to allow to summarize the results of 2019, did not turn out to be full due to the outbreak of a pandemic with a very high level of uncertainty, no direct comparison of year 2019 data with year 2020 data was conducted during the questionnaire survey. Nevertheless, an assumption was made about a significant increase in investments, which assumption must be checked by the end of 2021.

Secondly, new sources of financing appeared – the placement of shares and bonds on Russian stock exchange houses, as well as the provision of grants and subsidies by state development institutions. These sources existed before, but it was in 2020 that they started to work in such a way that they started to cover a fairly wide range of companies.

In 2020 respondents received the opportunity to indicate their total investment volume and their need for investments. Although due to the

Share of companies that have attracted or plan to attract external financing

Year of survey	in the previous year	in the current year	next year
2011	9%	16%	18%
2012	9%	24%	26%
2013	12%	25%	25%
2014	7%	18%	27%
2015	7%	22%	24%
2016	10%	19%	23%
2017	11%	14%	11%
2018	6%	12%	10%
2019	11%	13%	16%
2020	6%	12%	27%
2021	7%	16%	18%
2022	21%	34%	—*

* – due to the high uncertainty in spring 2022, as a result of the start of a special military operation in Ukraine, it was decided not to ask the company about their plans for the next year

pandemic it was not possible to conduct a full-fledged survey, some preliminary conclusions on the new data obtained can be drawn.

A survey with an updated question about investments showed that at the end of 2019, external financing accounted for only about one fifth (18%) of the total volume of investments. Own funds of companies and their owners form the main source of investments in the software industry. At the same time, software developers believe that the volume of effective investments could be 60% more.

Share of companies that invested in their development in 2020, with a separate indication of external investments (forecast for 2021-2022)

	In 2020 (fact)		In 2021 (forecast)		In 2022 (forecast)	
	Investments from all sources	Attracted external investment	Investments from all sources	Attracted external investment	Investments from all sources	Attracted external investment
Less than RUB 64 million	25%	7%	27%	12%	25%	13%
From RUB 64 million to RUB 320 million	6%	0%	8%	3%	10%	4%
From RUB 320 million to RUB 640 million	1%	1%	1%	1%	2%	2%
More than RUB 640 million	0%	0%	0%	0%	0%	0%
Found it difficult to answer	5%	5%	5%	4%	6%	5%
Attracted (plan)	31%	7%	36%	16%	36%	18%

Share of companies that invested in development in 2021, with a separate indication of external investments (forecast for 2022)

	In 2021 (fact)		In 2022 (forecast)	
	Investments from all sources	Attracted external investment	Waiting for investments from all sources	Expecting to attract external investments
Less than RUB 75 million	40%	19%	32%	25%
From RUB 75 million to RUB 375 million	8.8%	2%	16%	6%
From RUB 375 million to RUB 750 million	2%	0%	2%	2%
More than RUB 750 million	1%	0%	2%	1%
Found it difficult to answer	9%	11%	12%	13%
Have (plan) investments	52%	21%	52%	34%

The results of 2021 in terms of the comparison of the forecast with actual results obtained were unexpected. Only 16% of respondents expected external funding in the "current year" (2021), but in fact external funding was received by 21% of respondents. 36% of surveyed companies planned to receive investments from all sources, including their own funds, and 52% of respondents received investments in 2021. Consequently, there was a situation where investments became available to many companies that did not even plan them. This can be partly associated with the pandemic, which accelerated the introduction of information technologies (especially in the field of remote learning, work, entertainment), partly with the imports phaseout accelerated due to the sanctions policy (in any case, the need to replace foreign solutions with domestic counterparts has increased sharply).

52.1% of surveyed companies plan to invest in the development in 2022. These data were obtained based on the results of the survey conducted this spring. It was decided not to ask the respondents about their plans for the next year (2023) in connection with the high level of uncertainty that arose in spring 2022 regarding the future of the industry and the situation in the Russian and world economies. Consequently, in 2022 approximately the same number of software companies (the same share) indicated the presence of investment plans as the number of companies having actually attracted investments in 2021.

However, it should be noted that by the end of 2022, 34% of surveyed companies counted on external financing, and 22% of respondents actually received financing in 2021. If we assume that all forecasts are being implemented, then the total investment in 2022 shall grow by 60%, and external financing shall grow by 214%. At the same time, the need for investments (the number of effective investments that companies can theoretically master) still turns out to be 2 times higher than the projected volume of investments (from all sources).

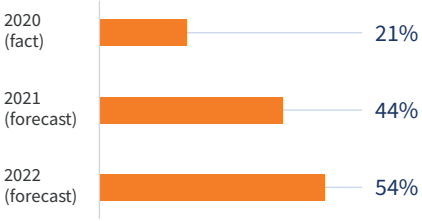
It is difficult to judge how correct the forecasts for 2022 will be until the completion of the next survey of companies in 2023. On the one hand, the need for investments did not decrease, but have increased with a high degree of probability: many urgent tasks occurred related to imports phaseout, and the need emerged to reorient to new markets due to the closure of Western markets for Russian companies. On the other hand, several months were lost due to the fact that the development strategy had to be urgently adjusted in the event of a radically changed situation in the Russian and foreign markets. In addition, some foreign funds could curtail their activities in Russia.

Public reports on investment activity in the high-tech sector of the Russian economy indicate no signs of growth in the first 7 months of 2022. These reports indicated not the growth, but the decrease in the field of investment by the end of the year. Herewith, the conditions for sharing information about plans and attracted investments were not the best in the first half of 2022. For example, foreign investors could completely mask their activities in Russia so that these activities are not noticeable to anyone.

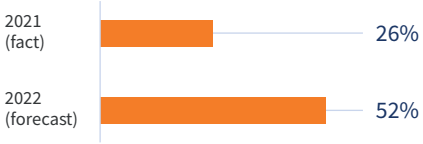
Nevertheless, it is still possible to focus on the expectations of companies, since the survey was conducted within the first months after the start of a special military

Share of total investments (actual in 2020 and projected in the next 2 years) in the volume of required investments (calculated based on the data of the survey performed by RUSSOFT in 2021)

Share of external financing in total investments in 2020 and the next 2 years (calculated based on the data of the survey performed by RUSSOFT in 2021)



Share of external financing in total investments in 2021 and 2022 (calculated based on the data of the survey performed by RUSSOFT in 2022)



operation in Ukraine, which means that respondents should already have taken into account the high level of uncertainty of the situation in their forecasts.

Investments available in 2020 covered only 37% of the companies' demands for financial investments. Based on the estimates of surveyed software companies, it can be argued that they could master more than 2.5 times more investment funds than they could attract. In 2021 this indicator was as high as 58%, and, according to a forecast based on the expectations of respondents, by the end of 2022 it will be 50%.

It is not a fact that in reality, with unlimited sources of investments, companies can master 2-2.5 times more investments than they expect to receive, primarily due to a shortage of personnel (they will be able to expand the staff accordingly only at the account of each other).

A request for a radical change in the financing structure in the industry still exists, although the share of external sources in 2021 has increased. It is difficult to judge how reasonable the expectations are in the current situation of high uncertainty. Most likely, even in the most optimistic scenario, such a powerful increase in external funding is unlikely. Nevertheless, a gradual increase in its share is quite possible considering the high level attention that the government began to pay to the industry. And there is already an increase in external investments.

Historically, the most popular direction of Russian video conferencing software development is the creation of simplified web conferencing products based on Open Source. Less popular and time-consuming approach is the development of classical videoconferencing solutions on the basis of ITU-T international standards. For example, Vinteo company created flagship software in the second segment in 2010, providing a technological "groundwork" for the future. Based on the professional VCS product, it makes it possible to build an extended ecosystem of solutions and adapt them to the tasks of any category of customers - B2B, B2G and B2C.

Boris Popov
Director of Business Development at Vinteo

Vinteo
VIDEO COMMUNICATION CORE

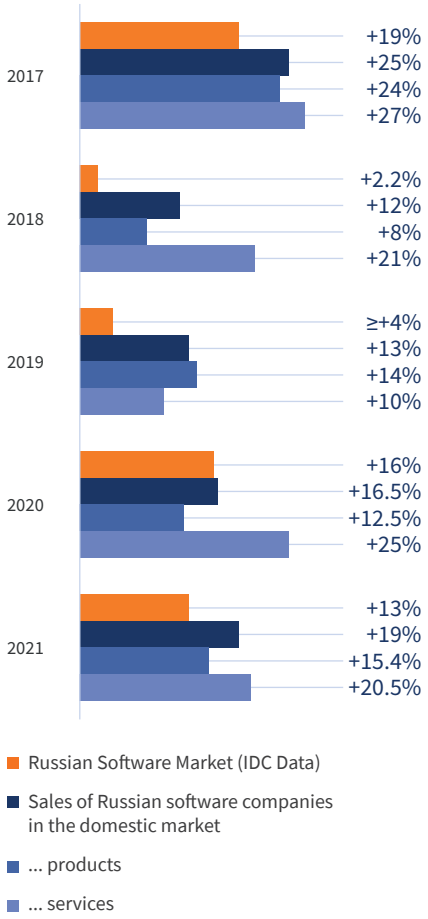
3.2. Ensuring technological sovereignty and imports phaseout

The process of imports phaseout in the field of software has been going on in Russia since about 2000, when the first solutions that have certain advantages over foreign counterparts began to appear on the Russian market. For a decade and a half, the main drivers of this process were as follows: 1) the emergence of new domestic software products; 2) improvement of existing Russian solutions; 3) the high cost of products offered by Western companies. At the same time, as a result of the devaluation of the ruble (2008-2009 and 2015), there was a sharp increase in the cost of foreign solutions in Russian currency for Russian buyers.

The fight against piracy also played a role, since the state forced enterprises (primarily small ones) to pay for those software products that they earlier were using for free. At the same time, users often installed pirated copies with redundant functionality. In some cases, such increases in costs have prompted the search for a cheaper domestic alternative. However, the transition to Russian solutions as a result of the fight against piracy did not become a mass phenomenon. More often, to legalize their pirated software, companies agreed to pay foreign vendors, sometimes switching to cheaper versions of products from the same vendors.

Until 2014 the imports phaseout policy if was announced by the State, but actually was not pursued. It can be assumed that the exception was only especially secret areas, but there is no information in the public domain about what software was used in them. Most likely, the imports phaseout policy had nothing to do with such areas, since initially only tested domestic solutions were used at secret facilities, the main feature of such solutions being not the functionality, but such characteristics as reliability and security.

Сравнение показателей роста российского рынка ПО и продаж российских софтверных компаний на этом рынке (в долларовом измерении)



Another driver appeared after 2014 in the process of imports phaseout - the sanctions policy of Western countries, affecting individual enterprises, entire industries and even higher educational institutions. Enterprises, government agencies and educational institutions, to which Western vendors refused to supply their solutions and to provide their technical support, were forced to actively engage in the purchase and installation of domestic solutions replacing foreign ones (in extreme cases, freely distributed software, the presence of bookmarks in which cannot be excluded).

The government of the Russian Federation had to intensify its activities in order to respond both to the sanctions already imposed and to those that may appear in the future. In June 2015, the President of the Russian Federation signed the law "On Information, Information Technologies and Information Protection," which provided for the creation of the Register of Domestic Software. Special services began to demonstrate special interest in the software used at certain strategically important enterprises. Nevertheless, in general, sanctions themselves were a more powerful driver of the imports phaseout process than a well-thought-out state policy (more information on this policy is presented in section 3.2.2).

As a result of sanctions imposed against specific organizations and enterprises, state corporations have developed and launched imports phaseout programs. The process as a whole in the country accelerated, but still continued to falter in many areas. However, it is still possible to judge the acceleration or slowdown of imports phaseout only by a number of indirect signs. There is no objective data on how to replace the solutions of foreign companies with domestic ones.

RUSSOFT monitors the imports phaseout process in the following ways: 1) compares changes in the volume of sales of Russian software companies in the domestic market against the changes in the scale of the software market; 2) analyzes public communications directly related to the imports phaseout process; 3) monitors data on sales of companies whose solutions are massively purchased as an

alternative to foreign software products; 4) studies the intensity of applications development for different operating systems and DBMSs.

Judging by the ratio of software sales in the domestic market and by the scale of this market, the imports phaseout process showed no stability in recent years – now it accelerated and now it slowed down. Yet another slowdown of the process was recorded in the end of 2017, and in 2018 it accelerated again.

If we compare the growth rates of the market and the growth of sales of Russian companies in the domestic market, then in 2016 the difference seems huge – 30 percentage points (sales of domestic companies in this year grew so much faster than the market), in 2017 this difference decreased to 5 percentage points, and in 2018 increased to about 10. In 2019 it remained on the same level. It can be assumed that these fluctuations were associated with fluctuations in the national currency against the US dollar.

According to the results of 2020, there was no significant difference between the growth indicator of the software market and sales of Russian software companies within Russia. The revenue of product companies from operations in the domestic market grew even slightly less than the market (data for comparison are taken from IDC, the only analytical company that discloses the results of its own research of the Russian IT market).

In 2021 sales of Russian software companies began to grow again faster than the market, but with account for the not very significant difference in growth rates and the fact that the IDC study does not cover the entire Russian software market (which means that with a more complete coverage, the market expansion indicator could be somewhat different), it is not worth talking about the presence of a clear sign of acceleration of the imports phaseout process. Apparently, it is the sales of Russian software that determine the dynamics of the expansion of the domestic software market. In addition, this comparison to some extent reflects the substitution in sales, and not the replacement of the software used. We can only assume that with high sales growth rates of Russian software companies, the transition of users from foreign to domestic software is quite active. However, even approximate quantitative estimates of how actively this substitution occurs cannot be made using this method.

Service companies, which are dominated by revenue from custom developments, in recent years have increased sales in the domestic market faster compared with this market growth.

Custom software companies have not previously been classified as participants in the imports phaseout process, since starting from 2005-2008 their foreign competitors almost did not provide similar services in Russia. In fact, imports phaseout in the field of software development services provision in Russia was successfully performed by Russian service companies, which did not allow either competitors from India and China (other developing countries with lower efficiency and close price of providing services) or competitors from developed countries to gain a foothold on the Russian market.

At the same time, custom development often serves as an alternative to buying and installing a foreign system. Quite often ready-made solutions offered on the market do not satisfy customers in terms of functionality, and therefore these customers employ service companies to create a unique solution for their needs. Moreover, due to the powerful process of digital transformation, it is becoming more and more difficult to provide all the functionality for different companies within standard replicated solutions. Thus, there are two main motives for custom development instead of buying a ready-made system: the need for unique functionality and the drive to gain independence from foreign suppliers.

The analysis of public communications directly related to the imports phaseout process indicates a significant increase in the attention paid to this process by the government, developers, state bodies and corporations that occurred in 2021. In 2022 after the start of a special military operation in Ukraine, this activity increased even more: the number of reports on the transfer of clients to Russian software, as well as on the decisions of the government (and other state bodies) in the field of imports phaseout has doubled. Analysts, system integrators, consultants and distributors became much more interested in the issues related to imports phaseout. More information on the results of this analysis is presented in the following section (3.2.1.).

Information about the revenues of IT companies operating mainly in the Russian market, replacing foreign counterparts with their solutions, and about the sales in Russia of vendors from "unfriendly" countries also indicates that the pace of imports phaseout has increased significantly. As a rule, revenues of domestic software developers, computer and telecommunications equipment manufacturers are growing much faster compared to the growth of the Russian segment of the IT market in which their solutions were present. At the same time, the revenues of Western vendors either decreased or grew only slightly. For example, the media reported that the number of staff in the Russian

representative office of Microsoft over the past 4 years has decreased almost by 50%, and the revenues of Russian legal entities of Cisco, according to the "Contur.Focus" service, decreased in 2021 by 3.7% (from RUB 37.1 billion to RUB 35.8 billion). In the second half of 2022, sales of many vendors in Russia may well reduce to zero, as these vendors have announced their exit from the Russian market.

Another way to determine the progress of the imports phaseout process is to estimate the growth of free software (FSW) consumption. This method shows that in the field of system software the share of the Linux operating system family, as well as the PostgreSQL DBMS, has sharply increased in recent years. In most cases, domestic versions of these open source systems are installed in the corporate sector.

According to RUSSOFT, the share of MS Windows in terms of time spent for the development of solutions and applications for MS Windows has decreased from 42.5% in 2019 to 28.2% in 2021, and the corresponding indicator for the Linux family has grown over the same years from 30.0% to 48.8%. These data are obtained from surveyed companies, and the dynamics is similar when extrapolating these data to the entire industry. The share of PostgreSQL over the past two years has increased from 35.8% to 47.1%, and for all other DBMSs (except Oracle) this indicator showed reduction. For example, in MS SQL, it decreased from 32.4% to 17.2%.

The results of various studies and surveys present some additional points to ponder. However, this information can be used specifically for contemplation, and not to obtain an adequate idea of the situation, since each data source needs to be dealt with – how the data is obtained, how correctly these data reflect the imports phaseout process as a whole or, at least, how this process is progressing in certain sectors of the economy.

According to a survey of participants of the conference for IT managers "CIO Prom Day – Imports Phaseout in Industry," organized by the NWComm agency in May 2022, the exit from the market or suspension of activities of foreign software suppliers has a critical effect for 8.5% of enterprises and organizations, has a strong effect on 28% of respondents, has a medium or moderate effect on 50% of respondents; and 11% of respondents almost did not feel the changes, and 2.4% of respondents do not use foreign software.

Regarding the exit of foreign equipment suppliers from the market, the following results were obtained: critical effect – 12.2%, strong effect – 43.9%, medium or moderate effect – 36.6%; barely felt the change – 6.1%, and do not use foreign equipment – 1.2%.

The survey showed that the IT strategy and plans of 9% of Russian industrial companies have completely changed due to the exit of foreign suppliers from the market, 66% have partial changes, 15.4% almost do not change the strategy and plans, 1.3% did not change. 7.7% of respondents found it difficult to give an answer to the question.

Respondents also answered a question about priority plans to replace foreign software and hardware during 2022-2023. 10.4% of respondents intend to replace ERP/BI/CRM, 2.6% intend to replace ECM/BPM, storage systems – 16.9%, information security systems – 12.3%, cloud technologies – 3.9%, virtualization – 13.6%, network equipment – 20.1%, IP telephony and contact center management – 6.5%. 13.6% of respondents did not plan to replace anything.

During a survey of YooKassa (the service of the fintech company YooMoney) and the country's media holding Rambler & Co, it turned out that about 50% of Russians are satisfied with the quality of Russian software, and 60% of users have been using it for several years. From January 1 to May 31, 2022, Russian employers bought different software for their employees 39 times more frequently compared to the same period last year. Most of respondents from among the employees of enterprises (29%) use domestic browsers and antiviruses on their work computer. 18% of respondents choose Russian office and mail software suites, and 16% choose Russian accounting software suites. Domestic operating systems (9%), cloud services and CRM systems (4%), video conferencing systems (4%) are also popular among employees.

Users also tend to use Russian browsers and antiviruses (24%) on home computers. Among 12% of respondents, domestic office and mail software suites are also popular among 12% of respondents, and one of every ten respondents chooses domestic operating systems. Photo and video editors, PDF programs and cloud services account for 3%, 3% and 2%, respectively.

The turnover of B2B payments of online stores selling software through YuKassa increased 8.7 times. Most of companies have purchased software in the number of one to five thousand rubles - the share of such purchases was 60%.

In July 2022 Vasily Shpak, the Deputy Minister of Industry and Trade, has announced the positive impact of Microsoft's departure on Russian software manufacturers and has presented the following data:

- a third of Russian companies (33%) have already begun or plan to transfer

their business processes to domestic IT solutions in the near future;

- a quarter of Russian business (25%) uses only domestic IT products.

At the same time, for most companies (69%), the issues of imports phaseout related to software continue to be relevant, since they either combine work with Russian and foreign software (61%), or use only imported IT products (8%).

According to IDC, domestic software purchased in Russia in 2020 accounts for 47% of all software purchased in the country. Almost half of the OCS software portfolio is represented by Russian vendors.

It is not easy to obtain such quantitative indicators which would absolutely objectively characterize the entire process of imports phaseout, if not to say that it is impossible. For example, if you switch to free software that allows not depend depend on the loyalty of foreign countries, the issue may not always be related to software sales, but rather to the provision of services for this software installation, support and development. Small enterprises download such software from open source repositories without even requesting a service for its support and installation.

3.2.1. Analysis of news reports directly related to imports phaseout

Analysis of news reports related directly to software imports phaseout allows to come to the following conclusions. First of all, it is worth noting the intensification of the transition of Russian corporations and authorities to domestic software after a slight slowdown in 2020 caused by the uncertainty of the situation in the first months after the declaration of the pandemic. In 2021, the acceleration of the process observed before the pandemic continued and became apparent (there was, apparently, a catch-up in the implementation of plans already charted for 2020-2021). In 2022, the process of transition to domestic software became even more active. If judged by the number of news reports on such a transition in the first 7 months, then there were about 2 times more such news reports.

It should also be noted that the number of reports on the adopted or planned decisions of the government (the largest companies) stimulating imports phaseout (ensuring technological sovereignty) increased in 2021. At the same time, some news reports reflected the activity of key private companies and other non-governmental structures (primarily industry associations) proposing to adjust the state policy in this area. In 2022 the number of relevant reports was even higher due to the start of a special military operation in Ukraine and to the emergence of new threats from sanctions and to the exit of companies subordinate to the policies of "unfriendly" countries from the Russian market.

The improvement of Russian IT solutions (or even the creation of platform solutions) started to be more frequently mentioned since September 2020. In the last 4 months of that year, there were 3 such news reports, with only one in the previous 8 months (3 news reports in the first 8 months of 2021). In this case, it is not the number of these news reports that is more important, but their dynamics. Subsequently, it turned out that at the end of 2020 the activation of developers has just only started: in 2021 and 2022, the number of relevant news reports began to grow about 3 times annually.

There were very few statistics characterizing the imports phaseout process. There have been problems with this before, especially in terms of their reliability. Most likely, such data did not get into the media due to their absence. In 2021, there were many times more news reports than a year earlier. By the end of 2022, this growth will continue, and the number of publications is likely to grow more than 2 times (possibly 3-4 times). Even analytical companies (for example, IDC) started to provide the media with such data, because the issue of "imports phaseout" is becoming the most significant for the Russian IT market.

At the same time, in general, the entire process of imports phaseout (and even more – the process of ensuring technological sovereignty) cannot be assessed unequivocally and quite accurately for all the quantitative indicators presented. It is clear that this process has accelerated in previous years, and after the start of a special military operation, the pace of transition to domestic software increased even more (in certain categories of software – 2-3 times compared to the same period last year).

Naturally, in the first half of 2022 there were by an order of magnitude more reports on restrictions on the sale of imported software by foreign vendors. At the same time, the importance of these news reports increased sharply: if earlier it was a question of sanctions against certain Russian structures or entire industries (defense complex, oil and gas industry), then in March 2022 the refusal of all supplies and all support of all Russian users was launched in the context of the complete exit of foreign companies (primarily American and European) from the Russian market. Some vendors still tried to prepare Russian customers for their exit from the Russian market, while others refused already paid deliveries and were not going to return payments already made.

Distribution of media news reports directly related to imports phaseout in 2018-2022 by topics

	2018	2019	2020	2021 (January-August + September-December)	2022 (January-July)	For 2018-2022 in the number of
Transition of Russian corporations and authorities to domestic software	6	12	10	53 (26+27)	50	131
Decisions of the government (key companies) stimulating imports phaseout	11	11	13	35 (17+18)	29	99
Sales of companies that most benefit (or loss) from imports phaseout	—	5	3	6 (5+1)	6	20
Statistical data characterizing the imports phaseout process	—	7	2	12 (2+10)	20	41
Revision of imports phaseout plans in favor of foreign software (other problems)	—	2	5	3 (0+3)	8	18
Improvement of Russian solutions (development of a set of solutions)	1	2	4	11 (3+8)	31	49
Reports on sanctions aimed at the restriction of foreign software purchases for Russian enterprises	2	—	1	3 (2+1)	17	23
Involvement of system integrators, distributors, various consultants in the imports phaseout process.	—	—	—	3	16	19
Total in a year	20	39	38	122	176	

3.2.2. State policy aimed at the assurance of technological sovereignty

After much talk about the need for imports phaseout, after the adoption of the first anti-Russian sanctions applicable to the supply of software to Russia, adoption of relevant decisions at the state level was started in 2014, however, resulting in no significant effect for almost two years. It turned out that first it was required to decide on what exactly needs to be stimulated, and what shall be identified as "imports phaseout". It was required to make a definition of the domestic developer O (it took almost a year to formulate this definition and to introduce appropriate amendments to the legislation).

When clarity with the definitions appeared and a ban was formulated for state structures and enterprises to purchase foreign software in the availability of a domestic analogue, it was found that no control mechanism was developed. In addition, it turned out that purchasers in state structures do not have incentives for imports phaseout, but they seriously risk criminal prosecution for violation of the legislation regulating the conditions of procurement, while compliance with these conditions is impossible in case of imports phaseout before the end of the depreciation period for already purchased imported software.

As a result, despite the bans, state structures continued to purchase foreign solutions (either justifying this fact by the absence of a domestic analogue, or purchasing software under the trademarks of Russian companies that use the OEM model for this).

While the state was working out the approaches to software imports phaseout and tried to form tools for its financial support, Russian IT companies started in 2014 to actively take actions aimed at the development of alternative solutions to replace imported software.

The creation of consortia of companies was initiated in 2014 which consortia would allow to develop complex solutions based on the research works of a number of companies or to jointly promote domestic systems on the Russian market (especially in the public sector, including state-owned enterprises). In particular, the following consortia were created: BETA – to form a full stack of domestic software (or FSW) and to replace basic and

Assessment of the impact of bans on the use of foreign software in the presence of an analogue in the Register of Domestic Software on software development companies depending on the share of operation in developed markets, the share of surveyed companies in 2021

	All companies surveyed	Do not operate in far abroad countries	Operate in far abroad countries
Very negative (-3 points)	3.5%	3.8%	3.3%
Negative (-2)	8%	6%	10%
Negative, but negligible (-1)	6%	5%	8%
No impact (0)	45%	43%	47%
Positive, but negligible (+ 1)	16%	19%	13%
Positive (+ 2)	12%	13%	12%
Very positive (+ 3)		10%	8%
Average score	0.33	0.46	0.23
Found it difficult to assess	17%	20%	14%

application software for the banking sector) and UNION – to replace not only imported basic and application software for the oil and gas sector, but also to replace imported servers with domestic ones based on "Elbrus" processors.

There are doubts about the degree of effectiveness of the Register of Russian Software, which appeared in 2016 under the Ministry of Communications. As of the beginning of September 2022 14,492 domestic software products were registered in the Register (28% more than a year earlier, over the previous 12 months the increase was even more significant - + 62%) and 4706 copyright holders (their number has increased by 32% over the year).

A number of domestic developers consider this Register quite useful to ensure the imports phaseout process. The presence of such a large number of companies that register their software in the register also indicates the need for such an instrument, although this need was created artificially.

In June 2021 the Ministry for Digital Technology, Communication and Mass Media of the Russian Federation has developed a new, more detailed version of the classifier, which will be used as part of the register of Russian software. Its current version includes only 26 classes, while the new version is also divided into sections, and the total number of classes has exceeded 95. This classifier has yet to be studied with experts, but it is unlikely that it will radically change anything if it does not reflect the need to replace the complex of interconnected solutions. In many cases, these shall be hardware and software systems. However, in order to take advantage of the tax benefits provided by the state, in reality the developers of such complexes in Russia still have to make their own choice – either software development or hardware development.

In the fall of 2021, the Ministry for Digital Technology, Communication and Mass Media announced its intention to thin out the register of domestic software and to remove about 1000 applications that do not meet the current requirements from the register. To implement this, the first audit of the register was performed in six years of this register existence, despite the fact that by the decision of the Government such inspections should be performed annually. At the end of October 2021, it became known that the Ministry has identified candidates for removal from the register of Russian software. The Ministry has conducted a large-scale audit, as a result of which about 900 products with irrelevant information in the description were found.

In February 2022 the Ministry for Digital Technology, Communication and Mass Media has announced the development of a regulatory framework to combine registries of domestic software and domestic hardware. The corresponding order to the Ministry was given by the Government.

The annual RUSSOFT survey (in spring 2022, the question about the attitude to the Register of domestic software was not asked due to the need to assess the significance of other problems) showed that on average, the assessment of the effectiveness of the Register of domestic software is not high.

In 2019 the average Register impact estimate for all surveyed companies approached zero - it decreased from 0.16 to 0.09. However, at the same time, companies that do not work in foreign countries began to evaluate this impact more positively - there was an increase in the average score of the Register's utility estimate from 0.15 to 0.22 (which is still less than 0.25 obtained in the survey conducted in 2017). Companies operating in foreign countries rated the impact of the Register much worse – a drop was noted from 0.16 to a negative value (-0.01).

In 2020, there were no significant changes in the assessment of the effectiveness of the software imports phaseout policy, and due to the fact that the number of respondents was much smaller than in previous years, the analysis of estimates for certain categories of companies was not carried out (segmentation further increases the error).

In 2021, the average score of the assessment of the imports phaseout policy increased to a record value – 0.33 (which is still closer to zero than to "1"), which means that companies positively evaluate the bans on the use of foreign software in the presence of an analogue in the Register of domestic software, but consider the influence of such bans insignificant.

For service companies in general, the assessment of the significance of the Register is very low. The average score in 2019 was only 0.01, and in 2021 it became completely negative (-0.04). This figure has almost always fluctuated around zero in recent years. More than half of such companies (50-60%) traditionally do not see any impact of the Register on the IT market.

Software developers are much less likely to show indifference to the Register. Only 35-40% of developers of replicated solutions do not see any influence of the Register, while the average Register score in 2019 was 0.18, and in 2021 it increased to 0.70.

At the same time, 28% of companies that receive at least 50% of revenues from exports believe that the existing bans have a negative impact on them. Jointly with 56% of companies that indicated zero impact of the Register on the market, the average score was -0.28.

For companies that receive their main revenues in Russia, the attitude towards the Register is generally positive – the average score is 0.48, but it is still very low (the Register has no effect on 43% of respondents in this segment).

According to the survey the biggest benefits from the Register are received by product companies, having more than 50% of revenues from sales generated in the domestic market. But their average score was 0.78, less than the level of positive minor influence.

The survey conducted by RUSSOFT does not allow to exactly determine what negative impact the presence of the bans on the use of foreign software has in the availability of an analogue product in the Register of Domestic Software. We can only assume that due to the binding of the granted VAT benefit to the presence of software in the Register, some companies had problems with receiving such a benefit. An additional study was required on how bans on foreign software affect the software industry as a whole, but such a study may no longer be relevant due to the closure of Western markets for Russian companies.

In early summer 2022 the Government of the Russian Federation took the decision to establish industrial competence centers (ICC) for the replacement of foreign software and competence development centers (CDC) for the development of Russian system-wide and application software required to replace currently used foreign analogues.

It can be assumed that the formation of user groups can be carried out not only on an industry basis. Besides that, the principle of solutions division by classes may become different - with account for the fact that in many cases it is required to change not individual products, but complexes of interconnected systems (including software and hardware systems).

The idea of involvement of experts from the Software Development Associations to the ICC and CDCs seams correct: focusing on the opinion of exclusively employees of IT departments of client companies significantly narrows the requirements for the functionality of the replacement product, which does not allow making it a competitive product for the global market. This will lead to the fact that soon the client will again be forced to purchase imported software to ensure the competitiveness of the line of its main products. However, by the end of summer 2022 software developers did not understand how their information and proposals would be used in the ICC and CDCs: whether this information will be accounted for and what final decisions these centers will make based on the data collected from various sources.

Apparently, there is a lack of a systematic approach with a clear definition of how problems related to imports phaseout will be solved with the help of the ICC and CDCs. It is possible that systemic approach is not created due to the incorrectly chosen goal of the state imports phaseout policy. In fact, imports phaseout itself was declared to be the goal of the state policy. However, in the last 1-2 years another, more correct goal has started to be proposed ¬– to ensure technological (or digital) sovereignty.

In April 2022 this goal was voiced by Alan Salbiev, the adviser to the Ministry of Digital Development, Communications and Mass Communications of the Russian Federation, who made it point-blank: "The era of imports phaseout is over. The era of independence from imports has started. It is necessary to make sure that our practitioners in the field of imports phaseout do not have a single chance".

The difference between imports phaseout and the assurance of technological sovereignty is significant and fundamental, although not everyone understands it. Imports phaseout as a state policy is implemented in the form of a simple replacement of foreign solutions by domestic ones at procurement government made by agencies and state-owned corporations. Thus, the share of domestic software should somehow grow, and therefore targets were set for both the procurement and the use in the corporate sector. It was not clear in which units the shares of the domestic and foreign software used shall be evaluated, as well as how correctly the current indicators are determined. But in any case, this approach did not allow to guarantee the solution of the main problem – the elimination of risks and threats existing when using foreign software (unauthorized access to information, disabling systems contrary to the wishes of Russian users, refusal to supply and to provide technical support).

First of all, it should be noted that the process of imports phaseout can be influenced by various external factors (sanctions, devaluation of the ruble)

and by the improvement of domestic solutions, and not as a result of a well-thought-out state policy. In such a way this process went mainly all the last 20 years (drivers are described in the beginning of this section).

The idea of imports phaseout in the field of software initially arose in order to support domestic developers, which, through the improvement of their solutions in the competition with foreign developments will eventually phase them out on the Russian market. At the same time, it was assumed that Microsoft, Intel, Cisco, SAP and other Western vendors would be reliable suppliers of the "best in the world" solutions and will provide support for these solutions. In reality, there was no policy of financial incentives for users from the state sector to imports phaseout of software, imports phaseout was limited to a declaration of bans on the purchase of imported software.

Since 2014 it has become clear that software vendors in Western countries are not reliable partners and at any time can refuse to supply solutions and to provide technical support to Russian enterprises and organizations. As a result, the imports phaseout policy began to imply the achievement of independence from these companies.

By default, imports phaseout was assumed to provide independency from imports. However, this assumption is fundamentally wrong. Imports phaseout can assure independence from imports, but only theoretically, and does not warrant such independence. Firstly, the requirement to replace imported software with Russian software can be satisfied at the expense of those solutions that are not critical for the corporation or the government. Thus, the criterion of imports phaseout can be fulfilled, and technological sovereignty will not be ensured, and dependence on Western solutions as a whole will remain at the same level.

Secondly, the required share of purchased or even used domestic software does not account for the fact that in many cases it makes sense to change the entire set of interconnected solutions to ensure technological sovereignty. The example of a large enterprise with a complex information system shows how the requirement to increase the share of domestic software looks like with no guarantees of independence from foreign vendors. Let's assume that the components of this system were initially only 10% domestic, but in a few years this figure was brought to 80%. At the first glance, it may seem that the imports phaseout process was more than successful. However, the remaining 20% may contain such foreign solutions, due to which the entire information system used may cease to function (for example, as a result of unauthorized access to these components, of the refusal to provide technical support or to make repair, where hardware is concerned).

Thirdly, the share of domestic software in monetary terms is a very unreliable indicator for monitoring the efficiency of technological sovereignty assurance. Russian solutions are sometimes 2-3 cheaper than foreign counterparts. In addition, technological sovereignty can be provided by free open source software, but also with no guarantees, because such software can also contain bookmarks for unauthorized access. For these reasons the main criterion for the success of imports phaseout is not an increase in the share of purchases of domestic software, but the assurance of technological sovereignty when using certain solutions. It is possible that this goal can be achieved with no increase of the share of purchased domestic software.

In this situation, there are so many problems related to the assurance of technological sovereignty that the growth in revenues of domestic software companies will be restrained only by the lack of resources, and not by the rejection of requirements for the procurement of domestic software by state corporations. The share of domestic software in any case will grow even faster than in previous years. However, ideally, such an increase shall be a consequence of the technological sovereignty assurance, and not the result of meeting the criteria for the increase of the share of domestic software sales in the total volume of software purchases.

Since Russian companies do not have competitive developments in all types of software and hardware in the field of information technology, it is quite possible to purchase solutions from "friendly countries" or to develop them within the framework of international cooperation. Consequently, a decrease in the share of purchased domestic software can in some unique cases assure technological independence even to a greater extent compared to its formal increase. In this regard CAD systems for designing complex products or imported processors can be recalled. It will not be possible to completely abandon CAD and processors supplied by foreign manufacturers in the coming years, but the problem of dependency on their foreign suppliers refusing to work in Russia, can be much faster solved jointly with China and other "friendly countries".

3.2.3. International cooperation in the field of technological sovereignty assurance

Not only Russia faces the problem of technological sovereignty, but also many other countries, including large states such as China and India.

By imposing sanctions Western governments exert political pressure on various states – from China and Russia to Iran, Venezuela and Syria, while providing preferences to their own companies. Corporations in their own use or try to use their own monopoly position. There are already many similar examples.

For example, in 2019 the Turkish Competition Council drew attention to the fact that Android users on smartphones do not have the opportunity to choose a default search engine for themselves; so this Council issued a fine and ordered Google to amend the license agreement. In early 2020 Google left Turkey without its Android operating system and applications on new devices.

In April 2021 US authorities included the Chinese company Phytium in a blacklist of companies allegedly having ties to the Chinese military. Phytium is developing processors for supercomputers based on the ARM architecture. For this reason the Taiwanese company TSMC, the world's largest manufacturer of semiconductor products, was forced to suspend cooperation with it. The United States put pressure on Huawei using a similar scheme – in May 2020 supplies of TSMC chips to this company were banned.

Even in Western Europe attempts are being made to ensure independence from American solutions, but so far, judging by media reports, these attempts are not very successful. At the end of December 2021 it became known that another attempt to abandon Microsoft products in favor of alternative solutions failed in Germany. The authorities of the State of Hessen were unable to pick up a replacement for the Teams messenger for schools due to bureaucratic delays. The results of public procurement of alternative software were invalidated. Since 2003 Germany has been trying with varying success to transfer the public sector and budgetary institutions to open source software and to eliminate the use of Windows, Microsoft Office and other Microsoft products. Apparently, there are no powerful incentives for such imports phaseout in this country yet, but it cannot be ruled out that they will appear in the future.

China already has plenty of such incentives. In spring 2022 the Chinese authorities obliged the public sector to completely get rid of foreign personal computers (PCs) within two years and to replace them with Chinese ones. More than 50 million computers are subject to replacement at central government offices, but in the end their total number will be much higher, since the imports phaseout campaign will definitely affect regional authorities too. The same incentives are in force in the countries of the Middle East, South and East Asia, Latin America.

Despite the fact that the readiness to assure technological sovereignty in these countries is very different, cooperation of Russia with almost all states striving for technological independence is possible in one form or another. It shall be possible to create joint platform solutions, to initiate the establishment of communities of programmers to build new solutions based on open source software, to transfer technologies and to train foreign partners to work with Russian solutions and tools. In any case, due to the increased volume of sales during imports phaseout and due to additional export revenues, Russian companies will receive revenues that they can use to develop domestic and joint solutions that will be an alternative to the systems and applications of companies in "unfriendly countries."

The situation in the global and Russian markets is such that in order to successfully promote their solutions and services abroad, Russian companies need to join forces at various levels - from coordinated development to joint marketing.

Firstly, there are no companies in Russia with billions of annual revenues that can on equal grounds compete with world leaders in terms of turnover and, therefore, in production costs and marketing budgets. Even the largest Russian software company Kaspersky with annual revenue of about USD 700 million recognizes the need for cooperation, which can be carried out, among other things, at the level of information exchange.

The management of Kaspersky believes that the more Russian companies will act in a certain market (especially in countries that are quite exotic for these companies), the easier it will be to do business in this market and to develop the market itself. Essentially, successful Russian IT exporters are ready, if possible, to help newcomers even free of charge. Especially if these newcomers can become potential technology partners.

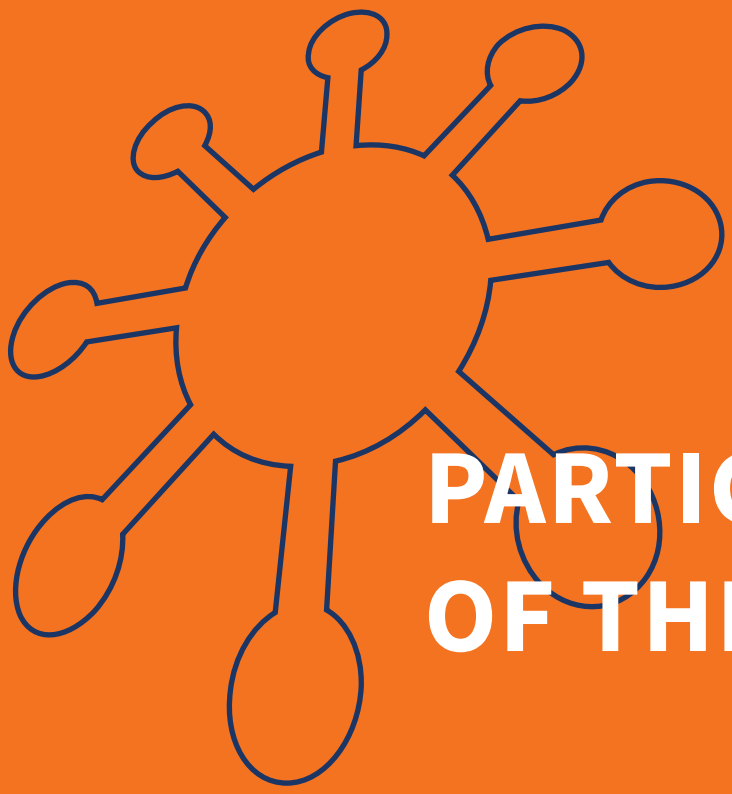
Secondly, according to the Russian Export Center, there is a demand in emerging markets for complex turnkey solutions. As a rule, customers refuse to independently develop such solutions and are waiting for an appropriate offer from suppliers. Such solutions require the unification not only of different software developers, but also require cooperation with custom software developers, system integrators, distributors, hardware manufacturers. Similar requests for complex solutions

and for large integrators are available on the Russian market too.

This topic is especially close for RUSSOFT, since the Association was established based on the decision made in 1999 by several companies to unite, on the grounds of their understanding how small they are in the American market. Promoting cooperation of Russian software companies is one of the strategic tasks of the Association.

Thirdly, the imports phaseout process is often impossible without comprehensive solutions offering. The fact is that Western hardware manufacturers and software developers have created the addiction of their clients to interconnected solutions. In many ways, this addiction was created deliberately and artificially in order to bind corporate clients (private users also) to these hardware manufacturers and software developers. For this reason the replacement of one component of the telecommunications or IT infrastructure with another is either impossible or very difficult without compromising the reliability of the systems used. Therefore, the substitution must be complex.

Sometimes the contingency of only two software products is enough, but more often a single software and hardware complex is required. It is not the first year that RUSSOFT is proposing to stimulate the establishment of such complexes at the state level within the framework of the imports phaseout policy and to support export activities of these complexes through the use of the entire range of tools of the Russian Export Center.



PARTICIPANTS OF THE SURVEY

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
2Nova Interactive	Saint-Petersburg	2nova.ru	hello@2nova.ru	(812) 318-4085	Custom software development	
7bits	Omsk	7bits.it			Custom software development	AR & VR Development; Artificial Intelligence; Big Data & BI; IoT; Smart City
A7 Systems	Saint-Petersburg	a7systems.ru	info@a7systems.ru	(812) 603-7137	Development of programming tools and database	Artificial Intelligence; Big Data & BI; IoT; Smart City
Across Engineering	Moscow	across.ru	info@across.ru	(495) 517-8033	Custom software development	
Active Business Consult / VS Robotics	Moscow	vsrobotics.ru	pr@vsrobotics.ru	(495) 136-5182	Embedded software (equipment, devices)	Artificial Intelligence; Big Data & BI
ALAN-IT	Yaroslavl	alan-it.ru	info@alan-it.ru	(485) 237-0303	Development of own analytical services	Artificial Intelligence; Big Data & BI; IoT; Smart City
Alee Software	Saint-Petersburg	alee.ru	info@alee.ru	(812) 309-7859	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Custom software development	
ALPOM	Saint-Petersburg	alpom.ru	inbox@alpom.ru	(921) 745-5069	Custom software development; Embedded software (equipment, devices)	
Altcraft	Ryazan	altcraft.com	contact@altcraft.com	(491) 290-1004	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Big Data & BI
ALT-SOFT	Saint-Petersburg	altsoft.spb.ru	altsoft@altsoft.spb.ru	(921) 956-7961	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence
Alvion Europe	Sevastopol	alvioneurope.ru	info@alvioneurope.ru	(978) 767-9890	Custom software development; Website designing	Big Data & BI; IoT; Smart City

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Angels IT	Voronezh	angelsit.ru	it@angelsit.ru	(473) 255-5007	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Embedded software (equipment, devices)	AR & VR Development; Artificial Intelligence; IoT; Smart City
Arax Group	Moscow	araxgroup.ru	info@araxgroup.ru	(495) 504-8263	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Blockchain Technology
Arcadia	Saint-Petersburg	softwarecountry.com	info @softwarecountry.com	(812) 610-5955	Custom software development	Artificial Intelligence; Big Data & BI
A-Real Consalting	Yaroslavl	xserver.a-real.ru	hello@a-real.ru	(800)555-9297	Information security solutions	Artificial Intelligence
Artezio	Moscow	artezio.com	welcome@artezio.com	(495) 981-0531	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology
ASys Soft	Moscow	asys.ru	asys2007@mail.ru	(929) 539-7815	Custom software development	
ATM	Moscow	атм.москва	mail@atm.msk.ru	(499) 490-2207	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Big Data & BI; IoT; Smart City
Auriga	**Moscow**	**auriga.com**	**pr@auriga.com**	**(495) 713-9900**	**Custom software development**	**Embedded and system-level development; Big Data; ML; IoT**
AV Soft	Moscow	avsw.ru	konkurs@avsw.ru	(495) 988-9225	Information security solutions	Artificial Intelligence; Big Data & BI; IoT; Smart City

Established in 1990, Auriga is one of the top 100 leading outsourcing software R&D providers worldwide. Headquartered in the U.S., with 600+ employees located across seven development centers and operating 13+ embedded testing R&D labs, Auriga delivers 100+ projects yearly. We offer custom software development, product maintenance, re-engineering and porting, integration, testing and test automation services for medical device, automobile and construction tools manufacturers, industrial automation and power management companies, consumer electronics, retail & logistics, software vendors (ISVs), semiconductors and hardware manufacturers (OEMs), like Chrysler, Draeger Medical, nVent and others.

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
AVS Consulting	Moscow	avsconsulting.ru	avs@avsconsulting.ru	(925) 999-3071	Custom software development, Website designing	AR & VR Development; Artificial Intelligence; Big Data & BI; Blockchain Technology; Smart City
AXELOT	Moscow	axelot.ru	a.dolgikh@axelot.ru	(495) 961-2609	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
Axilon	Moscow	axilon.ru	info@axilon.ru	(916) 815-3499	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other), Custom software development	Big Data & BI
BOBDAY	Krasnodar	bobday.ru	info@bobday.ru	(800) 201-3375	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Custom software development	Big Data & BI
Brain Systems Group	Saint-Petersburg	brainsystems.ru	zakupki @brainsystems.ru	(800) 555-3107	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
Celsus	Kaluga	celsus.ai	celsus@celsus.ai	(965) 077-7705	Embedded software (equipment, devices)	Artificial Intelligence
CenovikPRO	Moscow region	cenovik.pro	info@cenovik.pro	(495) 215-5248	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI
Cerebro	Moscow	cerebrohq.com	info@cerebrohq.com	(499) 110-8234	Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	
Citrus	Ioshkar-Ola	citrus-soft.ru	alex@citrus-soft.ru	(987) 702-7147	Website designing	
CodeInside	Penza	codeinside.ru	office@codeinside.ru	(8412) 636-736	Custom software development	Artificial Intelligence; IoT

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
CommuniGate Systems	Moscow	communigate.ru	russia @communigate.ru	(499) 271-3154	Development of unified communications technologies	
Cortex	**Krasnodar**	**cx.technology**	**info@cx.technology**	**(988) 245-9945**	**Custom software development; Scientific researching**	**Artificial Intelligence; Blockchain Technology**
Crosstech Solutions Group	Moscow	ct-sg.ru/	info@ct-sg.ru	(495) 741-8864	Information security solutions	Artificial Intelligence; Big Data & BI
CVisionLab	Taganrog	cvisionlab.com	info@cvisionlab.com	(903) 464-7047	Custom software development	Artificial Intelligence
Cyberprotect	Moscow	cyberprotect.ru	info@cyberprotect.ru	(903) 203-2299	Information security solutions	
Data East	Novosibirsk	dataeast.com	support@dataeast.com	(383) 332-0320	Navigation and geographic information systems	Artificial Intelligence; Big Data & BI; Smart City
DDoS-Guard	Rostov-on-Don	ddos-guard.net	info@ddos-guard.net	(495) 215-0387	Information security solutions	Artificial Intelligence
Development Center SAPR "GeoS"	Nizhny Novgorod	k3info.ru	sale@k3info.ru	(831) 435-2539	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	

Cortex

Cortex Technology is an international software group focused on digital commodity trading, agritech, biotech, and digital transformation of state authorities.

Our key practices:

— Digital commodity markets for metals and chemicals, trade platforms integration (Nasdaq, CQG, public blockchains), real-time data exchange, blockchain technologies (custom blockchain, dAps, smart-contracts);

— MedTech and BioTech: end-to-end product lifecycle automation, procurement and contract management, bioinformatics, machine learning for biological and medical data, telemedicine SaaS;

— Incident management in casinos;

— Regional decision support and incident management systems.

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Diasoft	**Moscow**	**diasoft.ru**	**pr@diasoft.ru**	**(495) 780-7575, (495) 789-9339**	**Software development for the financial and other industries; custom software development; enterprise resource planning (ERP platform); development of basic software (DBMS, programming tools)**	**Business processes management, visual analytics, Big Data, AI, ML**
		Diasoft is one of the largest Russian providers of IT solutions. During its 31-year history, it has accumulated a unique experience in development, implementation and support of comprehensive IT systems for customers from different industries, with the main focus on financial institutions. Diasoft is recognized as a systemically important company for the Russian information and communications industry. Its products are listed in the Unified Register of Russian Programs for Electronic Computers and Databases, and are recognized by Gartner, IDC, Forrester, BIAN and other global experts. The company is headquartered in Moscow, has branches in Saint Petersburg, Yaroslavl, Cheboksary, Perm, Novosibirsk, a representative office in Germany and a subsidiary in Vietnam.				
Digital Design	Saint-Petersburg	digdes.ru	info@digdes.com	(812) 346-5833	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Custom software development	Artificial Intelligence; Digital Workplace
DZ SYSTEMS	Moscow	dzsystems.com	sales@dz.ru	(495) 225-7693	Mobile applications; Custom software development	Artificial Intelligence; Big Data & BI; Smart City
Econophysica	Tomsk	econophysica.com	conactus @econophysica.com	(3822) 900-601 ext: 1003	Custom software development; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI; Smart City
EC-Tavrida	Simferopol	ec-tavrida.ru	ec-tavrida@yandex.ru	(978) 780-6700	Custom software development	
Edelink	Saint-Petersburg	edelink.ru	info@edelink.ru	(812) 507-3804	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	PropTech

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
e-legion	Saint-Petersburg	e-legion.ru	anna.krasavtseva@e-legion.com	(981) 844-4060	Mobile applications; Custom software development	Big Data & BI; IoT; Smart City
ErmineSoft ltd.	Novosibirsk	erminesoft.com	denis@erminesoft.ru	(913) 926-2697	Custom software development; Website designing	AR & VR Development; Artificial Intelligence
Etton Grup	Kazan	etton.ru	info@etton.ru	(800) 100-0815	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology; Smart City
Evavision	Ekaterinburg	evavision.tv	sales@evavision.tv		Development of a broadcasting control system for a network of video monitors of a new generation	IoT; Smart City
FAYGROUP	Moscow region	faygroup.ru	info@faygroup.ru	(964) 786-6003	Custom software development	IoT
Fidesys LLC	Moscow	cae-fidesys.com	v.a.levin@mail.ru	(495) 177-3618	Scientific researching; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; IoT; Smart City
FlexSoft	Moscow	flexsoft.com/about	info@flexsoft.com	(495) 788-0325	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Big Data & BI
Fogstream	Khabarovsk	fogstream.ru	org@fogstream.ru	(4212) 909-809	Custom software development	Blockchain Technology; Smart City
Foresight	**Moscow**	**fsight.ru**	**info@fsight.ru**	**(495) 137-5498**	**BI-systems**	**Artificial Intelligence, Big Data & BI, IoT, Smart City**

foresight.

Foresight is one of the largest Russian BI vendors. The company delivers to the market native and mature solutions for data analysis and corporate mobility development – Foresight Analytics Platform and Foresight Mobile Platform.

Foresight Analytics Platform features high performance, supports various data types and their data sources, includes machine learning, big data, modeling and forecasting technologies.

The company has also developed such products as Foresight Budgeting, Foresight Investment Management, and FlyBI used for business analysis on-the-go. Company products are used by companies in corporate, state and banking sectors. The Foresight partner network includes more than 60 Russian IT companies.

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Format Koda	**Saint-Petersburg**	**formatkoda.ru**	**info@formatkoda.ru**	**(812) 336-5533**	**Custom software development; Mobile applications**	**Artificial Intelligence, Big Data & BI, IoT, Smart City**
		FormatKoda is a premier provider of software engineering, software enablement, and digital transformation advisory services. The company leverages its agile technological excellence to efficiently deliver complex projects in retail digitalization, web content management & eCommerce, healthcare IT & real world evidence and data, machine learning and enterprise data management. Software engineering services include Mobile and IoT Dev, Test Automation, and Big Data Implementation.				
GDC Services	Usady town (Tatarstan)	icl-services.com	pr@icl-services.com	(800) 333-9870	Custom software development; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	AR & VR Development; Artificial Intelligence; Big Data & BI; IoT
Gektor	Moscow	gektorstroi.ru	support@gektorstroi.ru	(495) 510-1545	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
GEOCAD plus	Novosibirsk	geocad.ru	info@geocad.ru	(383) 352-1333	Navigation and geographic information systems	AR & VR Development; Smart City
Geoscan Group	Saint-Petersburg	geoscan.aero	info@geoscan.aero	(812) 363-3387	Professional unmanned technologies; Embedded software (equipment, devices)	AR & VR Development; Artificial Intelligence; IoT
Global Rus Trade	Moscow	globalrustrade.com/ru	info @globalrustrade.com	(495) 256-2625	International trade Marketplace	
GLOLIME LTD	Saint-Petersburg	glolime.ru	info@glolime.com	(812) 334-9384	Specialized tablet computers and development of a management system for enterprises and organizations on their basis	IoT
GS Labs	Saint-Petersburg	gs-labs.ru	alexey.goilo@gs-labs.ru	(911) 000-3347	Integrated solutions for the formation of ecosystems for the creation and delivery of digital products based on proprietary technologies	IoT; Smart City
HARMAN Connected Services	Nizhny Novgorod	harman.ru, harman.com	Olga.Sheinfeld @harman.com	(905) 664-1155	Custom software development	AR & VR Development; Artificial Intelligence; Big Data & BI; IoT; Smart City

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
IBS InfiniSoft	**Moscow**	**ibs-infinisoft.ru**	**ymaksimenko@ibs.ru; info@ibs-infinisoft.ru**	**(495) 967-8080; (495) 967-8081**	**Custom software development; Mobile applications; Website designing**	
IBS InfiniSoft		IBS InfiniSoft is a development hub of IBS group of companies with global 30 years' experience and big number of projects providing technology solutions and drive business change for customers in Russia and abroad. We focus on the business landscape with industry knowledge and digital capabilities, combining strategy and results-driven software development. IBS InfiniSoft operates efficiently with an agile workforce of 1000+ developers and other IT specialists. It combines a unique mixture of development excellence and deep industry expertise, helping our clients innovate in the areas of State administration, Automotive industry, Financial services, Healthcare, Media and Telecommunications, Retail, Oil and Gas, Energy, and other industries. We offer software, SAP, mobile, 1C and web development, as well as UI/UX design, UX-research, architecture & consulting services.				
Ideas World	Simferopol	iw-group.pro	info@iw-group.pro	(800) 301-0762	Custom software development; Mobile applications	
INEC-IT	Moscow	inec.ru	support@inec.ru	(495) 786-2230	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
InetPartners	Moscow	callpy.com	business @inetpartners.ru	(926) 613-4870	Custom software development	Big Data & BI; IoT
Infinity Video Soft	Tomsk	videograce.ru	contact @videograce.com	(903) 953-3424	Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	
INFOPRO	Moscow	info-pro.ru	post@info-pro.ru	(800) 600-2401	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology; IoT; Smart City
Information Systems and Services	**Novosibirsk**	**isands.ru**	**info@isands.ru**	**(800) 775-1986**	**Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)**	**Artificial Intelligence; Big Data & BI; IoT; Smart City**
ИНФОРМАЦИОННЫЕ СИСТЕМЫ И СЕРВИСЫ		Information Systems and Services, LLC is a company that uses its own low-code development platform IS.PROMETHEUS to create applications quickly and easily. The company's products are based on microservices architecture to show solid performance in handling the growing number of requests and are used by a variety of large enterprises.				

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
INFORM-TEKHNIKA	Moscow	minicom.ru	inf@infotek.ru	(495) 662-7321	Developer and manufacturer of modern means of communication	
Inline Group	Voronezh	inlinegroup-c.ru	contacs @inlinegroup-c.ru	(910) 749-8328	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	AR & VR Development
Innotech	**Moscow**	**inno.tech**	**info@inno.tech**	**(800) 500-3333**	**Custom software development**	**Artificial Intelligence; Big Data & BI**
INNOTECH	Innotech Group (part of Group T1) is a fast-growing high-tech IT company. Since 2020 we have been providing cutting edge software solutions for business digitalization. Innotech Group builds partnerships with leading companies in the financial sector, offering them comprehensive solutions for front and back offices, modern fintech products and big data systems. Moreover, Innotech Group carries out custom-made technological projects of any complexity, helping its clients on the path of digital transformation.					
Inostudio Solutions	Taganrog	inostudio.com	russoft@inostudio.com	(8634) 320-318	Custom software development	AR & VR Development; Artificial Intelligence
INOVENTICA Technologies	Moscow	inoventica-tech.ru	info@inoventica-tech.ru	(495) 646-7308	Information security solutions	
Inreco LAN	Vladimir	inrecolan.com	sergey.pyatigorskiy @inrecolan.com	(492) 244-4090	Custom software development	
Integral	Saint-Petersburg	integral.ru	eco@integral.ru	(812) 740-1100	Stationary software for environmental calculations	
ISGneuro	Moscow	isgneuro.com	info@isgneuro.com	(495) 232-2233	Development, support and development of our own product line of analytical software	Artificial Intelligence; Big Data & BI; IoT
iSpring	Ioshkar-Ola	ispring.com	buh@ispring.ru, valentina.bulygina @ispring.com	(960) 099-0074	Online Training Software	
ISPsystem	Irkutsk	ispsystem.ru	e.lavrenteva @ispsystem.com	(963) 305-0563	Embedded software (equipment, devices); Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools); Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
IT Pro	Moscow	biqube.ru	dp@itprocomp.ru	(952) 056-1199	Custom software development	Artificial Intelligence; Big Data & BI
ITB LLC	Saint-Petersburg	itb.spb.ru	manager@itb.spb.ru	(812) 335-0145	Information security solutions	
ITC Solutions	Sevastopol	itcsolutions.ru	dm@itcsolutions.ru	(989) 836-9939	Outsourcing/ outstaff architecture, development, system and business analysis, software testing	
ITConstruct	Novosibirsk	itconstruct.ru	office@itconstruct.ru	(383) 375-1277	Website designing	
ITPS	Perm	itps.com	info@itps-russia.ru	(495) 660-8181	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI; IoT
IVA Technologies (IVKS)	Innopolis	iva-tech.ru	info@iva-tech.ru	(495) 134-6677	Developers of innovative IT solutions for building a modern digital infostructure	Artificial Intelligence
IZZZIO	Moscow	izzz.io/ru	info@izzz.io	(905) 520-3080	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology; IoT
KAMIS	Saint-Petersburg	kamis.ru	info@kamis.ru	(812) 274-3522	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Smart City
KODEKS	Saint-Petersburg	kodeks.ru	nishonov@kodeks.ru	(812) 740-7887	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	AR & VR Development; Artificial Intelligence
LANIT-TERCOM	Saint-Petersburg	lanit-tercom.ru	contact @lanit-tercom.com	(812) 922-2091	Custom software development	AR & VR Development; Artificial Intelligence; Big Data & BI; Blockchain Technology; Smart City
Lartech	Saint-Petersburg	lar.tech	info@lar.tech	(812) 339-4501	Embedded software (equipment, devices)	IoT; Smart City

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Lexema	Ufa	lexema.ru	info@lexema.ru	(347) 284-7000	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI
Lotsiya	Moscow	loodsen.ru	welcome@loodsen.ru	(495) 730-2023	Custom software development; Mobile applications; Website designing	Big Data & BI
Luxms Group	Saint-Petersburg	luxmsbi.com	sales@luxmsbi.com	(812) 974-7403	Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	Artificial Intelligence; Big Data & BI; IoT; Smart City
Makves	Moscow	makves.ru	marketing@makves.ru	(495) 150-5406	Information security solutions	
MATSBKT-SEZ	Moscow	interpolymech.com	nnevskaya@global-rc.ru	(916) 609-0790	Custom software development; Embedded software (equipment, devices)	AR & VR Development; Artificial Intelligence; IoT
Megaputer Intelligence	Moscow	megaputer.ru	info@megaputer.ru	(499) 753-0129	Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	Artificial Intelligence; Big Data & BI
Microolap Technologies	Tatarstan	microolap.ru	formal@microolap.ru	(926) 326-9277	Information security solutions	Network Traffic Analysis (NTA)
Monolit-Info	Saint-Petersburg	monolit.com	alex@monolit.com	(921) 937-8542	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Custom software development	Big Data & BI
Motiware	Belgorod	motiw.ru	office@motiw.ru	(472) 278-0000	Custom software development; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Moy Klass	Ekaterinburg	moyklass.com	info@moyklass.com	(495) 108-5239	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Big Data & BI
New space	Moscow	newspacecorporation.com	info @newspacecorporation.com	(928) 165-3302	Custom software development; Website designing	Big Data & BI; Blockchain Technology; IoT; Smart City
Nexign	Saint-Petersburg	nexign.com/ru	Yekaterina.Petrova @nexign.com	(812) 326-1299	BSS solution provider	IoT
NitrosData	Moscow	nitrosdata.ru	info@nitrosbase.com	(495) 101-4324		Big Data & BI
NooSoft	Bryansk	noosoft.ru	lv@noosoft.ru	(913) 271-3993	Custom software development	Artificial Intelligence; Big Data & BI
Nord Clan	Ulyanovsk	nordclan.com	welcome @nordclan.com	(499) 404-0943	Custom software development; Mobile applications; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence
NotiSend	Tomsk	notisend.ru			Marketing platform for business	
Novosibirsk Scientific and Technological Center	Novosibirsk	nntc.pro	ematveeva@nntc.pro	(923) 248-2615	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI
NTP-DIP	Saint-Petersburg	ntp-dip.ru	dip_zenit@mail.ru	(911) 928-8478	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
OFT	Bryansk	oft32.ru	oft@inbox.ru	(920) 602-3335	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Open Solutions	Penza	osinit.com	info@osinit.com	(800) 250-9669		AR & VR Development; Artificial Intelligence; Big Data & BI; Blockchain Technology; IoT; Smart City
Piter-Soft	Saint-Petersburg	piter-soft.ru	info@piter-soft.ru	(812) 333-0860	Custom software development	
POWWWER	Novosibirsk	powwwer.io	a.mitasov@powwwer.io	(383) 318-1043	Custom software development; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Blockchain Technology; IoT
Project	Moscow	project-llc.ru	sdmitriy@project-llc.ru	(985) 890-0000	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI
PROMT	Saint-Petersburg	promt.ru	julia.epiphantseva @promt.ru	(812) 655-0350	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI
Prostorlab	Moscow	prostorlab.com	korolev@enersys.ru	(926) 296-0502	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	IoT; Smart City
PROTEI	Saint-Petersburg	protei.ru	sales@protei.ru	(812) 449-4727	Embedded software (equipment, devices)	Big Data & BI; IoT; Smart City
RAIDIX	Saint-Petersburg	raidix.ru	request@raidix.com	(812) 622-1680	Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	Artificial Intelligence; Big Data & BI; IoT; Smart City

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Raketa	**Moscow**	**raketa.world**	**hello@raketa.travel**	**(925) 655-9007**	**Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)**	**Big Data & BI**
RAKETA	“Raketa” Company is a developer of the digital platform and the mobile application for business trips and expense management. Our solution helps commercial and government companies save up to 30% of business travel budgets and up to 90% of employees' working time, makes the process of organizing business trips and expense management fully digital and automated. “Raketa” is the winner of the prestigious Buying Business Travel Awards in the Technology category in 2022 and the best Online booking tool in 2018. The company's offices are located in Moscow, Vladivostok, Yekaterinburg, Novosibirsk, Almaty, Nur-Sultan, Bishkek. The staff has 100 employees. Now we have more than 300 largest companies from Russia and abroad in our portfolio.					
RDTEX	Moscow	rdtex.ru	marketing@rdtex.ru	(495) 995-0999	IT Services	Artificial Intelligence; Big Data & BI; IoT
red_mad_ robot Tomsk	Tomsk	redmadrobot.ru	ee@redmadrobot.com	(909) 542-2169	Custom software development; Website designing; Mobile applications	Blockchain Technology; IoT
Redline	Tomsk	redlg.ru	info@redlg.ru	(999) 619-7912	Website designing; Mobile applications	IoT
Reksoft	Moscow	reksoft.ru	info@reksoft.ru	(495) 926-1771	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology; IoT; Smart City
Relex	Voronezh	relex.ru	market@relex.ru	(473) 271-1711	Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	Big Data & BI
Renga	Saint-Petersburg	rengabim.com	info@rengabim.com	(812) 703-1011	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
RNDSOFT	Rostov-on-Don	rnds.pro	es@rnds.pro		Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Custom software development	Big Data & BI; Blockchain Technology; Smart City

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
RTC ARGUS	Saint-Petersburg	argustelecom.ru	t.stakanova @argustelecom.ru	(921) 781-2612	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Big Data & BI
S.C.A.T	Krasnodar	skat-vending.com	info@skat-vending.com	(918) 199-3891	Custom software development	Artificial Intelligence
SatvaSpace	Tver	satvaspace.com	s.abdulova @satvaspace.com	(921) 655-6958	Custom software development	Artificial Intelligence; IoT
SDI SOFT	Moscow	sdisoft.ru	info@sdisoft.ru	(499) 495-1042	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	NRI – Network Resource Inventory
SearchInform	**Moscow**	**searchinform.ru**	**info@searchinform.ru**	**(495) 721-8406**	**Information security solutions**	**Artificial Intelligence; Big Data & BI**
SEARCHINFORM INFORMATION SECURITY	SearchInform is a leading Russian developer of information security solutions. The company's list of products includes instruments for complex internal threats protection: SearchInform Risk Monitor, SearchInform DLP, SearchInform SIEM, SearchInform FileAuditor, SearchInform ProfileCenter and TimeInformer as well as information security services using its own products. SearchInform products are suitable for companies of all industries, where data is stored, processed and transferred. The competence of the company is confirmed by a perpetual license from the Center for Licensing, Certification and Protection of State Secrets of the Federal Security Service of the Russian Federation, as well as by licenses from the Federal Service for Technical and Export Control of Russia.					
Secret Technologies	Moscow	secretgroup.ru	info@secretgroup.ru	(495) 109-2950	Information security solutions	
SETERE	**Saint-Petersburg**	**setere.com**	**info@setere.com**	**(812) 921-0977**	**Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools); Custom software development**	**Blockchain Technology**
SECURITY TECHNOLOGY RESEARCH	SETERE (LLC "TBI") is a software development company for users of domestic operating systems based on LINUX. At the moment, the company has released two of its own products: a software package for the rapid deployment of remote workstations "ISU Terminal" and "SETERE OCR optical text recognition system". SETERE is also engaged in import substitution projects, carries out complex deliveries of software and equipment of its partners.					
Sibedge	Tomsk	sibedge.com	contacts@sibedge.com	(382) 270-1841	Custom software development	Artificial Intelligence; IoT

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
SIGMA messaging	Saint-Petersburg	sigmasms.ru	integration @sigmasms.ru	(904) 615-4608	Content provider for A2P text and multimedia messaging	
SimbirSoft	**Ulyanovsk**	**simbirsoft.com**	**request @simbirsoft.com**	**(800) 200-9924**	**Custom software development**	**Artificial Intelligence; Big Data & BI; Blockchain Technology; IoT**
SimbirSoft	SimbirSoft provides custom software development and testing services. Since 2001, we have created more than 1000 IT products for business growth and development in fintech, retail, healthcare, logistics, industry, etc. We develop IT solutions for work automation, high-load systems, mobile apps, machine learning and data science systems for customers from Russia, Europe and the USA. We provide all services with our own staff of 1300 employees. SimbirSoft is listed among the largest IT companies in Russia and in the Software 500 global rating. Growth rates and service quality are confirmed by international awards and Global Outsourcing 100, RAEX, RUSSOFT AWARD, CNews, Tadviser, and Tagline ratings.					
SIMETRA	Saint-Petersburg	simetragroup.ru	moscow @simetragroup.ru	(812) 702-1335	Custom software development; Navigation and geographic information systems; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Smart City; Big Data & BI; Artificial Intelligence
Simtech Development	**Ulyanovsk**	**simtechdev.ru**	**sales@simtechdev.org**	**(800) 550-8510**	**Custom software development**	
simtech DEVELOPMENT	Simtech Development is a developer of eCom solutions for the transitioning of business to a new level of digitalization. We have been converting sales to online for more than 17 years. Since then, we have implemented more than 5,000 projects, including the launch of highly loaded online stores and marketplaces “from scratch”, as well as modifications of existing complex eCom projects. We work with corporations, financial and trading companies, manufacturing enterprises and local businesses. We work in the in-house development format, implementing projects by specialists of our own. Furthermore, our operation is in accordance with the requirements of the international standard ISO 9001:2015.					
SKB Kontur	Ekaterinburg	kontur.ru	pr@skbkontur.ru	(800) 500-5080	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)	Artificial Intelligence; Big Data & BI

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
SkyDNS	Ekaterinburg	skydns.ru		(812) 385-7421	Information security solutions	Big Data & BI
Smart Analytics	Perm	sm-analytics.com.ru	eugenia.shadrina@sm-analytics.com	(964) 190-3412	Custom software development	Big Data & BI
Smart Design	Saint-Petersburg	smddev.com	vitaly.tishkov@smddev.com	(921) 932-7150	Custom software development	Artificial Intelligence; Big Data & BI; IoT
Smartilizer Rus	Saint-Petersburg	smartilizer.ru	evgeny.filippov@smartilizer.ru	(921) 323-1370	Custom software development	Artificial Intelligence
SMS-Information technologies	Samara	sms-it.ru	info@sms-it.ru	(846) 205-7900	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	IoT
Soft Company	Moscow	softwarecom.ru	info@softwarecom.ru	(495) 983-0548	Custom software development	Big Data & BI; Blockchain Technology
SoftLab-NSK	Novosibirsk	softlab-nsk.ru	administration@softlab-nsk.com	(383) 363-0462	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other); Custom software development	AR & VR Development
SOLVO	Saint-Petersburg	solvo.ru	sales@solvo.ru	(812) 606-0555	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI
Sopos	Saint-Petersburg	einsur.ru	info@einsur.ru	(812) 507-6780	Custom software development; Tender platform; Health insurance expertise	
SPC KRUG	Penza	krug2000.ru	krug@krug2000.ru	(841) 249-9775	Development of software and hardware complexes and industry solutions in the field of industrial automation	IoT
Speech Technology Center	Saint-Petersburg	speechpro.ru	stc-spb@speechpro.com	(812) 325-8848	Embedded software (equipment, devices)	Artificial Intelligence; Big Data & BI; Smart City
SPHAERA	Moscow	sphaera.ru	info@sphaera.ru	(495) 672-7076	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Big Data & BI; Smart City

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
SSP SOFT	**Moscow**	**ssp-soft.com**	**sales@ssp-soft.com**	**(495) 975-9390**	**Custom software development**	
SSP SOFT		SSP SOFT is a service company and a reliable IT service provider for the implementation of complex, large-scale business digital projects in banking and financial sector, retail, telecommunications, transport and logistics, power engineering and other areas. The company was awaded by the «RUSSOFT AWARDS 2021» prize in the category of fast-growing service companies that have made significant progress in the field of software development and IT -services export. Access to more than 1500 highly qualified specialists, high quality requirements, quick response to customer`s requests and modern management approaches allow SSP SOFT to provide services that meet international standards. SSP SOFT operates in the Russian Federation, Republic of Belarus, Republic of Kazakhstan and other EAEU countries.			
Statanly Technologies LLC	Saint-Petersburg	statanly.com	sergey@statanly.com	(921) 875-2396	Custom software development	Artificial Intelligence; Big Data & BI; Smart City
Supl.biz	Tomsk	supl.biz	info@supl.biz	(800) 600-5831	Services based on our own business platform Supl.biz	Artificial Intelligence
SWDC RTSoft	Moscow	rtsoft.ru	rtsoft@rtsoft.ru	(495) 967-1505	Embedded software (equipment, devices); Custom software development	AR & VR Development; Artificial Intelligence; IoT; Smart City
SWTECNN LLC	Nizhny Novgorod	swtec.group	Artem.Kalachev @swtecnn.com	(960) 173-8444		
Syncretis	Saint-Petersburg	Syncretis.com	info@syncretis.com	(812) 611-0686	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology
T1	Moscow	t1.ru	info@t1.ru	(495) 727-0985	Custom software development; System integration; Consulting	Big Data & BI; IoT
TEAM FORCE	**Moscow**	**teamforce.ru**	**welcome @teamforce.ru**	**(495) 646-8040**	**Custom software development; Mobile applications; Website designing**	**Human capital**
TEAMFORCE		TEAM FORCE is the pioneer of SmartStaffing and the leader of the TEAM FORCE Alliance, where IT teams have been strengthening each other via project-based rearrangement of required competencies since 2008. Our Alliance, as an industry partnership, is focused on solving the challenges of the largest corporate customers.				

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Technoservice	Moscow	techsrv.ru	info@techsrv.ru	(499) 704-3425	Custom software development	Big Data & BI; IoT; Smart City; AMS (Association Management Software); ESB (enterprise service bus)
TERMIKA	Moscow	olimpoks.ru	info@termika.ru	(495) 956-2101	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	
TLK	Novosibirsk	youlk.ru	info@youlk.ru	(383) 209-3430	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; IoT; Smart City
Tract-Soft	Saint-Petersburg	tract-soft.ru	ns@tract.ru	(812) 490-7799	Embedded software (equipment, devices); System for broadcasting automation and planning the radio content	
Transset	Moscow	transset.ru	inform@transset.ru	(499) 649-4668	Custom software development; Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	Artificial Intelligence; Big Data & BI; IoT; Smart City
TRONIC	Moscow	tronicint.ru	info@tronicint.ru		Supply of technological solutions for the production of microelectronics and relevant IT solutions for various sectors of the economy	Big Data & BI; Smart City
Unlim-Soft	Tyumen	unlim.group/ unlim-soft	m.zemlyanoy @unlim.group	(345) 228-5052	Custom software development	Artificial Intelligence; IoT
Usetech	Moscow	usetech.ru	info@usetech.ru	(495) 660-5048	Custom software development	Artificial Intelligence; Big Data & BI; Blockchain Technology; IoT

Company	Head office location	Web	E-mail	Phone	Specialization	Expertise in areas corresponding to global technological trends
Vinteo	**Krasnodar**	**vinteo.ru**	**info@vinteo.ru**	**(800) 333-4016**	**Basic software development (DBCS, OS, office applications, virtualization tools, programming languages and tools)**	
Vinteo VIDEO COMMUNICATION CORE	Vinteo is a Russian producer of professional videoconferencing software and endpoints (telepresence) and a provider of video engineering services. The Vinteo products are based on the international ITU-T standards and H.323 and SIP protocols and provide the maximum compatibility with third-party videoconferencing solutions. Vinteo products are used for holding conference calls at the highest government level, organizing national programs on distance education, telemedicine, etc. The company's developments are included both in the Unified Register of Russian Software and in the official list of analogues recommended by the Russian Ministry of Digital Development, Communications and Mass Media for replacement of popular foreign video communication services.					
VR Concept	Moscow	vrconcept.net	info@vrconcept.net	(495) 212-1147	Replicated enterprise (institution) management, document of automation, design and production process systems (ERP, CRM, ECM, EDMS, CAD, APCS and other)	AR & VR Development; Smart City
Web3 Integrator	Moscow	wavesenterprise.com	sales @wavesenterprise.com		Custom software development	Blockchain Technology; IoT
Webpractik Ltd	Rostov-on-Don	webpractik.ru	info@webpractik.ru	(863) 303-2038	Custom software development; Website designing	Artificial Intelligence; Big Data & BI
WESMA	Moscow	wesma.agency	manager@wesma.ru	(495) 118-2474	Website designing	