

Business Opportunities for Swiss Suppliers in the  
Machine Tool Sector in Russia

# MARKET RESEARCH



OFFICIAL PROGRAM



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# Contents

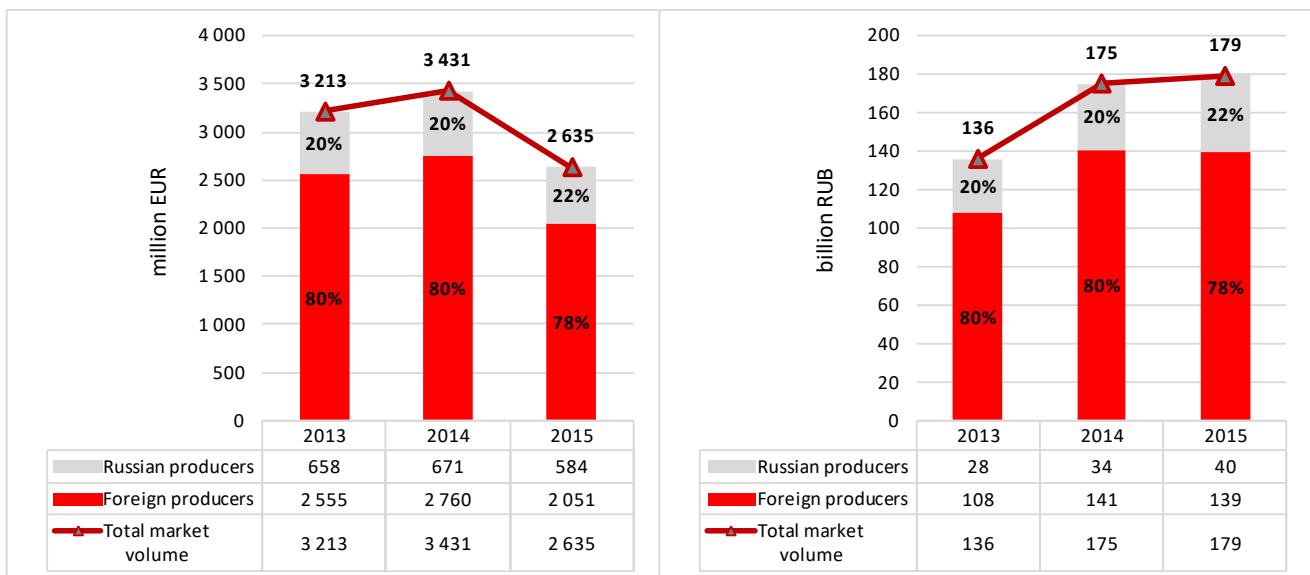
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# 1. Industry Overview

The market for machine-tool construction in Russia was estimated to be, by the end of 2015, around 179 billion RUB, or 2,635<sup>1</sup> million EUR, of which Russian production amounted to 649 million EUR: imports were 2,051 million EUR and exports were 64 million EUR. Products of foreign origin account for more than <sup>3</sup>/<sub>4</sub> of the Russian market for machine-tool construction.

The size of the Russian machine-tool market increased in money terms (**in RUB**) by 32% during the period of 2013-2015, in particular domestic production increased by 43%, and imports by 29% (in RUB). The market volume for machine-tool construction **in EUR**, as well as in other industries in Russia, showed a decrease in 2013-2015 – mainly due to the rapid drop in the rate of the national currency in 2014-2015.

Dynamics and structure of the Russian machine-tool market for domestic and foreign producers, 2013-2015, million EUR, billion RUB<sup>2</sup>

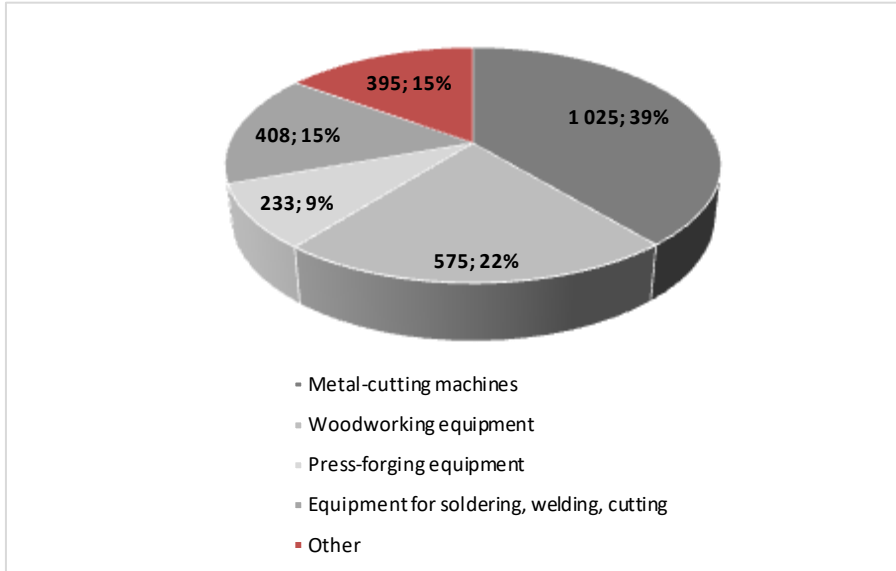


The bulk of the machine-tool market in Russia consists of metal-cutting machines (39% of the total market volume in 2015) and woodworking equipment (22%). Woodworking and press-forging equipment used in Russian industry is mainly produced by foreign manufacturers (98% and 99%, respectively). In addition, a large share of imports can be observed in the market for metal-cutting machine tools (84% of the gross market volume in 2015), as well as the market for soldering, welding, cutting, and surface tempering equipment (80%).

<sup>1</sup> Here and elsewhere, average annual exchange rates were used for rubles / euro conversion: f2013 was 42.3 rubles / euro, 2014 was 51.1 rubles / euro, and 2015 was 68 rubles / euro.

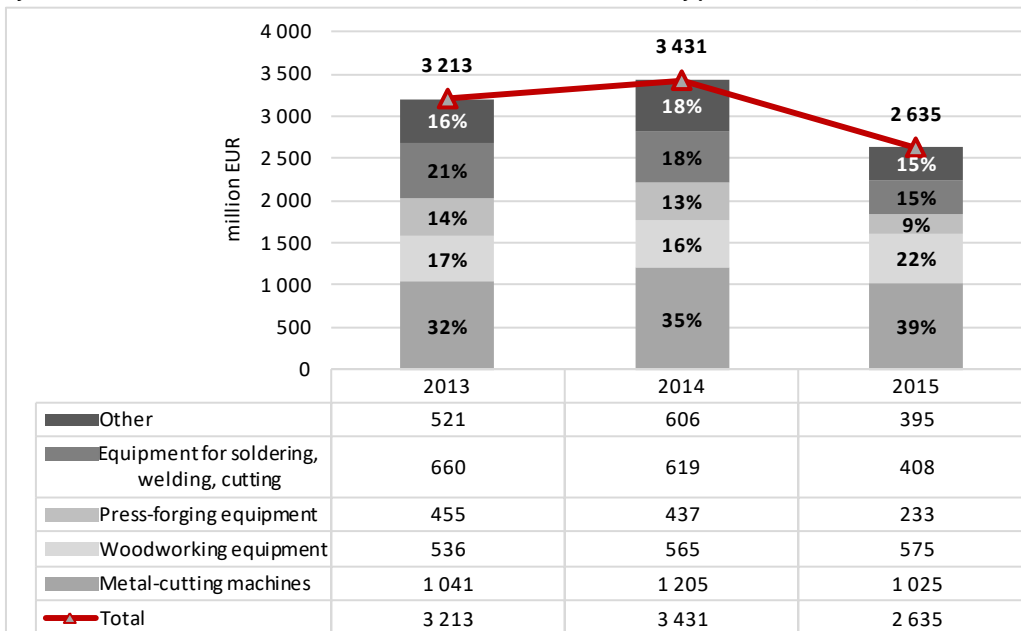
<sup>2</sup> Here and elsewhere, based on data from the Federal Customs Service of Russia and Russian Federal State Statistics Service.

Structure of Russian machine-tool market by product, 2015, million EUR, %



In the past few years, there has been a tendency towards an increase in metal-cutting machinery in the share of the machine-tool market's structure in Russia – from 32% in 2013 to 39% in 2015, and woodworking equipment went from 17% to 22%. The share of press-forging equipment and soldering, welding, cutting, and surface tempering equipment, on the contrary, declined.

Dynamics and structure for the Russian machine-tool market broken down by product lines, 2013-2015, million EUR



The average export share in the total volume of Russian production in the machine-tool industry was only 10% in 2015 (in 2013-2014 it was 11% and 12%, respectively). The total volume of export in monetary terms was also quite low – only 64 million EUR in total for the whole industry.

The cumulative share of imported products in the Russian machine-tool market fell slightly in 2013-2015 – from 80% to 78%. Specifically, the share of metal-cutting machines of foreign origin in the Russian market fell from 96% in 2013 to 84% in 2015,

while the share of imported press-forging equipment increased from 94% to 99%, and soldering, welding, and cutting equipment from 70% to 80%.

The export of *metal-cutting machines* from Russia (as well as the export share in production volume) declined annually in 2013-2015, and amounted to only 21 million EUR in 2015, or 11% of Russian production (compared with 40 million EUR, or 46%, in 2013). The main receivers were Kazakhstan and Belarus (28% and 15% of gross export volume in 2015, respectively). The high percentage of exported products in the Russian machine-tool market is typical only for *press-forging equipment* – 91% in 2015, or 22 million EUR (compared with 42% in 2013 and 51% in 2014). The share of *woodworking equipment* export in production was fairly high - 27% in 2015. However, the export volume in monetary terms was small - only 4.6 million EUR (production volume was 17.1 million EUR). The leading importing countries of Russian-made press-forging equipment were Kazakhstan, which accounted for 25% of total exports in 2015, or 5.4 million EUR, China (13%, or 2.8 million EUR), India (13%, or 2.7 million EUR), Korea (9%, or 2 million EUR) and Turkey (7%, or 1.4 million EUR).

## TOP 20 KEY INDUSTRY PLAYERS

Company name	Revenue, million RUR			Rev., mio EUR, 2015	Production	Address, website
	2013	2014	2015			
LLC NPO "Stankostroyeniye"	1 509	1 897	3 097	45,5	CNC <sup>3</sup> machine tools of "machining center" type Foundry	Bashkortostan, Sterlitamak www.stankostroenie.com
JSC "Tyazhpresmash"	2 327	2 767	3 017	44,4	Forge-and-press machine building. Downhole equipment for equipping gas and oil wells and their conservation Press-forging equipment Metallurgical production Wall and roofing sandwich panels Water utility products Multipurpose double-seater C-2 "Sintal" Square – 400 thou sq.m	Ryazan, www.tkpo.ryazan.ru
JSC "Kirovgradskiy zavod tverdykh splavov"	1 980	1 923	2 469	36,3	The company specializes in the production of metal powders, sintered hard alloy products and tools. Processing of metals and hard-to-process materials by cutting, drawing, equipping a mining drilling tool.	Sverdlovsk region, Kirovgrad www.kzts.ru
JSC "STP "PZMTS"	1 332	1 522	2 429	35,7	CNC Turning Machining Centers Range of turning high-tech-logical centers of increased dynamic rigidity, accuracy and performance The plans include the expansion of optional solutions - the subsequent modernization of the range of machines, the development of new models and technical solutions.	Perm пзмп.рф
LLC "MTE KOVOSVIT MAS"	367	1 889	2 387	35,1	Joint venture LLC "MTE Group" and KOVOSVIT MAS, Localization of production in Russia Milling machines, lathes	Rostov region, Azov www.mtekovosvitmas.ru

<sup>3</sup> Computer numerical control

PJSC "Siblitmash"	837	1 048	1 437	21,1	Multi-purpose machine building enterprise Machines and means of automation of injection molding; Molding machines and casting lines; Machines for centrifugal casting of pipes and pipe billets	Novosibirsk, www.siblitmash.com
LLC "Gruppa STAN"	22	40	1 197	17,6	"STAN" company includes: LLC NPO "Stankostroenie", JSC "Stankotekh", LLC "Ivanovo Heavy Machine Tool Plant", LLC "Ryazan Machine Tool Plant" and LLC "Shlifoval'nyye Stanki". Manufacture of metal-machining machine products, as well as the modernization and restoration of previously released equipment, including other manufacturers.	www.stan-group.com
JSC "INTERSKOL-Alabuga"	11	313	1 111	16,3	The electrotool; Means of small-scale mechanization The plant opened in 2014. Production capacity is up to 2 million units per year, with the commissioning of II and III stages it will increase to 5 million units per year	Tatarstan, OEZ "Alabuga" www.alabuga.interskol.ru
JSC "Instrumental'nyy zavod - PM"		788	887	13,0	Designing, manufacturing, repair of non-standard measuring and technological tools and equipment. Serial production of aircraft engines for civil aviation, industrial gas turbines for power plants and gas transportation.	Perm www.avid.perm.ru
JSC "Zavod po vypusku tyazhelykh mekhanicheskikh pressov"	898	2 313	873	12,8	Equipment for forging and sheet stamping production and workshops; Equipment for the construction industry and railcar workshops; Large-scale metal structures	Voronezh www.tmp-press.ru
JSC "Sverdlovskiy instrumen-tal'nyy zavod"	590	747	862	12,7	Carbide and hard-cutting tools, band saws, molds and dies, thermal treatment of metals, metal-cutting tools. Milling and turning machines, carbide tools.	Yekaterinburg www.siz66.ru
JSC "Stankotekh"	652	663	805	11,8	Manufacture of metal-working machines and press-forging equipment. Overhaul and modernization of machine tools and presses. Supply of components for machine tools. Machining of the Customer's parts.	Moscow region, Kolomna www.stanko-nct.ru

JSC "Elektromekhanika"	552	600	683	10,0	Creation and implementation of modern measuring, recording and automation systems for industry and transport.	Penza www.elmeh.ru
LLC "Savelovskiy mashinostroi-tel'nyy zavod"	500	677	549	8,1	CNC turning and milling machines; Equipment for processing titanium and high-temperature alloys.	Tver region, Kimry, www.smz-stanki.ru
JSC "Sasta"	735	510	506	7,4	Automatic lines, flexible production modules, processing centers, lathes and special machines with ready-made technology.	Ryazan region, Sasovo, www.sasta.ru
LLC "IZTS"	133	212	77	1,1	Precision horizontal boring machines; Processing centers; Heavy processing centers with a carrying capacity of up to 25 tons; Tools, furniture.	Ivanovo, www.izts.ru
JSC "Stankoprom"	37	35	32	0,5	Holding unites scientific centers, manufacturers of machine tools. Qualitatively change the approach to the technological re-equipment of Russian enterprises: from local replacement of equipment to complex technological re-equipment. On a parity basis, they are open for cooperation with foreign machine-tool companies.	Moscow stankoprom.ru

## INDUSTRY PROBLEMS

- Technological backwardness in some areas of manufacturing
- The introduction of sectoral sanctions that limited access of Russian enterprises to specific foreign technologies and the capital market
- Low labor productivity
- A lack of financial resources (including R&D resources), and dependence on supplies of imported components.

## 2. Industry Development Forecasts

The expected change in production volumes in terms of the incremental total by 2019, as compared to 2015, is 27.4%.

### **PRIORITY TASKS FOR THE INDUSTRY**

- Reducing the dependence of Russian strategic machine-building companies, and the military-industrial complex, on the supply of foreign technology.
- Providing equipment upgrades for companies, and constantly replicating and improving applied production technologies.



### 3. Investments in the Industry

Russian machine-tool plants demonstrated positive investment dynamics for the modernization of machinery and equipment in 2013-2015, and volume increased nearly 3 times.

#### Investment in the machine tool industry in EUR by subsegment

Industry	2015, million EUR
<b>Machine tool industry in total</b>	<b>24</b>
Production of other machine tools for working metal	9
Production of metal-cutting machines	8
Production of other machine tools	3
Production of equipment for soldering, welding, and cutting	3
Production of press-forging equipment	1
Production of woodworking equipment	0,02

The highest investment volume was observed in the production of metal-working equipment.

#### Dynamics of the investments in machinery, equipment, vehicles

	2013	2014	2015
Machine-tool industry in total, million EUR	523	10.2	24

The volume of federal budget allocations for the subprogram "Tool-making industry", part of the Russian Federation government program entitled "Developing industry and increasing its competitiveness" amounted to:

- 2012-2016 – 10 630 million RUR (156.3 million EUR<sup>4</sup>)
- 2017-2020 – 6 500 million RUR (95.6 million EUR).

<sup>4</sup> The average annual rate **for 2015** was used for rubles / euro conversions (68 rubles / euro).

Funds raised for investments in fixed assets are negligible in the machine-tool industry (in 2015 - only 1 million EUR).

**Investment in fixed assets in EUR**

<b>Industry</b>	<b>2015, million EUR</b>
<b><i>Machine tool industry in total</i></b>	<b><i>1.0</i></b>
Production of other machine tools for working metal	0.2
Production of metal-cutting machines	0.2
Production of other machine tools	0.4
Production of soldering, welding, and cutting equipment	0.4
Production of press-forging equipment	-
Production of woodworking equipment	-

The Russian authorities invested substantial amounts in import substitution in the machine sector.

**Recipients of the state funding in "Machine tool industry" section**

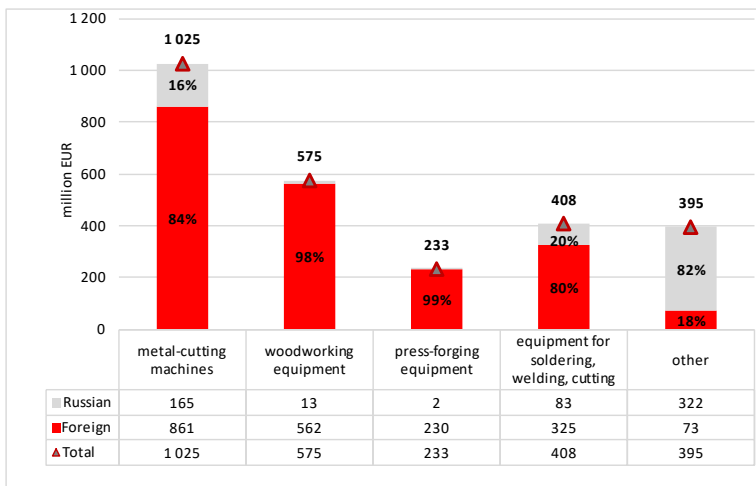
<b>Source of financing</b>	<b>Company name</b>	<b>The amount of the state funding, EUR</b>	<b>The amount of the state funding, RUB</b>
Federal budget	JSC "Tjzhmekhpress"	51 414	3 496 120
	JSC "Zarem"	56 818	3 863 610
	JSC "Siblitmash"	37 702	2 563 759
	LLC "STAN Group"	252 180	17 148 241
Industrial Development Fund	JSC "Interskol-Alabuga"	20 588 235	1 400 000 000
	LLC "Virial"		
	JSC "Tyazhpresmash"		
	LLC Sterlitamak Machine-Tool Enterprise		
	JSC "Stankotech"	7 000	500 000

The goals for the majority of the projects were setting up production for metal turning lathes and milling machines, the implementing the production of CNC machines, and local equipment upgrades related to industrial output capacity.

## 4. Prospects for the supply of goods and equipment from Switzerland

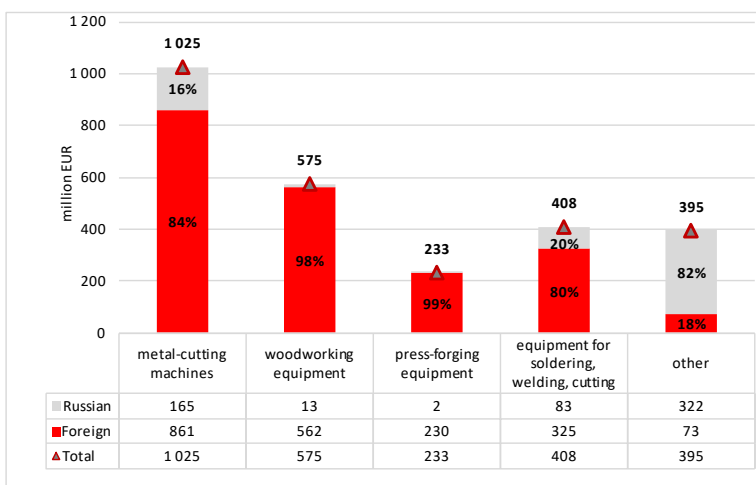
Products of foreign origin account for more than ¾ of the Russian market for machine-tool construction.

Structure of the Russian machine-tool market broken down both by product lines and by domestic and foreign producers, 2015, million EUR



The main countries of supply are the USA, Germany, and Japan. There are companies from Switzerland among foreign manufacturers of machine tools.

Structure of the Russian machine-tool market broken down both by product lines and by domestic and foreign producers, 2015, million EUR



The Russian Government has recently started several programs to increase domestic production. Thus, the national industrial policy is aimed at developing the manufacturing of Russian products that are to replace imports (import substitution) and as a consequence – an increase in domestic production (production localization).

The machine tool industry is one of the sectors in focus of the import substitution plans of the Russian government and the Russian authorities put a lot of efforts to convince the domestic and foreign manufacturers to invest in the modernization and the expansion of the production.

In total, research done in the scope of the Project revealed 13 investment projects implemented by domestic companies in partnership with foreign producers.

**Investment plans of the companies "Machine tool industry"**

<b>Company initiator of the project</b>	<b>Project concept</b>	<b>Types of equipment</b>	<b>Amount of financing, million EUR</b>	<b>Amount of financing, million RUB</b>
JV Ulyanovsk Machine Tool and German-Japanese group "DMG-Mori Seiki"	Manufacturing of the wide range of turn-mill machining centers. The project capacity will be over 1000 machines per year by 2017. Development of new models of metal-cutting equipment in Russia.	N/A	73,5	5000
"MTE Kovosvit MAS" (Czech Republic)	Creation of a modern high-tech production of metal-turning lathes, milling machines, multifunctional metalworking centers "Kovosvit". The plan area will be 33 thousand square meters. (Rostov region). Start of production: 2018.	N/A	27,9	1900
JV JSC "Kovrovskiy elektromekhanicheskiy zavod" and Takisawa (Japan)	Localization of the manufacturing of new generation turn-mill machining centers.	N/A	N/A	N/A
Co-operating LLC "UMK "Pumori" (Sverdlovsk region) and Okuma (Japan)	Joint manufacture of machine tool (brand "Okuma-Pumori") followed by the localization of production including in the form of special investment contract.	N/A	58,8	4000
LLC "Shlifovalnyye stanki" (huffing machines)	Production of OD grinding machine and surface-grinding machine with CNC for processing parts of turbine and gas turbine engines. The project is funded by Industrial Development Fund. Acquisition, installation and setting-up of equipment: Q2 2018. Start of production: Q4 2019.	Centrifuges, including centrifugal dryers; filtering or purifying machines and devices for liquids or gases	4,2	286
JSC "Vniiinstrument"	Creation of the full-scale production of ultra-precision multi-axis CNC machine tools with a modular design for nanometer accuracy and optical surface quality machining parts. The company plans to cover about 50% of the domestic industry's need for equipment of this accuracy class. The project is funded by Industrial Development Fund. Installation and setting-up of equipment: Q4 2018. Start of production: 2019.	Centrifuges, including centrifugal dryers; filtering or purifying machines and devices for liquids or gases	5,9	400
JSC "Stankotech"	Retooling and modernization of the CNC turning mill production (machining centers).	N/A	11,3	767,3

JSC "PZMTS"	Reconstruction and equipment of industrial capacity for the high-tech metal working centers production. New centers will be with Increased dynamic rigidity, accuracy and productivity for the processing of special structural steels and alloys.	N/A	N/A	N/A
JSC "Sverdlovsky instrumentalny zavod" (Sverdlovsk tool factory)	Process refinement and the formation of new production lines for the manufacture of hard-cutting tools, carbide tools, series production of lapping tool and drills, molds and welding of band saws.	N/A	N/A	N/A
JSC "Stankoprom"	Reconstruction and equipment of industrial capacity of LLC "Simbirsk Machine-Tool Plant" for production a series of vertical milling and boring machines of the new range "B". Reconstruction and equipment of the production of turn-milling machines and CNC precision production center.	N/A	N/A	N/A
LLC " Vologodskiy zavod spetsialnykh podshipnikov" (Vologda Special Bearings Plant)	Construction of a factory for the high-precision bearings production.	N/A	N/A	N/A
LLC " IZTS" (Ivanovo Heavy Machine Tool Plant)	Retooling and modernization of the production of CNC heavy machines and CNC high-speed machine tools (machining centres).	N/A	N/A	N/A
LLC "SMZ" (Savelovsky Machine-Building Plant)	Reconstruction and equipment of industrial capacity for the manufacture of turn-milling machines and CNC drilling-boring machine.	N/A	N/A	N/A

Furthermore during the research done in the scope of the Project several types of equipment with a high import share and Russian manufacturers capable to substitute the production were identified. Depending on the results of feasibility studies the Russian companies may start to establish new production lines, which may open good business opportunities for Swiss suppliers.

#### The necessity of foreign technologies in "Machine tool industry" section

Types of equipment	The share of Russian production by sub-groups	The share of foreign production by sub-groups	Russian manufacturers (producing or capable of mastering the production of competitive products)
Turning equipment	5-40%	60-100%	The most important for import substitution from the point of view of national security is the equipment for ultra-precision metal working of certain parts. Can be organized on the basis of "Krasny Proletary" factory (currently included in OJSC "VNIINSTRUMENT").
Boring equipment	1%	99%	Coordinate boring machines are supplied by Dixi (Switzerland). Production can be arranged at JSC "Stan-Samara" (Samara)
Milling equipment	3-20%	80-97%	The developments exist, small-scale production is organized <sup>5</sup>
Grinding equipment	0-3%	97-100%	The developments exist at JSC "Stan-Samara" (Samara)

<sup>5</sup> LLC "SMZ" (Kimry, Tver region), LLC "NPO "Stankostroenie" (Sterlitamak), JSC "IZTS" (Ivanovo), LLC "CCV" (Ulyanovsk), ZAO "Stankotech" (Kolomna), JSC "Sedin" (Krasnodar)

Thread grinding equipment	3%	97%	Potentially, there is a base for development at CJSC "MSZ-Salut" (Moscow)
Tool grinding machinery	0%	100%	Ultra-precision grinding machines are supplied by Ewag (Switzerland). In the future, production can be organized at LLC "VSZ Tekhnika" (Vladimir)
Gear processing equipment	1%	99%	JSC "Sasta" (Sasovo, Ryazan region) JSC "MSZ-Salut" (Moscow)
Electroerosive equipment	4%	96%	In the future, they can be produced at LLC "EDM Engineering" (Moscow)
Press equipment	5-15%	85-95%	Criticality from the point of view of national security of the release of certain types of press machines. The output may be adjusted at LLC "Zavod Mekhanicheskikh Pressov" (Barnaul) JSC "Hydropress" (Orenburg)
Metrological equipment	5%	95%	LLC "Lapik" (Saratov), JSC "NIIzmereniy" (Moscow)
Foundry equipment	0-7%	93-100%	In the future, production may be organized at Siblitmash OJSC (Novosibirsk)
Blanking equipment	2-30%	70-98%	There are some developments, small-scale output of products is carried out at manufactur <sup>6</sup>
Means of automation of production	5%	95%	In the future, the production can be arranged at LLC "VMZ" (Tolyatti)
Welding equipment	10%	90%	JSC "Selma" (Simferopol)
Additive equipment	0%	100%	LLC "SMZ" (Kimry, Tver region) IPLIT RAN (Shatura, Moscow region)
Machine control systems	0-15%	85-100%	Important positions for providing CNC production of other types of machine tools. Production can be organized by following companies (see note below) <sup>7</sup>
Thermal Equipment	20%	80%	Production can be organized by following companies <sup>8</sup>
Tool products	10-30%	70-90%	Critical products. Without the presence of own production of carbide tools, the development of machine-building, aviation, aerospace and other industries is under the threat of failure; Criticality from the point of view of national security. Missing positions can be made at following enterprises (see note) <sup>9</sup>
Accessories for machines	0-12%	88-100%	In the future can be produced at LLC "Pimek" (Moscow), LLC "SMZ" (Kimry, Tver Region), JSC "ENIMS" (Moscow)

6 Delta-Index LLC (Kazantsevo, Chelyabinsk region), Donpressmash (Azov), Nelidovo Hydraulic Presses Plant (Nelidovo, Tver Region), JSC "VNITEP" (Dubna), JSC "NPP ESTO" (Zelenograd), Plant of Automated Systems "Cyberstep" (Tyumen), LLC "SMZ" (Kimry, Tver Region), LLC "Baltiyskaya mashinostroitel'naya kompaniya" (St. Petersburg), JSC "Astrakhanskiy stankostroitel'nyy zavod" (Astrakhan)

7 MSTU "Stankin" (Moscow), "T-Platforms" (Moscow) LLC "Balt-System" (St. Petersburg)

JSC "Micros" (Noginsk, Moscow region) "Modem-Techno" (Tula), JSC "SKB-IS" (St. Petersburg)

8 NPO "Teplokonstruktsiya", JSC "Nakal", LLC "NPF Termiks", JSC "Electromechanics", JSC "MEVZ", LLC "Teplopribor", LLC "Aktan Vakuum"

9 LLC "VIRIAL", JSC Kirovgrad Hard Alloys Plant, JSC "Pobedit", JSC "Instrumental Plant-PM JSC VNIINSTRUMENT", JSC "Terekalmaz", Ilyich Abrasive Plant, JSC "VNII-MAZ"

## 5. Conclusions and Recommendations

The current import substitution initiative in Russia opens several business opportunities for Swiss suppliers of the relevant sectors. The main goal of the Russian authorities is to boost the local production. Due to high investment costs this is probably not the first option for Swiss SMEs, especially if they have not been introduced in the Russian market so far and have no order commitment. But for suppliers there are also some interesting export options as presented in the report.

In order to be successful and win new business partners in the Russian market, the following competences are particularly important:

- Local presence either with a subsidiary, a representative office or through a reliable partner
- Good functioning logistics, generally more important than in the West
- Consulting support capabilities for projects in order to win tenders
- Customer training
- Well trained service staff

In general, personal contacts with potential clients and decision makers are likely to take much more time than in European countries. Detailed information material in Russian will also be necessary to convince your business partner.

The Swiss Business Hub Russia will be glad to consult and support you in all questions related to doing business in and with Russia.

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