

Industry Insights

The facts for your business

Machinery & Equipment Industry in Russia

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This report is an overview of the Machinery & Equipment sector in Russia rather than an exhaustive report. We would be happy to provide a more detailed report on a specific subject. This extended version of the original report contains further statistics and other market information.

For the purposes of this report the Machinery & Equipment sector consists of Electrical Engineering & Precision Equipment, General Machinery & Equipment, and Transportation Equipment. We do not cover the Automotive industry in this report. A separate research paper will be dedicated to this industry.

Executive Summary (1)

“The industry is very important for the country’s modernization. It needs significant investment”



- Russia’s Machinery & Equipment industry (excluding Automotive) is the **4th largest sector** among other Industrial Manufacturing sectors of the economy, employing approximately **2 million** people
- **High level of regional concentration:** Central, North-West and Volga federal districts account for approximately **80%** of the sector’s output
- Significant **dependency** on imported machinery and equipment: **50%-90%** depending on industry sector
- Equipment will likely require modernization: rate of depreciation reaches **70%** in certain sectors. For example, equipment used in wholesale and retail is 68% depreciated, oil and gas production: 64%; construction: 60%; transportation: 60%; industrial manufacturing: 54%.
- The Russian machinery and equipment market was an **impressive USD 103 bn** in 2015
- **China, Germany, Italy, USA and Japan** are main sources of imports into Russia: among the five of them they account for **55% of Russia’s imports**

Executive Summary (2)

“Investment potential due to growing demand and state incentives”



- **13 industrial segments**, such as Agrochemicals, Paints and Textiles, which are consumers of the machinery industry, show **growth of 10% and more** in the first six months of 2016 (see slide 14)
- These factors above can be **sources of export opportunities** for overseas manufacturers
- Government is pursuing an **aggressive policy of import substitution** and **limits access to state procurement** for companies that have not localized
- Share of machinery produced locally should be **60% by 2020** while China’s program **‘Made in China 2025’** sets this level at **70%**
- At the same time, there are incentives available to investors who want to localize: machinery (power generation and energy) is the largest recipient of state aid from the **Industry Development Fund**
- **Special Investment Contracts** (SPIKs) are the new tool of the government’s industrial policy: investors should implement production and the state guarantees stability of tax and legal regimes, and provides incentives

Russia: Facts & Advantages (1)

“Educated labor force”



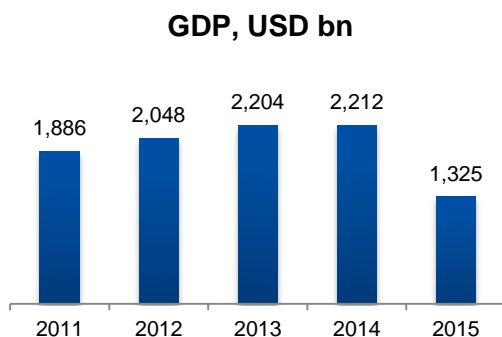
Indicators	2015
Public debt, USD bn*	112
Public debt as a % of GDP	9%
Private debt, USD bn	165
Private debt as a % of GDP	13.2%
Human Development Index (HDI)	0.798
Unemployment, %	5.9

- Russia is a major market with **144 million** inhabitants, of which **74% live in urban areas**
- **Very close to Europe** with strong historic and economic ties
- **77 million** people are working age (aged 15-72)
- **Good education system** with a strong technical/science heritage
- **100%** of population is **literate** with **95%** with at least **upper secondary education**
- **950** state and private **universities** produce **1.2 million graduates** a year (almost double from 2000)
- According to OECD, **54%** of those aged 25-64 have attained **university degree**
- Approximately **30%** of graduates major in **sciences and technology**
- **Average salary** in the machinery and equipment industry is **RUR 32,000-36,000 (EUR 440-490)**, putting Russia in the same group with Belarus, Bulgaria, Kazakhstan, Serbia and Thailand). Average salary in **China is 50% higher** than in Russia

*Year-end exchange rates were used.

Source: Federal State Statistics Service (Rosstat),
FocusEconomics, UNDP, Central Bank

Russia: Facts & Advantages (2)



- **12th largest economy in the world** measured by GDP in real terms: **USD 1,325 billion**
- **6th largest economy in the world** measured by GDP based on PPP valuation
- **GDP per capita** in 2015 at current prices: **USD 9,055** (and USD 25,411 based on PPP)
- **Annual progress** in World Bank's 'Ease of doing business' ranking: **51st place in 2016 (2015: 62nd)**
- A survey by CEEMEA Business Group, a consultancy, found that **30% of foreign companies** operating in Russia are **planning some type of new investment in Russia in 2016**. This is evidence that localization is seriously considered as an option for future development. The survey was conducted among major multinational companies
- **28% of foreign companies use Russia as an export base** and another 20% are thinking
- Approximately **40%** of multinational industrial companies **expect double-digit growth** in RUR sales

Russia: Facts & Advantages (3)



- According to a survey of the **Association of European Businesses** in Russia and the International Institute of Marketing and Social Research **GfK-Rus**, **European business expects investments in Russia to grow in the next 2–3 years**. In 2016, the integrated AEB-GfK Index grew by 14 points from 2015 and now stands at 120 points out of 200 possible, which is a shift to positive expectations
- **Manufacturing Purchasing Managers' Index** (PMI) elaborated by Markit **rose to 49.6** in May from 48.0 in April - closer to the 50-threshold that separates contraction from expansion in the sector



“Increase in investments expected”

Machinery: Role in the Economy



#4
among Industrial Manufacturing segments



8%
is the sector's contribution to the economy



2 million
people are employed in the sector



3%
of total working population

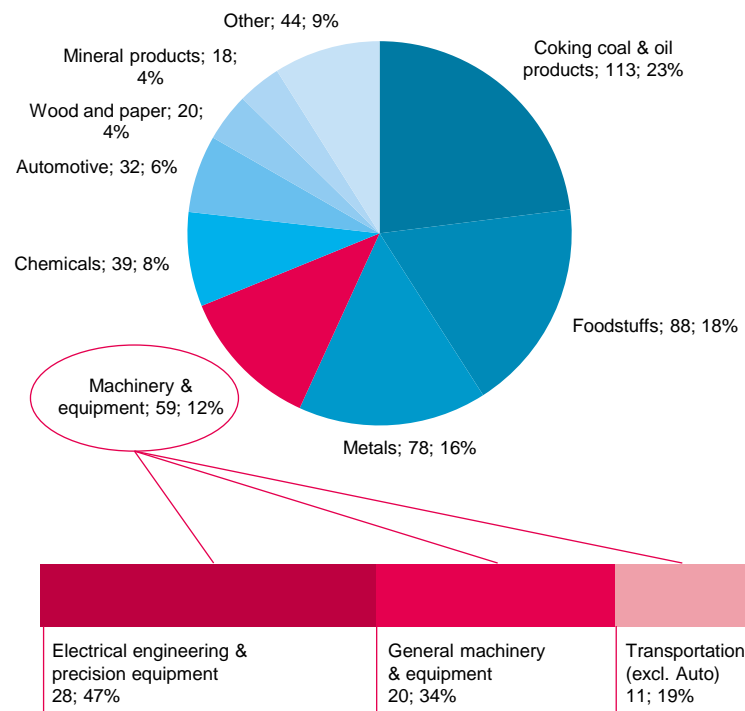


130,000
companies work in the sector



34%
of players are small and medium companies

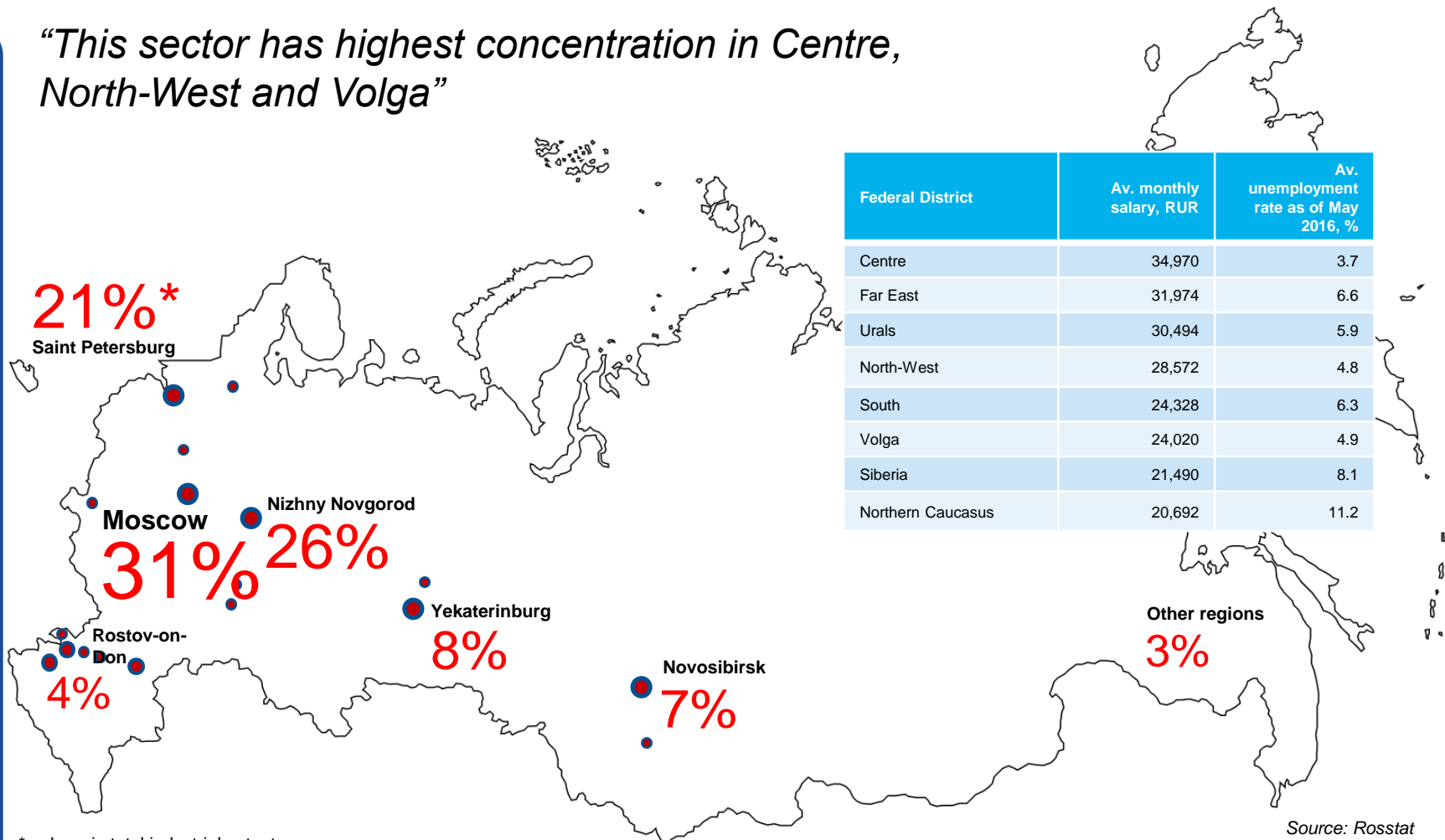
Machinery & Equipment in Industrial Manufacturing output in 2015, USD bn; %



Exchange rate: RUR 65 to USD 1
Source: Federal State Statistics Service (Rosstat); own estimates

Geographic coverage of the sector

“This sector has highest concentration in Centre, North-West and Volga”

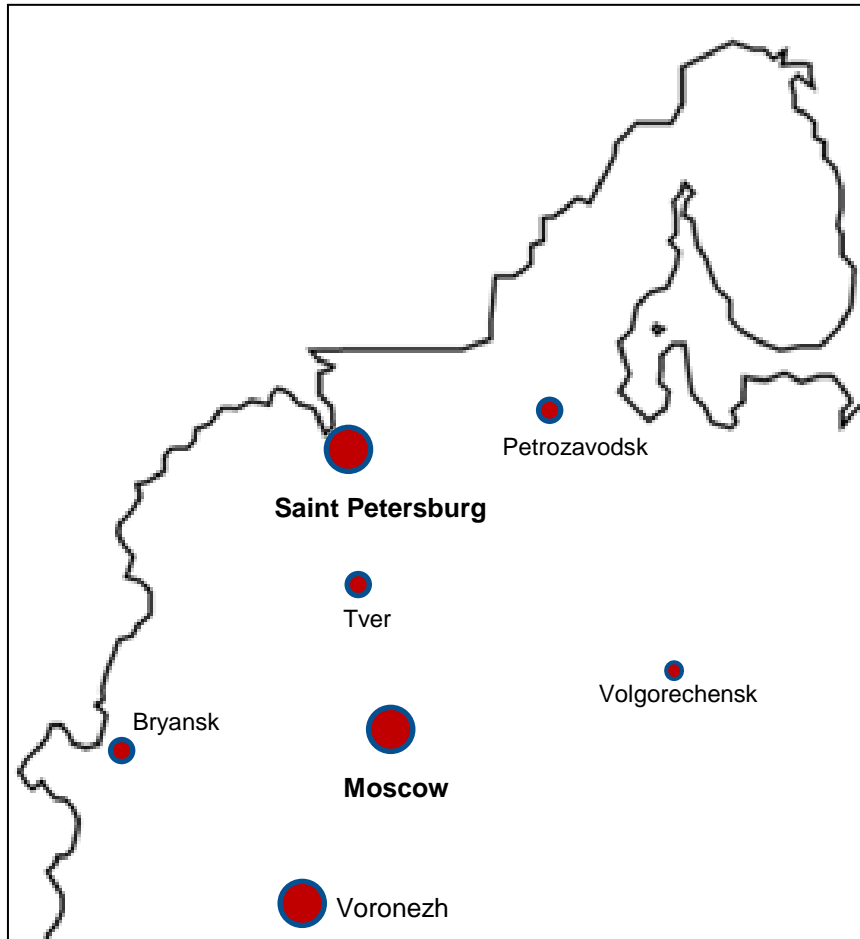


* - share in total industrial output

Source: Rosstat

Industry Players (1)

Centre and North-West



Bryansk:

Bryansky Mashinostroitelny Zavod (RU; Transmashholding/TMH) – Locomotives



Moscow:

Demikhovsky Mashzavod (RU; TMH) – Electric trains
Elektrozavod (RU) – Transformers
Kolomensky Zavod (RU; TMH) – Locomotives
Metrovagonmash (RU; TMH) – Metro carriages
ZIO-Podolsk (RU; Atomenergomash / AEM) – Nuclear power
Alstom (FR) – Locomotives
GEA (DE) – Refrigerators and compressors



Voronezh:

Siemens (DE) – Transformers



Volgorechensk:

NOV (USA) – Drilling rigs



Petrozavodsk:

AEM-Technology (RU; AEM) – Nuclear power
Onega Tractor Plant (RU; Machinery & Industrial Group / KTZ) – Tractors



Saint Petersburg:

Electrosila (RU; Power Machines / PM) – Generators
Izhorskiye Zavody (RU; OMZ) – Heavy equipment
Kirovsky Zavod (RU) – Tractors
Leningradsky Metallichesky Zavod (RU; PM) – Turbines
Siemens (DE) – Gas turbines



Tver:

Tver Carriage Works (RU; TMH) – Passenger coaches



Industry Players (2)

Volga, Urals and South

Kazan:

Schneider Electric (FR) – Electric equipment 

Ulyanovsk:

DMG Mori (DE) – Milling machines 

Engels:

Bosch Evroradiators (DE) – Steel panel heating radiators

Bosch Heating Systems (DE) – Boilers

Bosch Power Tools (DE) – Electric tools



BOSCH

Nizhny Tagil:

UVZ Uralvagonzavod (RU; UVZ) – Transportation equipment



Yekaterinburg:


Uraltransmash (RU; UVZ) – Trams

ABB (CH) – High-voltage products

Schneider Electric (FR) – Electric equipment 

ABB

Krasnodar:

BDM-Agro (RU) – Agricultural equipment 


CLAAS (DE) – Agricultural equipment

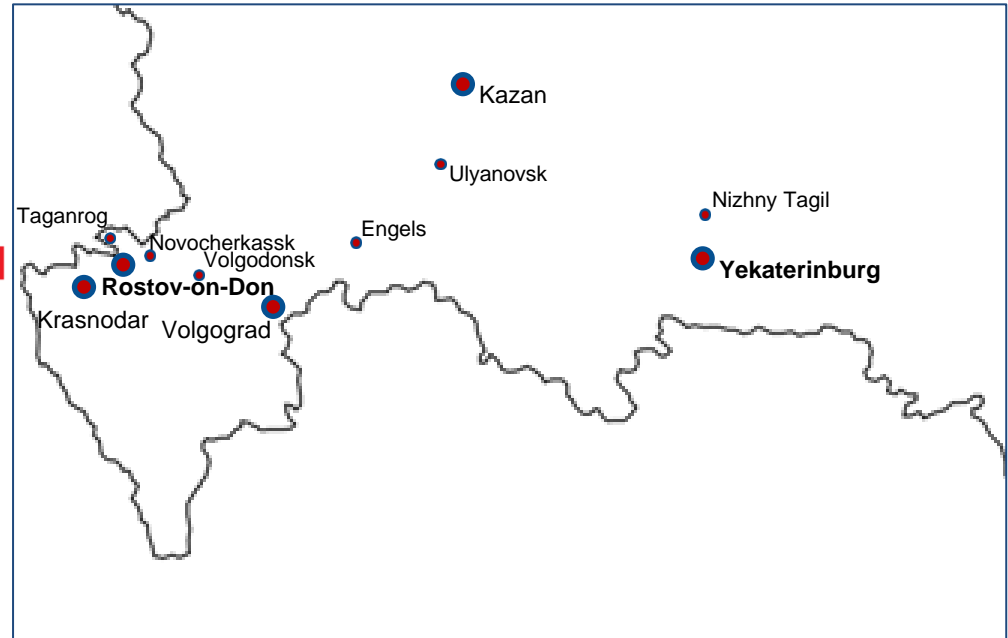
CLAAS

Rostov-on-Don:

Rostselmash (RU) – Agricultural equipment 

Novocherkassk:

Novocherkassk Electric Locomotive Plant (RU; TMH) – Electric locomotives 



Taganrog:

Krasnyi Kotelshik (RU; PM) – Boilers



Volgodonsk:

Atomash (RU; AEM) – Nuclear power



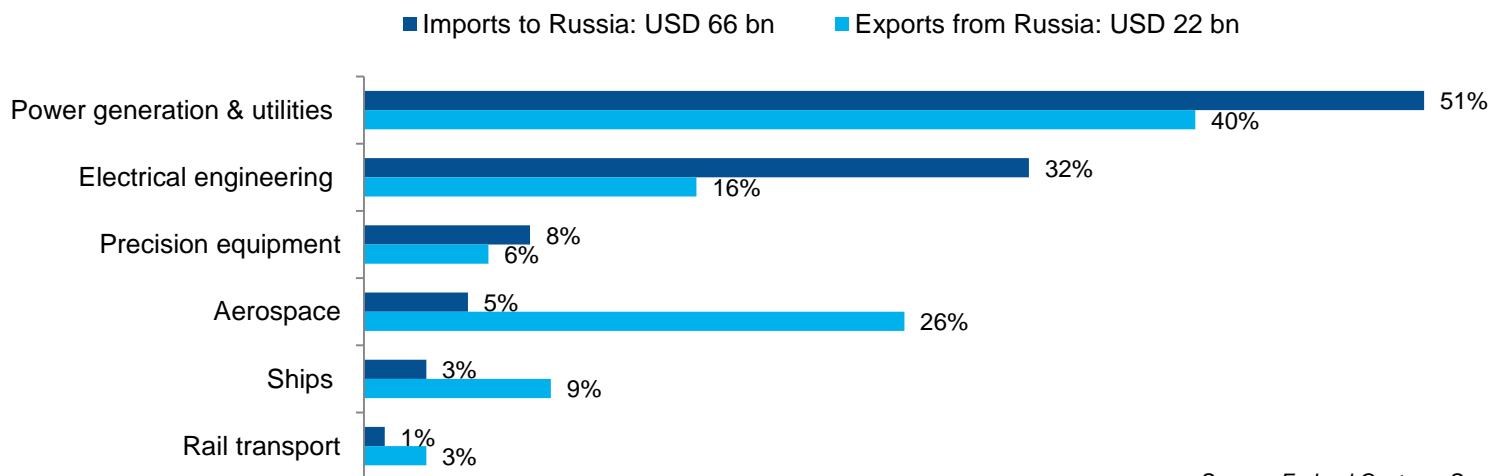
Volgograd:

Volgograd Tractor Plant (RU; KTZ) – Tractors



Export Potential to Russia from Abroad (1)

Machinery and equipment industry imports and exports in 2015, % of total

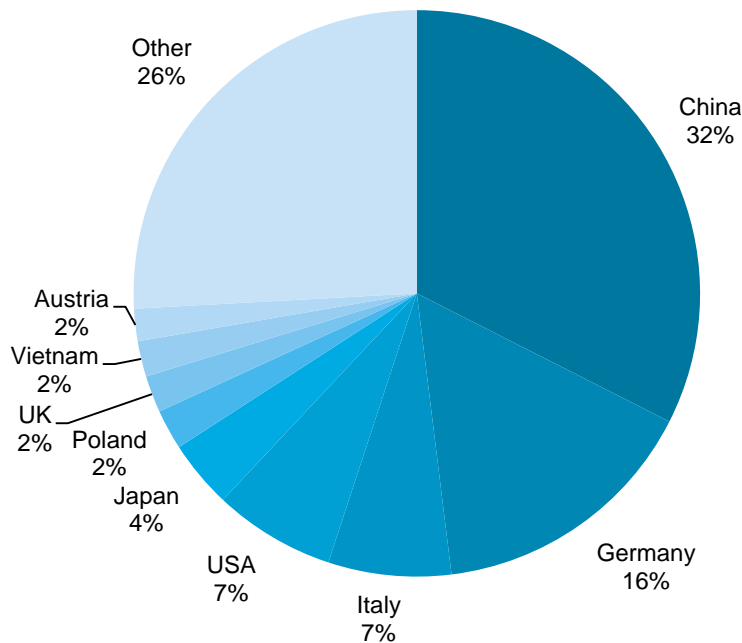


Source: Federal Customs Service of Russia

- Total machinery and equipment market size in 2015 was a **strong USD 103 bn** (imports + domestic production – exports)
- Russia imported approximately **USD 66 bn** worth of machinery and equipment in 2015
- **Still impressive** despite reduction on 2014 (**36%**), and imports will rebound when investment becomes available

Export Potential to Russia from Abroad (2)

Main sources of Russia's machinery and equipment imports in 2015, % of total



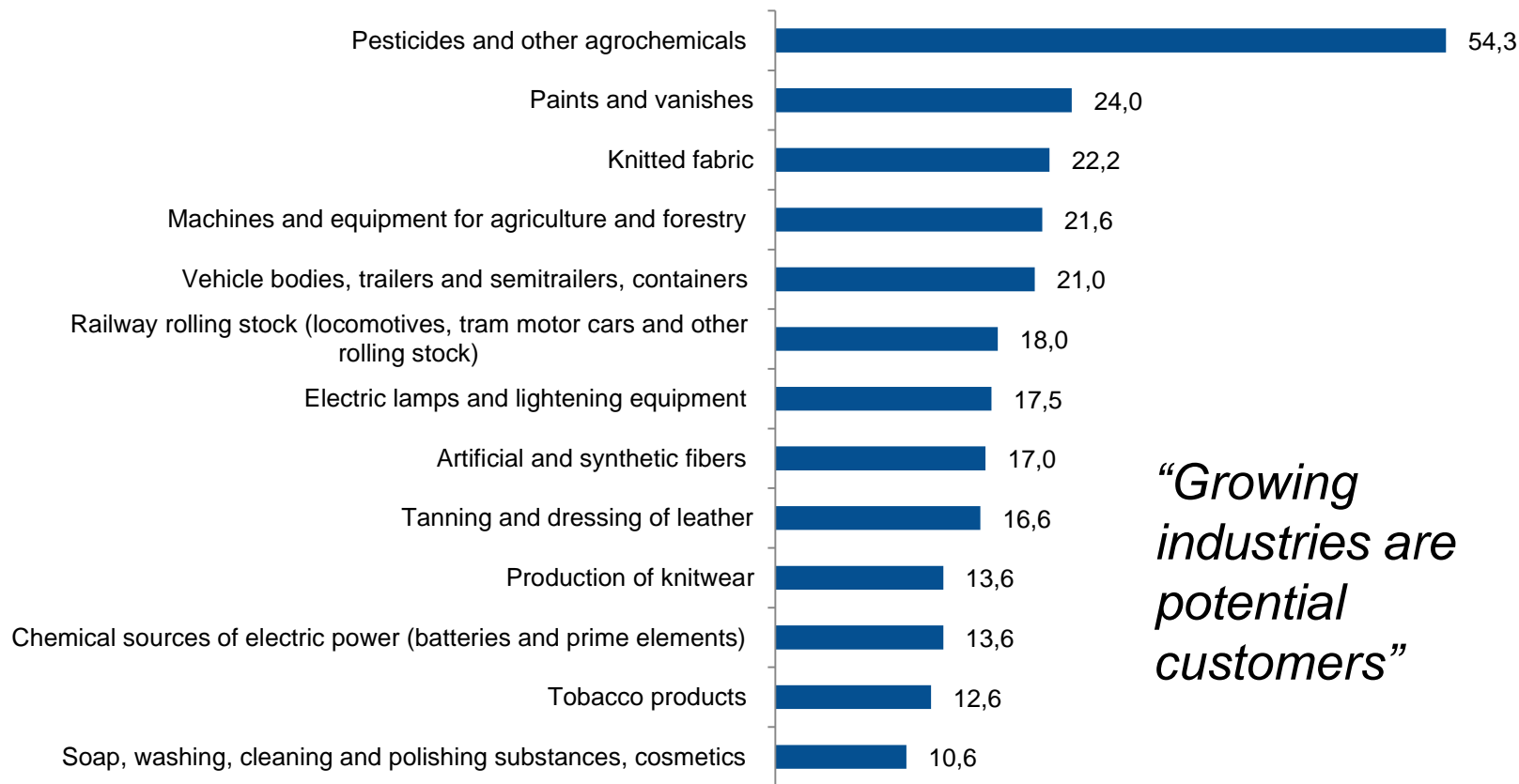
Source: Federal Customs Service of Russia

- Russia imports most from **China, Germany, Italy, USA and Japan: 55% of total imports**
- Austria and Switzerland account for 3%.
- **Is it time to think of expansion or changing sector focus?** E.g., ABB is already changing its approach to sell more infrastructure equipment for data centers.

Further details of import and export statistics are provided in the Appendix.

Export Potential to Russia from Abroad (3)

Segments showing more than 10% growth in RUR terms in 2016, % y-o-y



“Growing industries are potential customers”

- Details of industries showing growth less than 10% in RUR terms in 2016 are provided in the Appendix.

Source: Rosstat Production Index

Key Consumers and Markets

Example: Steel Manufacturers



EVRAZ

Main products: Raw (coal, iron ore) and rolled products

Equipment: Danieli, Techint

Capex: USD 428 m (2015)



Mechel

Main product: Coal, iron-ore concentrate and rolled products

Equipment: Kasto, Eurolls Italia, Koch

Capex: USD 80 m (2015)



Metalloinvest

Main products: Iron ore, iron, steel

Equipment: Midrex Technologies, Siemens VAI, Linde, SMS Demag, IMATEK

Capex: USD 5.8 bn (2015-2023)



NLMK

Main product: Iron and rolled products

Equipment: Siemens VAI, Koch, MarioFrigerio, TeamMeccanica, FIB, EBNER, WAFIOS

Capex: USD 550 m p.a. (2016-2018)



Severstal

Main product: Coal, iron-ore, rolled products, pipes

Equipment: SMS GROUP, WISDRI Engineering & Research Incorporation Limited, Primetals Technologies Germany GmbH, EFD INDUCTION, Sundbirsta, Strabag, Danieli

Capex: USD 660 m (2016)



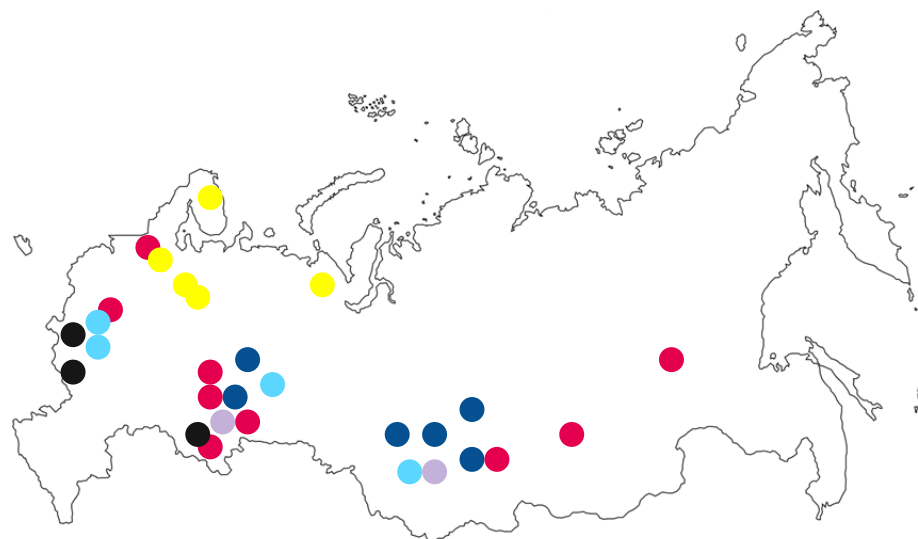
MMK

Main product: rolled products, pipes, feeds

Equipment: ELTRA, SMS group, Danieli

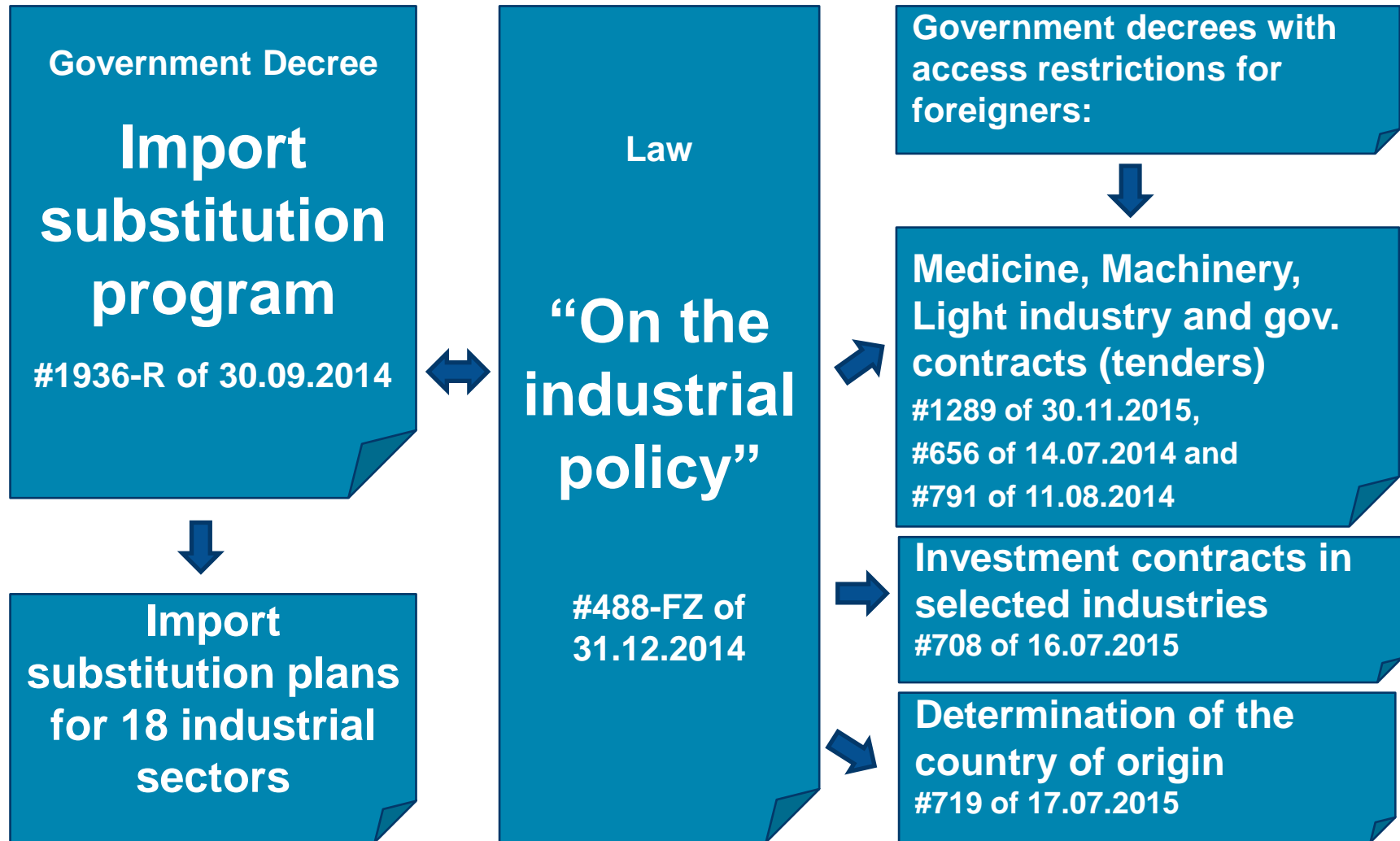
Capex: USD 348 m (2015)

“Russian Industrial Manufacturing companies have been traditional users of western technology”



This slide provides publicly available information on Russia's steel manufacturers and some of their foreign equipment suppliers. Similar information on such industries as non-ferrous metals, pipe manufacturers, automotive producers, chemical and petrochemical companies, and construction companies can be found in the Appendix.

Government Industrial Policy (1)



Government Industrial Policy (2)

Import Dependency

Government decree regarding import substitution #1936-R of 30.09.2014:

- The Ministry of Industry plans to start the production of 800 products in 18 industrial sectors in Russia by 2020:
 - Agricultural & forestry machinery
 - Automotive industry
 - Chemical industry
 - Civil aviation
 - Construction
 - Conventional weapons
 - Electronics industry
 - Equipment for the oil & gas industry
 - Ferrous metals
 - Forestry industry
 - Heavy machinery
 - Light industry
 - Machine tools
 - Machines for the food & beverage industry
 - Medical technology
 - Non-ferrous metals
 - Pharma industry (medicines)
 - Shipbuilding, ship components
 - Transport machinery
 - Turbines, power grid equipment

Government Industrial Policy (3)

Import Dependency

- More than 2,000 projects in 20 sectors should be implemented by 2020
- Import substitution program till 2020
 - Examples (Import dependency in %):

Product/Technology	Import dependency in 2014 (%)	Import dependency in 2020 (%)
CNC machines	90	60
Drilling machines	80	61
Grinding machines	97	85
Industrial robots and manipulators	95	69
Electric motors	100	86

- Modernization of the industry increases the demand for high quality tools and machinery

Government Industrial Policy (3)

Industry Development Fund

- The Fund provides loans at 5% p.a. for co-financing of industry development projects and facilitates negotiation of Special Investment Contracts (SPIKs)
- Focus area: modernize industrial production
- Consultative Centre operating in the Fund provides advice to companies and regional authorities
- One window approach
- The Fund's capital is RUR 21 bn
- 102 loans for a total of RUR 30 bn given to date
- 4 programs:
 - Development projects (loan range: RUR 50-300m; term: no longer than 5 years)
 - Consortia projects (loan range: RUR 100-500m; term: no longer than 7 years)
 - Industrial-scale production of machinery and tools (loan range: RUR 50-500m; term: no longer than 7 years)
 - Leasing projects (loan range: RUR 5-250m; term: no longer than 5 years and no longer contract term)
- The fund will give loans to companies with foreign origin if they are registered in Russia



RUR 30bn

Total loans given

RUR 6.75bn

Loans given to Machinery & Equipment companies

<http://frprf.ru/>

Special Investment Contracts/ SPIKs (1)

- Introduced by Government Decree #708 dated 16.07.2015
- SPIK is made between an investor and the federal or regional government
- Types of SPIKs:
 - Creation or modernization of industrial production
 - Introduction of best available technologies
 - Manufacturing of industrial products that have no equivalents in Russia
- Duration: project starting to earn operating profit + 5 years but no more than 10 years in total
- Minimum investment: RUR 750 million (for SPIKs where the Russian Federation acts as a party to the SPIK)
- Industry Development Fund (IDF, an agency of the Ministry of Trade) is a go-between for the investor and the government when the SPIK is discussed (see next page for process flow)

Signed:

CLAAS

Approved:



sollers



mazda

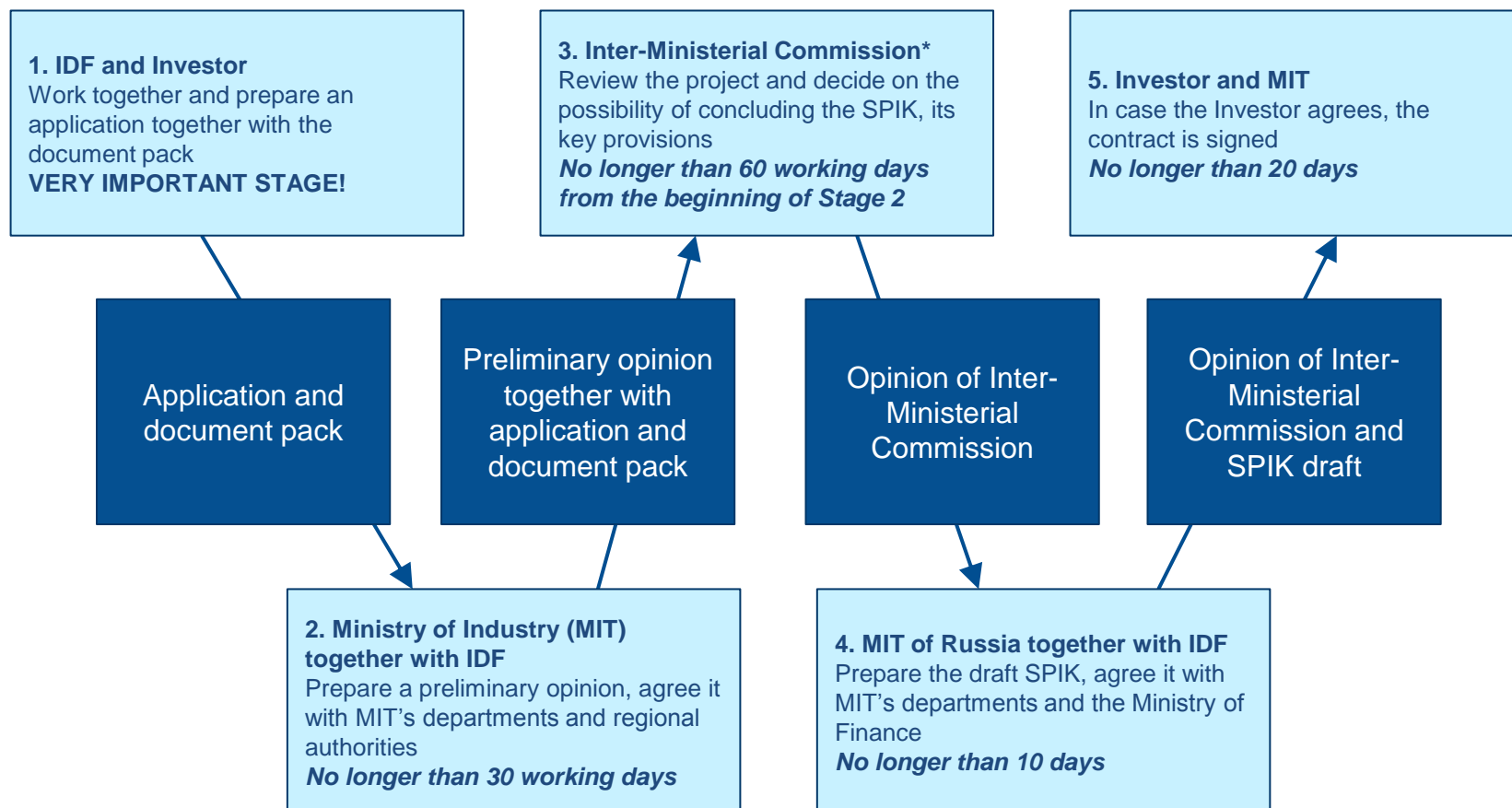
Reviewed:



DMG MORI

Special Investment Contracts/ SPIKs (2)

— Process of agreeing and signing a SPIK: stages, document flow and timing



*Appointed by Government Decree

Source: Ministry of Industry and Trade

SWOT Analysis

Machinery industry in Russia

Strengths

- History of achievement/ traditional industry
- Strong industrial base
- Access to affordable energy
- Educated workforce
- Large market
- Significant demand

Weaknesses

- Low investment in modernization and R&D
- Weak Ruble and high interest rates
- Management inefficiencies
- Dependency on imports in civil engineering

Opportunities

- Know how transfer through localization
- Special Economic Zones, Industrial Parks, Special Investment Contracts
- Government industrial policy is geared to localization
- Low cost location for export
- Reduced dependency on energy revenues

Threats

- Further devaluation of the Ruble, high fluctuations of commodity prices:
 - Steel billet: Dec 2015: 170 USD/ton; June 2016: 325 USD/ton
 - Oil (Brent): Dec 2015: 37.3 USD/barrel; June 2016: 49.7 USD/barrel
 - Natural gas: Dec 2015: 2.3 USD/MMBtu; June 2016: 2.9 USD/MMBtu
- Further reduction in investment in modernization
- Competition from Asia, especially China

Our industry-specific services (1)

- **Market research/ business partner search**, incl.
 - Advice on localization options (special economic zones, industrial parks, etc.)
- **Company registration**, incl.
 - Legal and business address
- **Tax and legal services**, incl.
 - Structuring advice
 - Contract of delivery to Russia
 - Installation: tax advice for installers (short- and mid-term stay) in Russia, annual tax returns, official registration, accounting, contract with subcontractors, visas and work permits, taxation and tax risks (for example, double taxation risk)
 - Establishment of production
 - Transfer pricing
- **Interim management**, incl.
 - General Director, head of branch or representative office
 - Risk management



Our industry-specific services (2)

— **Import services**, incl.

- Classification decision
- Customs handling and consultation
- Consultation regarding appropriate customs value
- Certification
- Coordination with the logistics provider, DDP services for after sale services (spare parts)



— **Accounting outsourcing**, incl.

- Transformation and reporting according to IFRS/US GAAP/HGB
- Payroll accounting with special knowledge about business trips, shift work, regional coefficients and corporate compensations
- Accounting tax policy with focus on the machinery industry
- Revenue recognition in special cases
- Cost management
- Tax accounting



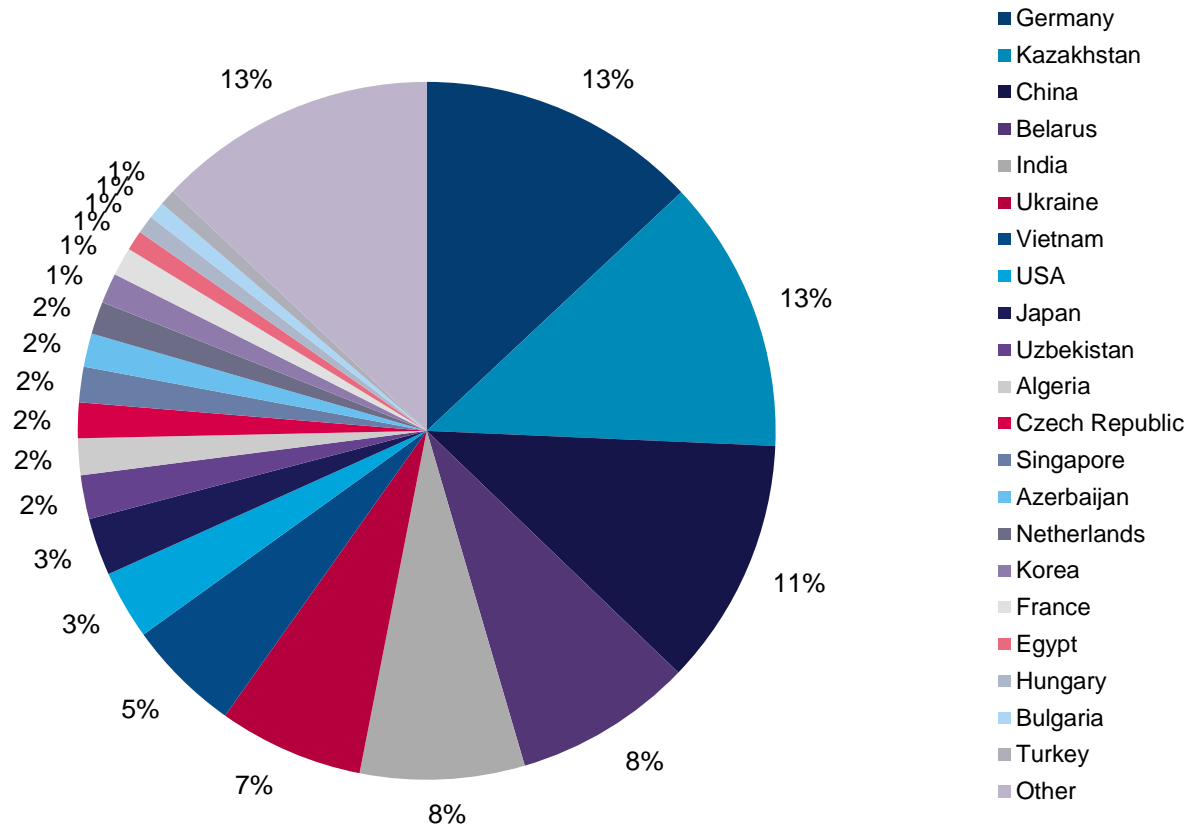
— **IT services**, incl.

- ERP systems implementation (1C and SAP), including Logistics and Manufacturing Development (1C, SAP, C++)
- System Admin set up and permanent help desk
- Hosting (Recovery Time Objective: 1 hour, Recovery Point Objective: Last Save)

Appendix

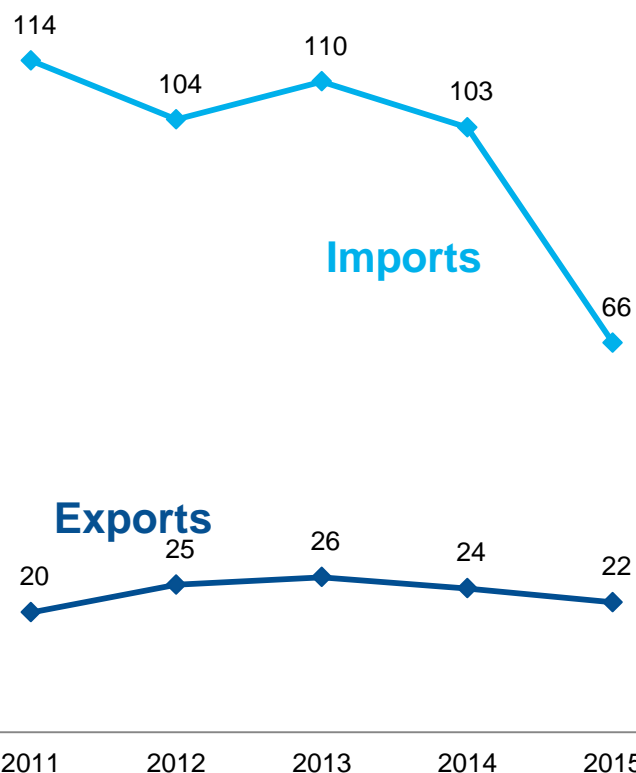
Russia's Exports

Destinations of Russia's Machinery & Equipment exports in 2015, % of USD 22 bn in total



Import and Export Development

Import & Export dynamics in 2011-2015, USD bn

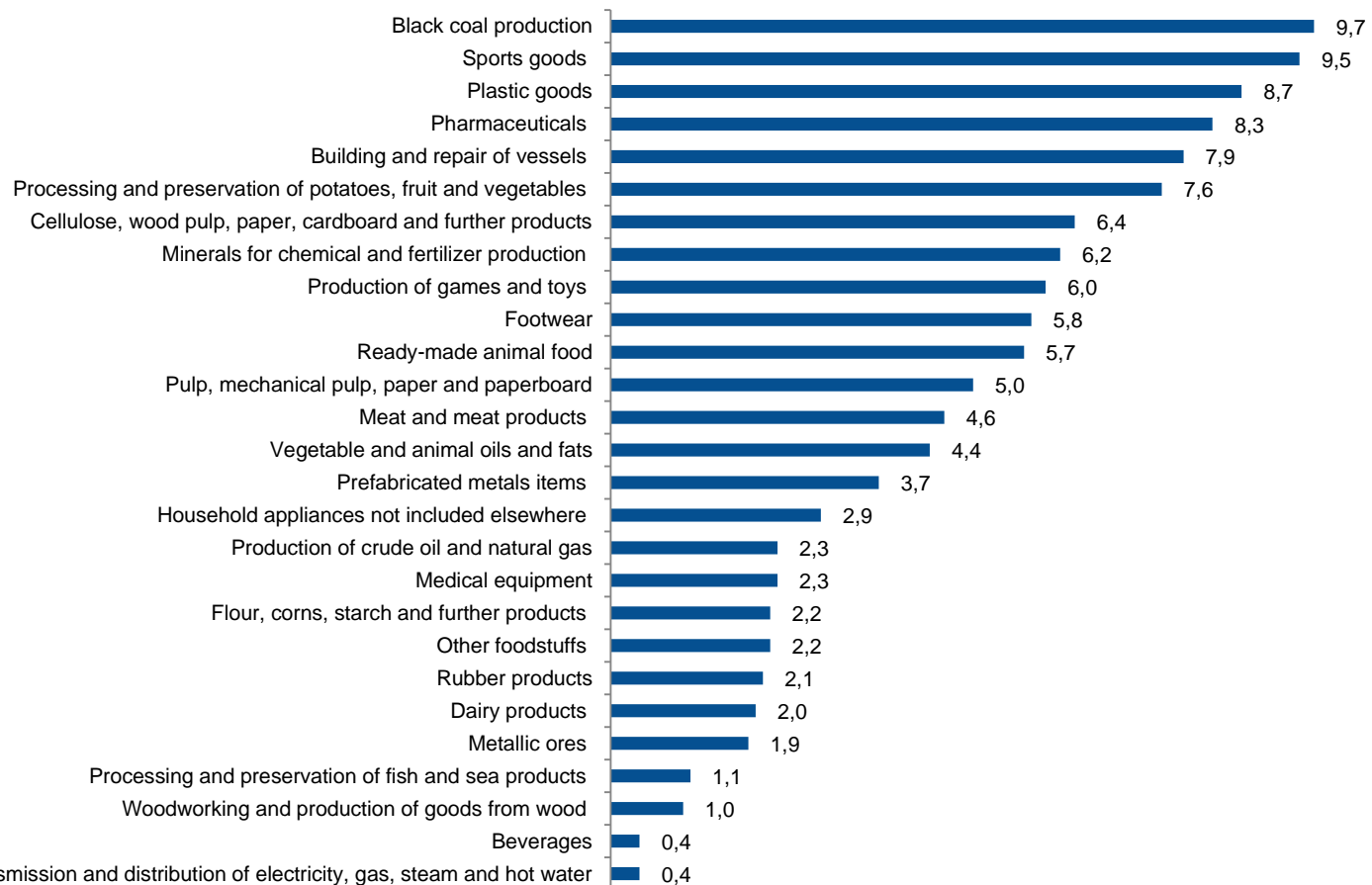


Source: Federal Customs Service of Russia

- Imports of machinery and equipment peaked in 2011 and 2013, started to stall in 2014 and collapsed in 2015 on the back of:
 - Currency volatility
 - Reduction in capital investment
 - Sanctions
- Exports of machinery and equipment in 2015 decreased by 9% compared with 2014 due to declining production

Production Output Development (1)

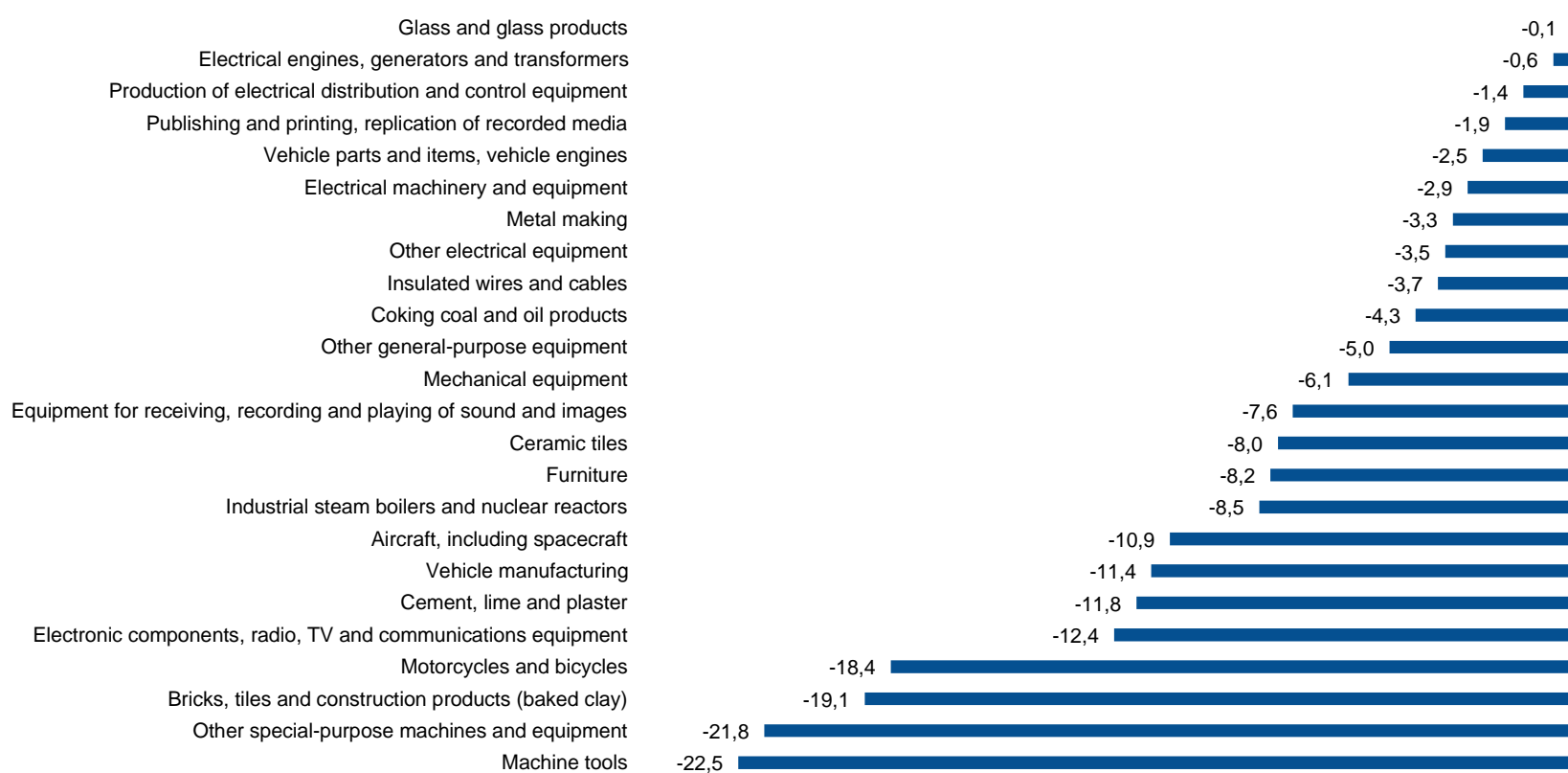
Segments showing less than 10% growth in RUR terms in 2016, % y-o-y



Source: Rosstat Production Index

Production Output Development (2)

Segments declining in RUR terms in 2016, % y-o-y



Source: Rosstat Production Index

Key Consumers and Markets (1)

Non-ferrous metals



Norilsk Nickel

Main products: Nickel, palladium, platinum and copper

Equipment: Evatherm AG, GMA, THYSSEN SCHACHTBAU

Capex: USD 2.3 bn (2015-2025)



UMMC

Main product: Copper

Equipment: SMS-Meer, DIEMME, Kuenz



Russian Copper Company

Main product: Copper

Equipment: Kumera, Ausmelt, Linde, Metso, Outotec

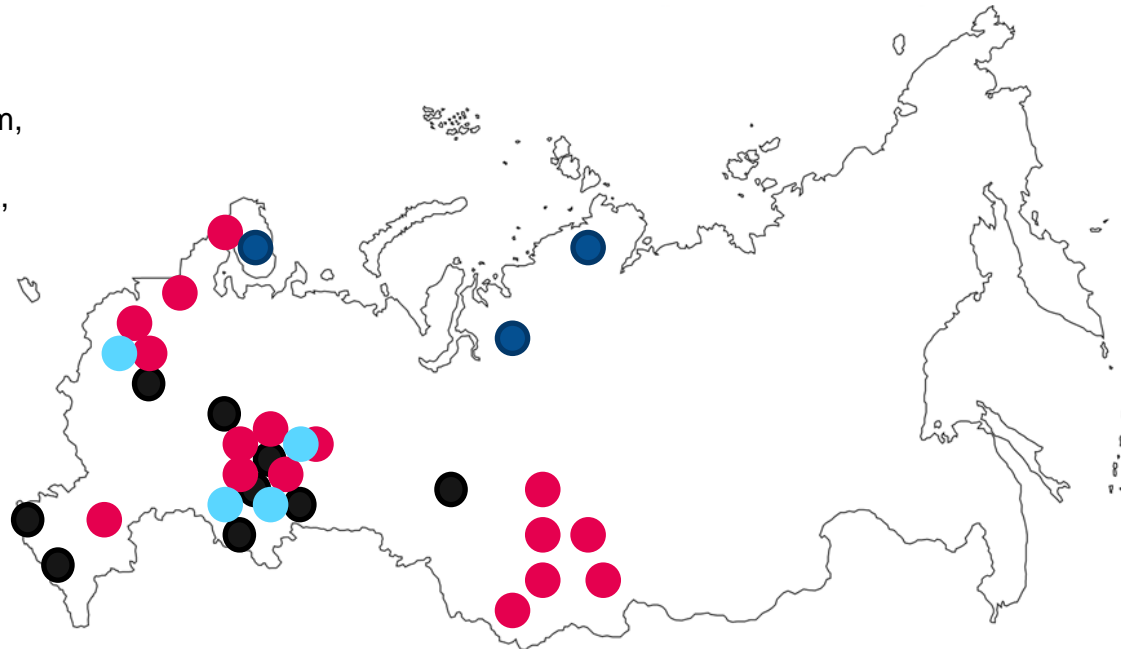


RUSAL

Main product: Aluminum

Equipment: N/A

Capex: USD 522 m (2015)



Key Consumers and Markets (2)

Pipe manufacturers



TMK

Main products: Weldless and welded pipes, steel feeds

Equipment: SMS MEER

Capex: USD 200 m (2016-2017)



OMK

Main products: Pipes, pipeline valves, springs and railway wheels

Equipment: CRC Evans, Danieli & C. Officine Meccaniche SpA, SMS Siemag AG, FAGOR

Capex: USD 82 m (2015)

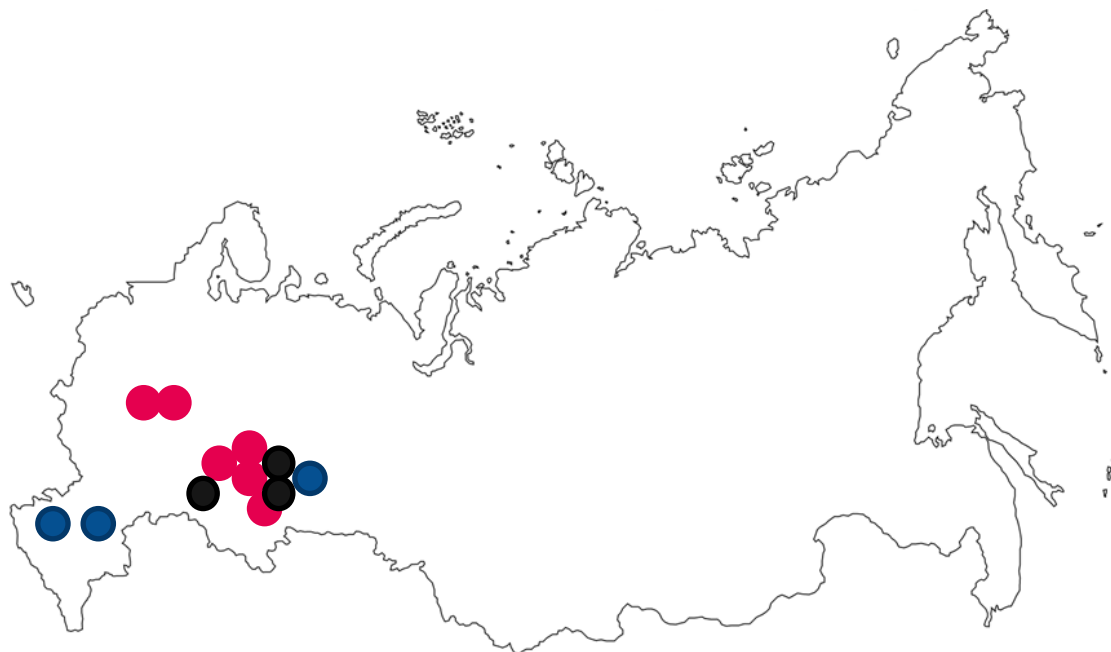


Ч Т П З

ChelPipe

Main product: Weldless pipes

Equipment: CRC Evans, SMS MEER, ITWH



Key Consumers and Markets (3)

Automotive OEMs



Key Consumers and Markets (4)

Chemicals and Petrochemicals



Sibur

Main products:

Polymers, synthetic rubbers, plastic and organic synthesis products

Equipment: Tecnimont, Linde-KCA-Dresden, O.R.V. Manufacturing, SHUNDE PLASTIC MACHINE, Yokogawa



EuroChem

Main products: Mineral fertilizers

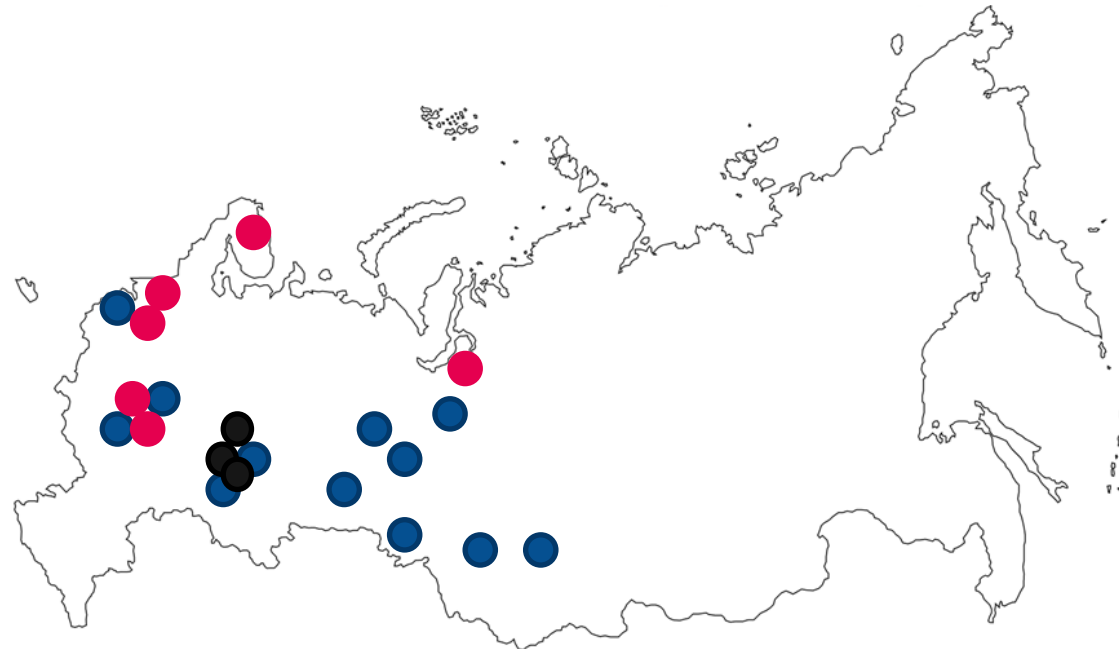
Equipment: Siemens, GEA



TAIF Group

Main products: Petrochemicals

Equipment: LINDE, Tecnimont, GE, HAVER & BOECKER, MÖLLERS, Coperion, Technip, Toyo Engineering



Key Consumers and Markets (5)

Construction



Stroygazmontazh

Main activity: Pipeline construction

Equipment: HARFANG VEO, GS, Volvo, MAN, Komatsu, CRC Evans, New Holland, Caterpillar, Tatra, IVECO, Cummins, Hitachi, Liebherr, Ammann, Superior, Manitou, John Deere, Dressta, Miller, Lincoln Electric, Vermeer, Dich Wich, JME, NISBAU



Stroygazconsulting

Main activity: Oil, gas and condensate field facility construction

Equipment: Denyo, CRC-Evans, Serimax



Stroytransgaz

Main activity: Transport, energy, industrial, civil, oil and gas construction

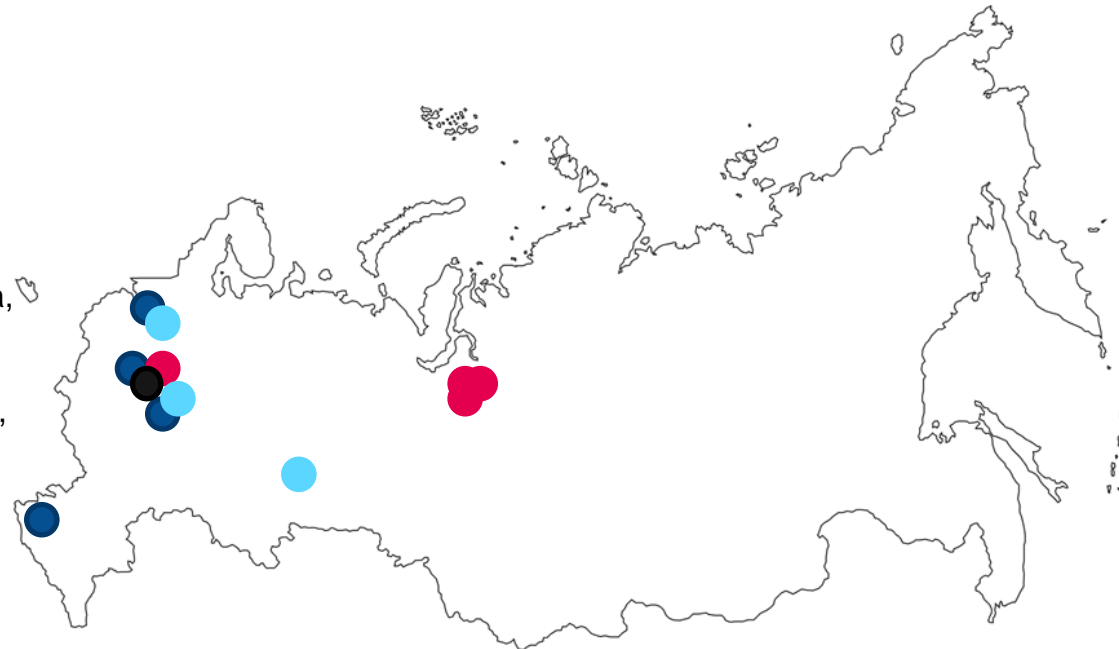
Equipment: CRC-Evans, Liebherr, Lincoln Electric, Mercedes-Benz



LSR Construction Group

Main products and activities: Building materials (concrete and bricks), aggregates, real estate construction

Equipment: CERIC, Händle, Hans Lingl





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