



INDUSTRIAL PARK

IN BELARUS





GREAT STONE

industrial park

www.industrialpark.by

Belarus, Minsk

Tel.: +375 (17) 240 86 31

Fax.: +375 (17) 240 86 27

E-mail: welcome@industrialpark.by

China, Beijing

Tel.: +86 (10) 82559026-9029

+86 (10) 82688661-8136-8083

Fax.: +86 (10) 82688006

E-mail: minskpark@camce.com.cn

CONTENTS

1 THE REPUBLIC OF BELARUS 2

2 ECONOMY AND INDUSTRY 4

3 ATTRACTION OF FOREIGN CAPITAL 6

4 INDUSTRIAL PARK OVERVIEW 8

5 THE LAND-USE MASTER PLAN OF INDUSTRIAL PARK 10

6 LARGE MARKET OPPORTUNITIES 12

7 BENEFITS 14

8 LABOR FORCE POLICY 16

9 ONE-STOP STATION 18

10 GUARANTEES FOR INVESTORS 20

1 THE REPUBLIC OF BELARUS

The Republic of Belarus is situated in the center of Europe, boarded by Russia to the northeast, Ukraine to the south, Poland to the west, Lithuania and Latvia to the northwest. It's Europe and CIS Countries traffic and trade corridor.

Vancouver

✂ 17.50

New York

✂ 12.00

Territory 207.6 thousand sq.km (ranks 84th in the world)

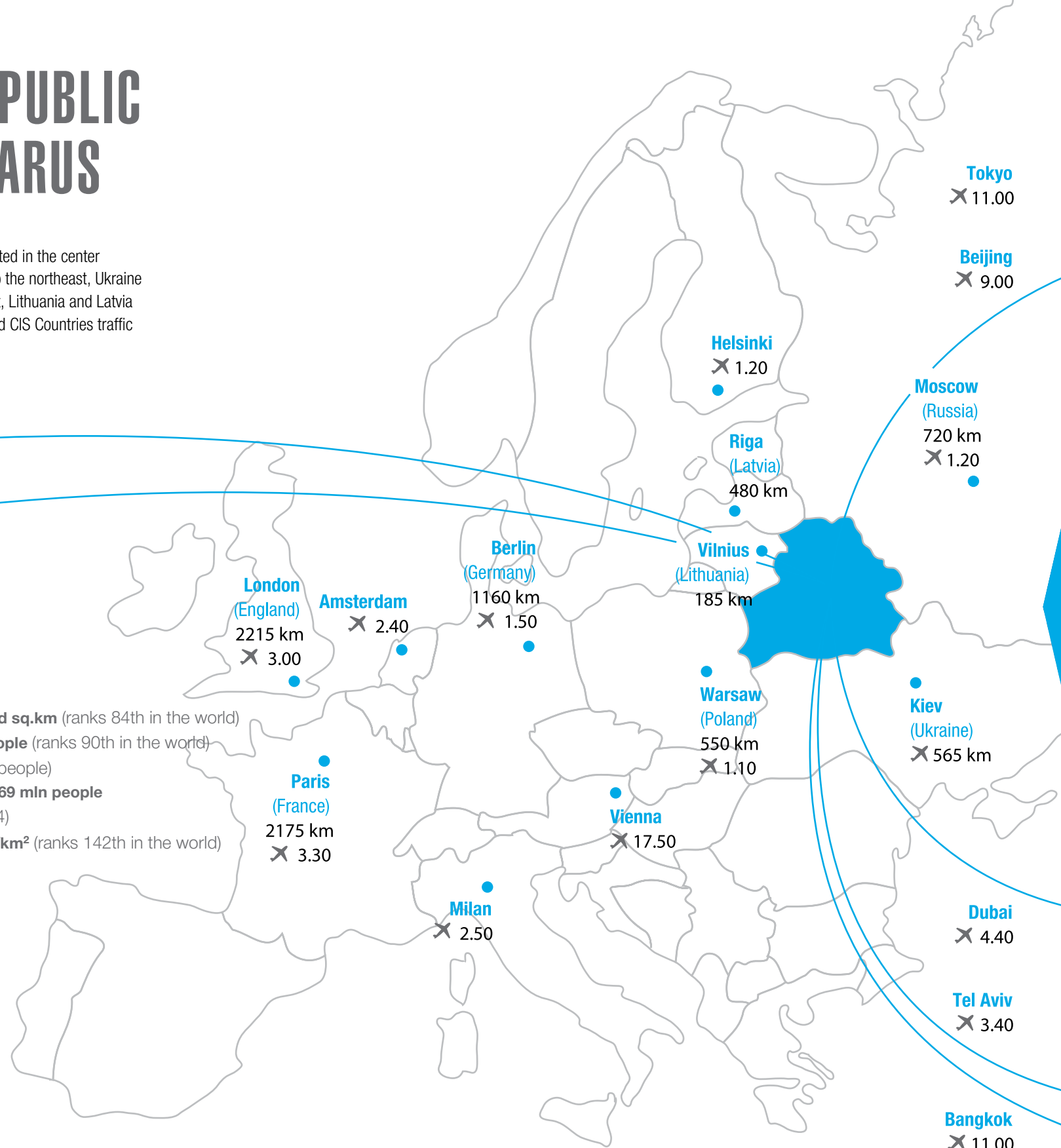
Population 9.47 mln people (ranks 90th in the world)

Capital Minsk (1,9 mln people)

Able-bodied citizens 5.69 mln people

GDP 76.2 bln USD (2014)

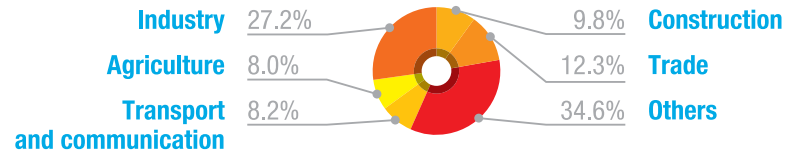
Population density 45.8/km² (ranks 142th in the world)



2 ECONOMY AND INDUSTRY

Diversified Economy with Strong Export Positions

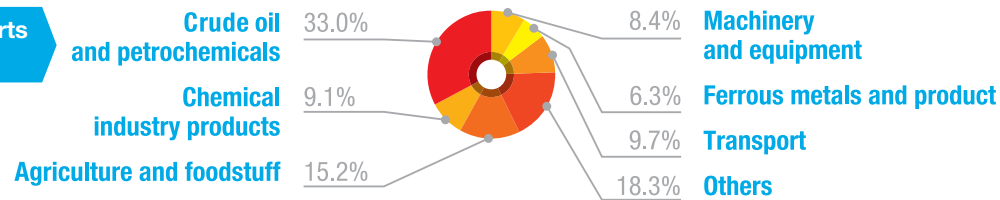
A GDP 2013



B Belarus position on the World Market (*faostat.fao.org)

- Nr.1** Producer of mining dump trucks (30% of global market)
- Nr.4** Producer of potash (8% of world reserves)
- Nr.4** Producer of tractors (6%), harvesters (17%)
- Nr.4** Exporter of whole milk*
- Nr.6** Exporter of cattle meat*
- Nr.6** Producer of flax (6,4%), potato (2,8%)
- Nr.8** Exporter of butter*

C Exports 2013



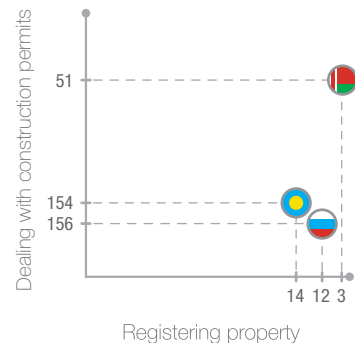
D Foreign trade turnover 2013



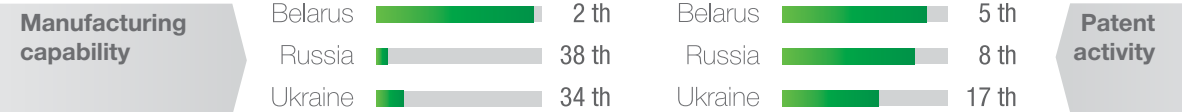
Doing Business Report, 2015



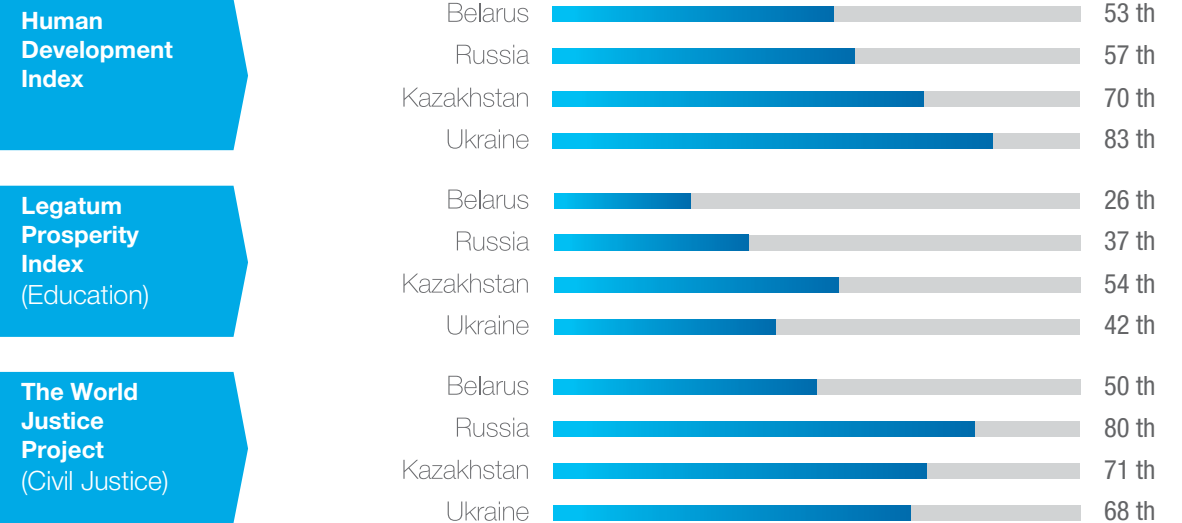
4 INDUSTRIAL PARK IN BELARUS



Bloomberg, Most innovative Countries, 2013

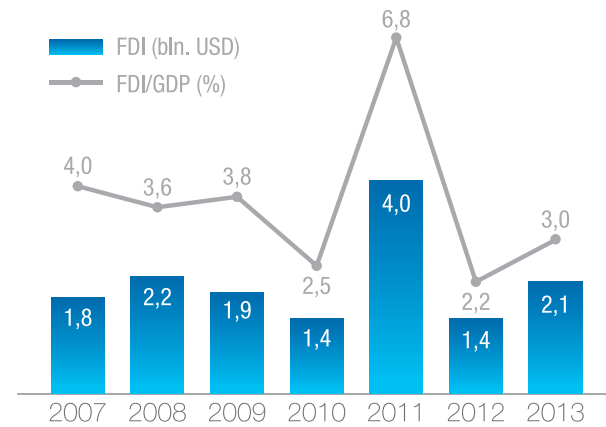


Other international rankings, 2014



3 ATTRACTION OF FOREIGN CAPITAL

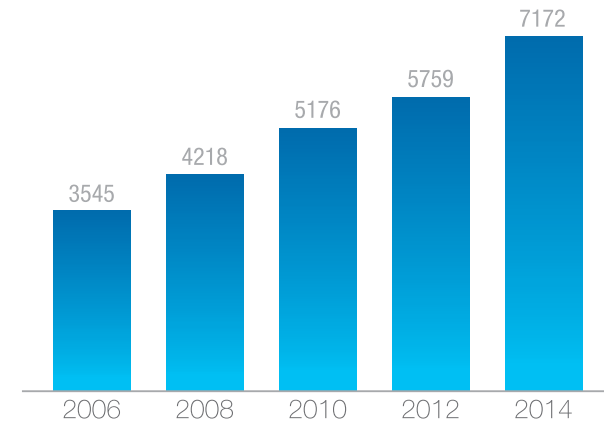
A FDI inflow



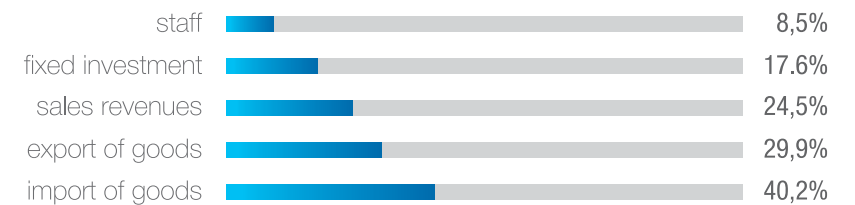
B FDI structure 2013



C Number of registered companies with foreign capital



D Share of companies with foreign capital (%)



ZTE 中兴

TELEKOM AUSTRIA

Unilever

Coca-Cola

kapsch >>>

BEELY

kronospan

PHILIPS

Henkel

HUAWEI

<epam>

Alcatel-Lucent

FRESENIUS

Heineken

Microsoft

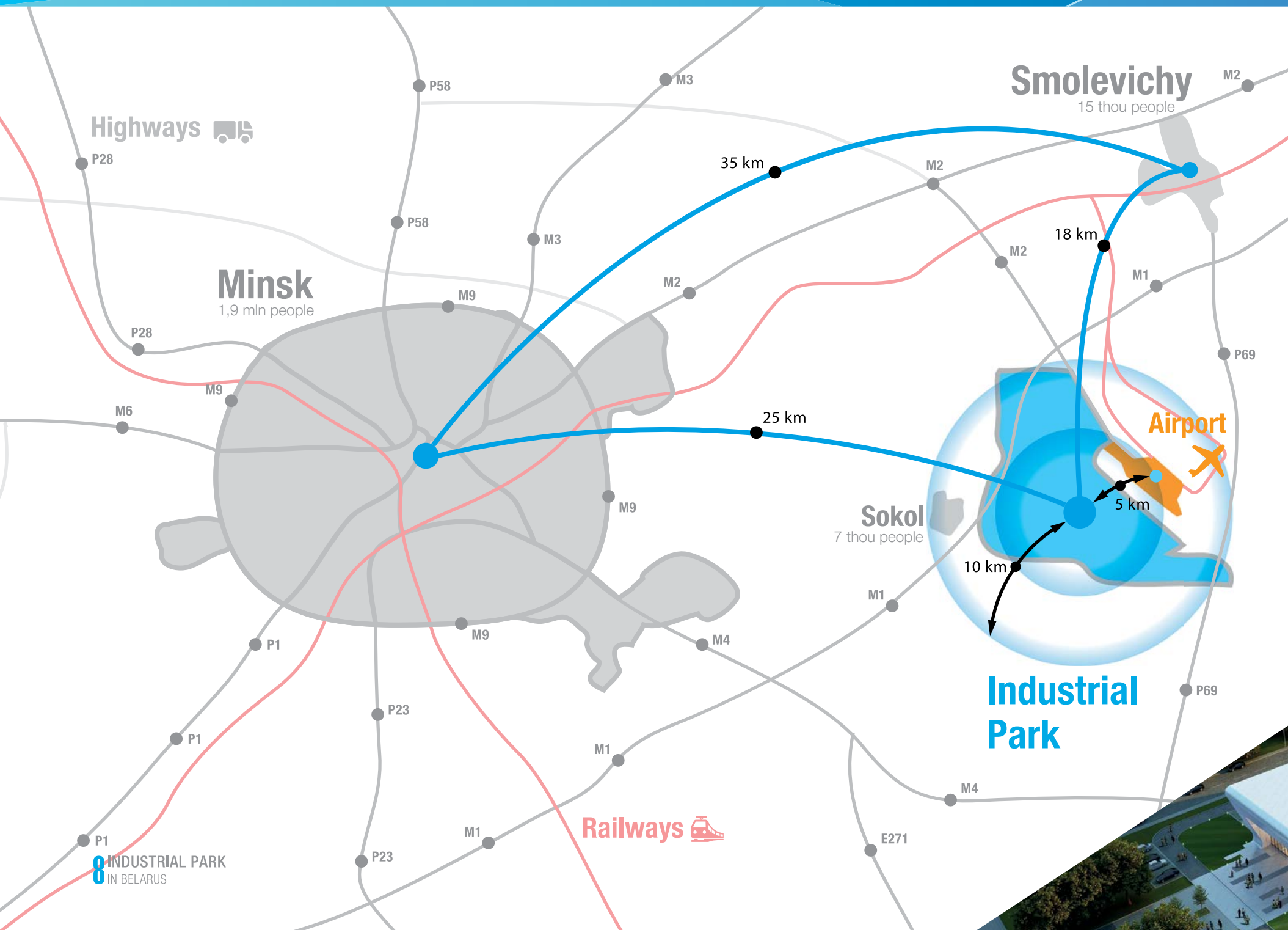
GAZPROM

Raiffeisen BANK

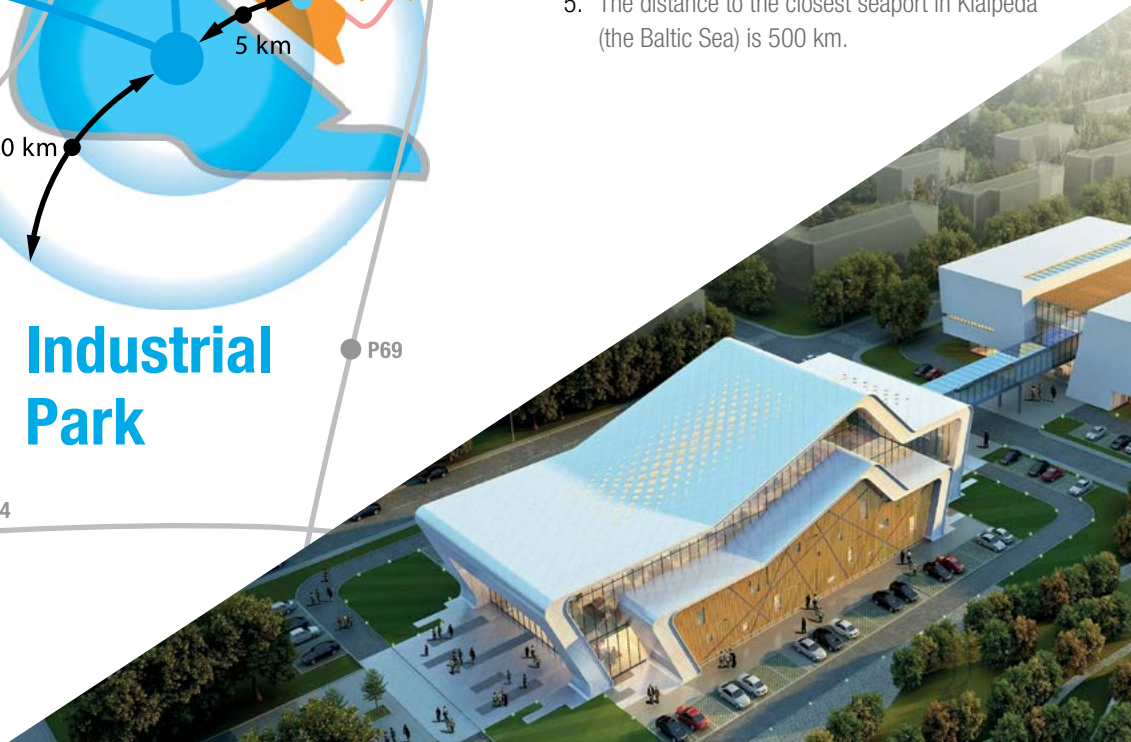
DANONE

STADLER

4 INDUSTRIAL PARK OVERVIEW



1. Industrial park is situated in Smolevichy district, Minsk region, in the distance of 25 km from Minsk, the capital of the country, and occupies about 91 sq.km.
2. The aim of park construction is to create a new international city which will attract intellectual assets due to its closeness to universities and scientific centers, will combine advanced industries and modern services, and will be based on the harmony of nature, production and innovations.
3. Advantageous geographical situation and infrastructure
4. The park is situated in close vicinity to Minsk National Airport, railways; it is located on the crossing of the international highway M1 which extends to Moscow on the north (the distance of 700 km) and to Berlin on the south (the distance of 1000 km).
5. The distance to the closest seaport in Klaipeda (the Baltic Sea) is 500 km.



5 THE LAND-USE MASTER PLAN OF INDUSTRIAL PARK

M2 highway
(Airport-Downtown)

M1/E30 trans-continental highway
(Berlin – Minsk – Moscow)

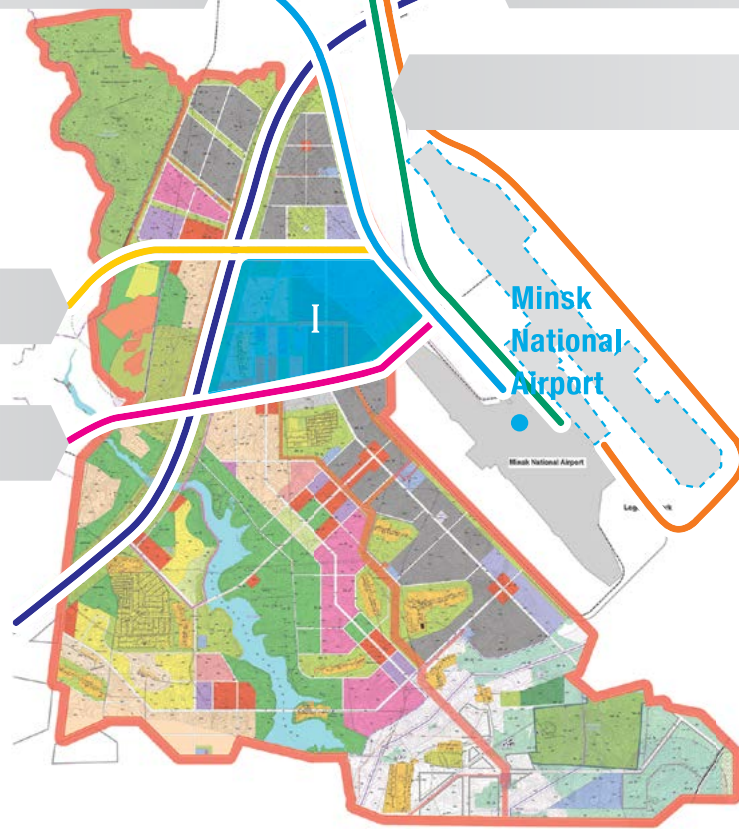
Passenger
railway

Scheduled
highway

Minsk
National
Airport

Local
road

Railway



Detailed regulatory plan for the first phase of industrial park

- First class residential
- Second class residential (apartment buildings)
- Trade, service and commercial facilities
- Business projects
- Scientific and educational facilities
- Cultural and entertaining facilities
- Sports and recreation facilities
- Medical institutions
- Engineering structures
- Industrial facilities
- Logistics and warehouses
- Planting for public use
- Planting for special purpose
- Transport infrastructure facilities



Land plots can be leased for a period of 99 years or can be privatized

A Zone of residential buildings and buildings of public use

141 ha – to provide enterprise-residents with land plots for residential, trading and services rendering space.

B Industrial zone

182 ha – to provide enterprise-residents with land plots for business activities.

C Warehousing and logistic zone

86 ha – to provide enterprise-residents with land plots for warehouse and logistic services.



Potable water consumption
— 27000 m³/day



Sewage disposal
— 24000 m³/day



Heat demand, MW 287



Natural gas consumption
— 116 million m³/year



Electricity consumption
— 50 MW



Accumulation of solid waste
— 10 tones a year



Capacity of the telephone network
— 30 thousand

6 LARGE MARKET OPPORTUNITIES



One border crossing



EURASIAN ECONOMIC UNION

176 mln people

Minsk

Moscow

Astana

Yerevan


1. Customs Union of Belarus, Russia, Kazakhstan and Armenia (soon Kyrgyzstan) — more than 176 mln people; customs duties and economic limitations are not applied;
2. Eurasian Economic Union: free traffic of goods, services, capital, labor force, harmonization of legislation, technical and regulatory standards and rules;


3. CIS Free Trade Agreement: free trade with 11 CIS countries;
4. The proximity to the neighboring European countries: reduction of transport and time expenditures when exporting goods to Europe.


7 BENEFITS


Benefits	Totally around Belarus	Industrial Park, priority projects*	Benefits	Totally around Belarus	Industrial Park, priority projects*
Income tax	18 %	First 10 years — 0%; subsequent 10 years — 50% from the existing rate	Tax on income and profits of foreign companies which do not operate through a permanent representative office, concerning dividends	15%	0% within 5 calendar years, beginning with the first year in which there was a gross profit
Real estate tax	1%	First 10 years — 0%; subsequent 10 years — 50% from the existing rate	Tax on dividend income and other similar income accrued to its founders (participants, shareholders, owners)	Not more than 12%	5%
Land tax	Average rates per 1 ha: Park area — 126 USD/ year Minsk district — 3,150 USD/ year Minsk — 24,000 USD/ year	First 10 years — 0%; subsequent 10 years — 50% from the existing rate	Compensation payments for harmful impact upon objects of flora and fauna during construction	Depending on territory	Released
Value added tax (on sales)	20%, in case of export of finished goods including the Customs Union countries — 0%	Prompt refund of the full amount from the state budget, paid by purchasing (import) of goods (works, services), property rights for creation of park facilities	Obligatory sale of currency earnings	30 %	No obligations, exemption applies also to contractors engaged
Customs fees (VAT and customs duty) for raw materials, materials	duties depend on materials (5–20%) VAT — 20 %	0% in case of export of finished goods outside the Customs Union or by absence of analogue materials produced in the CU	Payments in foreign currency in the course of construction of the industrial park objects	Prohibited	Allowed
Customs fees (VAT and customs duty) for components and equipment	duties depend on equipment (usually 5%, rarely 10%)	0%	Certification of goods and materials for construction at the territory of the industrial park	Obligatory certification	Released
Income tax for physical bodies (employees of resident enterprises pay)	13%	9%	State duty for issue (prolongation) of permit to attract foreign work force, special permits for the right to work in the Republic of Belarus, for temporary residency in the Republic of Belarus	~70\$/foreign person. ~750\$/legal entity	Released, exemption applies also to contractors engaged
Allocations to the social protection fund (enterprises pay)	35%	Belarus citizens — 0% for part of incomes which exceed average salary around the Republic. Foreign citizens — 0%. Example: Salary of some belarusian employee in March=1000 \$. Average salary in Belarus in February, 2014 was 555 \$. Generally fees per March=1000*0,35=350 \$. Fees in the Park =555*0,35=194 \$.			


LABOR FORCE POLICY


 There are no restrictions on recruitment of foreign labor force

 Exemption from fees connected with engagement of foreign labor force, temporary residence in Belarus

 Opportunity to obtain a residence permit in the Republic of Belarus when investing more than 150 thousand euros

 Fixed and preferential rate of a personal income tax (9%)

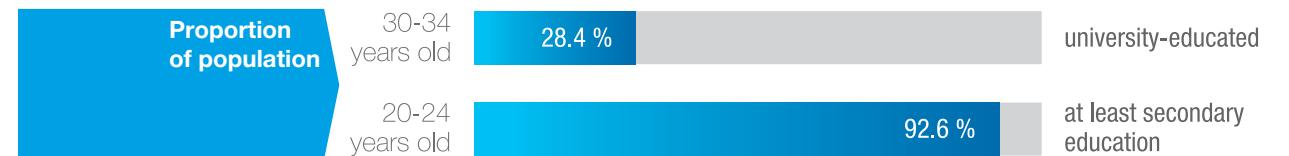
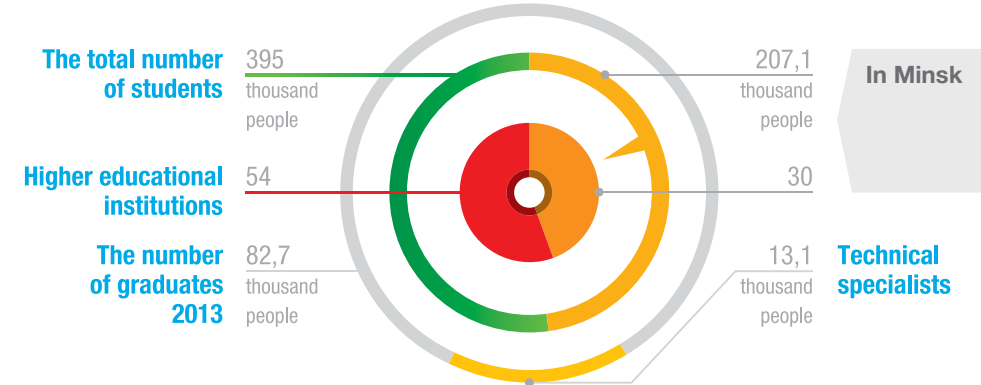
 At the first stage, until 2020, it is planned to create conditions for residence of 25 thousand people

 Access to manpower of the capital city of Minsk:

1. The population of the city of Minsk is 1.9 million people
2. The nearest district of the city (the settlement of Sokol) is located at a distance of 1 km only from the park territory (its population is 6 thousand people)

High scientific potential

in the Republic of Belarus



2013 г.  **1,634 patent applications**

In 2013, Belarusian scientists submitted 1,634 patent applications

9 ONE-STOP STATION

Activity in the Park

The Administration makes decisions independently and operatively on registration of the Park residents, on placement of construction facilities in the Park territory, on permission to carry out design and survey work and construction, on other procedural matters and day-to-day management of the Park in whole.

All the administrative procedures are carried out by the Park Administration

In case some questions fall within the competence of another body of state administration, the Park Administration provides answers to such questions without direct interaction of the resident with this body.



Registering property

According to the report of Doing Business 2015, the Republic of Belarus ranks 3rd in the world in registering property.

THE INDUSTRIAL PARK IS A TERRITORIAL UNIT OF THE REPUBLIC OF BELARUS, THE DAY-TO-DAY MANAGEMENT OF WHICH IS CARRIED OUT BY THE PARK ADMINISTRATION.

- 1 Company registration:**
 1. Choice and approval of a company name;
 2. Business registration with the State Registry;
 3. The registration of the company in tax inspection, insurance company, social security fund;
 4. Making of a company seal;
 5. Opening of a regular bank account with any of 31 banks acting in Belarus.

- 2 Conclusion** of a contract concerning terms and conditions of activity in the Park with the Administration,* submittal of **substantiation** of an investment project in any form.

- 3 Conclusion** of a contract with a management company on rent/purchase of a land plot for construction* or a ready real estate.

10 GUARANTEES FOR INVESTORS

- 1. Invariability of preferential treatment even in case of establishment of new taxes and dues in the country** (Decrees of the President of the Republic of Belarus on the Park dated 5 June 2012 and 30 June 2014)
- 2. Permanent most favourable treatment in comparison with special economic zones of Belarus** (the Intergovernmental agreement on the Park of 18 September 2011 ratified by the Law of the Republic of Belarus of 7 January 2012)
- 3. Unimpeded transfer of profit from the Republic of Belarus** (Decrees of the President of Republic of Belarus on the Park dated 5 June 2012 and 30 June 2014, the law "On investments")
- 4. Protection of property against nationalisation and requisition** (the Law of the Republic of Belarus "On investments")
- 5. Bilateral agreements on mutual promotion and mutual protection of investments concluded with more than 60 countries of the world**
- 6. Opportunity to conclude an investment contract with the Republic of Belarus** (the Decree of the President of 6 August 2009)
- 7. Judicial protection, including arbitration and the International Centre for settlement of investment disputes** (Washington convention on the settlement of investment disputes of 18 March 1965)
- 8. Insurance of noncommercial risks connected with investment** (the Agreement between the Government of the Republic of Belarus and the Multilateral Investment Guarantee Agency ratified by the Law of 4 May 2012)

Benefits

- 1. Political and social stability;**
- 2. Steady economic growth;**
- 3. Advantageous geographical position and developed transport infrastructure;**
- 4. Developed industrial, science & technical, export potential;**
- 5. Customs Union & Eurasian Economic Union of Belarus, Russia, Kazakhstan and Armenia (soon Kyrgyzstan), MIGA and other membership;**
- 6. Low level of crime;**
- 7. Highly qualified and relatively low-cost labour force;**
- 8. Progressive investment legislation and positive dynamics of foreign direct investment.**



**GREAT
STONE**
industrial park

INVESTMENT PROJECTS

BENEFITS BY INDUSTRY TYPE

- 6-7 ADVANTAGES OF BELARUS
- 8-9 ADVANTAGES OF THE INDUSTRIAL PARK
- 10-11 MECHANICAL ENGINEERING
- 12-13 ELECTRONICS, OPTICS, ELECTRICAL ENGINEERING
- 14-15 ADVANCED NEW MATERIALS AND OTHER INDUSTRIES
- 16-17 PHARMACEUTICS AND BIOENGINEERING
- 18-19 MEDICAL EQUIPMENT AND MATERIALS

MECHANICAL ENGINEERING

- 22-23 ABRASIVE TOOLS PRODUCTION
- 24-25 MANUFACTURING OF TRANSMISSIONS
- 26-27 MANUFACTURING OF PLASTIC AUTO PARTS
- 28-29 MANUFACTURING OF FILTERS FOR AUTO
- 30-31 PRODUCTION OF WOODWORKING MACHINES
- 32-33 MANUFACTURING OF LASER EQUIPMENT FOR METAL PROCESSING
- 34-35 PRODUCTION OF METALWORKING MACHINES
- 36-37 EQUIPMENT FOR AGRICULTURE
- 38-39 PRODUCTION OF TOOLING
- 40-41 POWER EQUIPMENT PRODUCTION

ELECTRONICS AND ELECTRICAL ENGINEERING

- 44-45 3D PRINTERS PRODUCTION
- 46-47 AUTO ELECTRONICS MANUFACTURING
- 48-49 AIR CONDITIONERS PRODUCTION
- 50-51 PRODUCTION OF COMPACT HOUSEHOLD APPLIANCES
- 52-53 DATA STORAGE DEVICES PRODUCTION
- 54-55 PRODUCTION OF VIDEO CONTROL SYSTEMS
- 56-57 PRODUCTION OF SATELLITES AND EQUIPMENT FOR SATELLITES

OPTICS

- 60-61 MANUFACTURING OF LASER LIGHT SOURCES
- 62-63 MANUFACTURING OF OPTICAL EQUIPMENT
- 64-65 OPTICAL FIBER MANUFACTURING

NEW MATERIALS

- 68-69 HIGH-PURITY QUARTZ PRODUCTION
- 70-71 PRODUCTS FROM CERAMICS AND METAL-CERAMICS MATERIALS
- 72-73 MANUFACTURING OF QUARTZ GLASS PRODUCTS
- 74-75 POLYSILICON PRODUCTION
- 76-77 MANUFACTURING OF GLASS FIBER COMPOSITES
- 78-79 PRODUCTION OF HEAT-INSULATING MATERIALS FROM FLAX

BIOTECHNOLOGY AND PHARMACEUTICALS

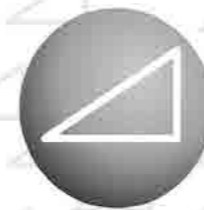
- 82-83 BIOPHARMA PRODUCTION
- 84-85 PRODUCTION OF GENERICS
- 86-87 ADVANCED GRAIN PROCESSING WITH LYSINE AND GLUTEN PRODUCTION
- 88-89 MANUFACTURING OF ECOBIO MICROALGAE-RUN MINI HEAT POWER PLANTS
- 90-91 PIGMENT PRODUCTION

MEDICAL EQUIPMENT AND SUPPLIES

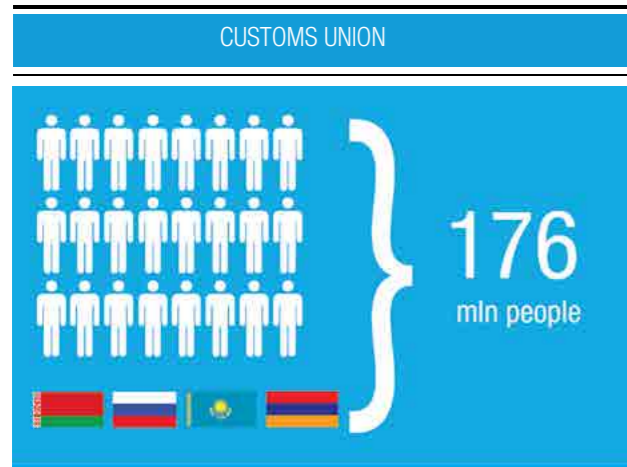
- 94-95 PRODUCTION OF MEDICAL NEEDLES AND SURGICAL INSTRUMENTS
- 96-97 PRODUCTION OF MEDICAL FURNITURE
- 98-99 PRODUCTION OF IMPLANTS AND ENDOPROSTHESES
- 100-101 EQUIPMENT FOR LASER SURGERY
- 102-103 PRODUCTION OF X-RAY APPARATUS
- 104-105 PRODUCTION OF ULTRASONOGRAPHS

OTHERS

- 108-109 MANUFACTURING OF CHILD SAFETY SEATS
- 110-111 PRODUCTION OF PAPER PACKAGING AND CORRUGATED BOARD
- 112-113 PLASTIC TOYS PRODUCTION
- 114-115 MANUFACTURING OF STROLLERS
- 116-117 PRODUCTION OF PLASTIC PACKAGING
- 118-119 PRODUCTION OF PLASTIC FITTINGS
- 120-121 PRODUCTION OF LEDS AND LED LIGHTING DEVICES
- 122-123 MANUFACTURING OF POWER CABLES
- 124-125 MANUFACTURING OF EXERCISE MACHINES
- 126-127 PLASTIC AND METAL-PLASTIC PIPES



BENEFITS BY INDUSTRY TYPE



Belarus is getting attractive for foreign investors: there is a possibility to operate on a capacious 176 mn people Customs Union market.

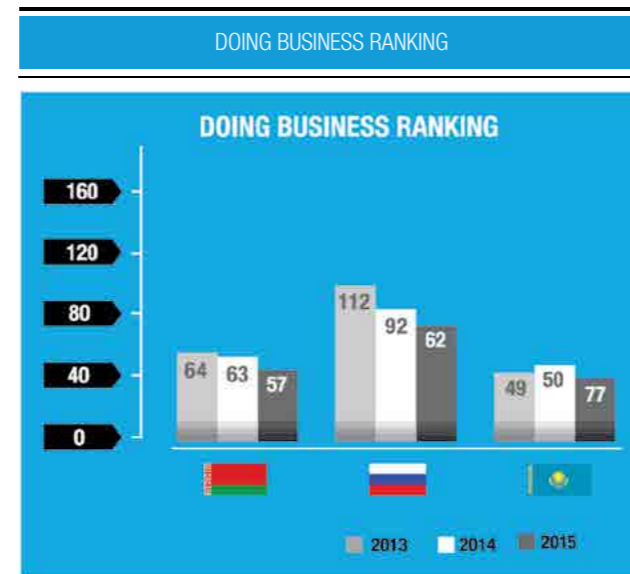


- Belarus is an important transport and communication hub. Intersection of railway lines and automobile highways, communications, gas- and oil pipelines, water mains and air ways.
- Locating production in Belarus will help optimize logistic costs



- Availability of 5 types of transport (auto, railway, air, river and pipeline). Transport corridors – “West-East” and “North-South”, highway Berlin-Moscow, oil pipelines Druzhba and Yamal-Europe.
- Availability of all necessary networks and communications.

According to annual rating *Doing Business-2015*, prepared by IFC and World Bank’s experts, Belarus improved its position, being ranked 57th (63th in 2013) out of 185 countries according to doing business conditions.



Highly qualified and affordable labor force (every fourth graduated from a higher educational institution).

According to human development index, Belarus was ranked 53th out of 187 countries and belongs to the group of countries with high HDI.



Low crime rate, political, socio-economic stability, absence of conflicts (international, religious) – according to Legatum prosperity index Belarus was ranked 54th out of 142 countries.



Mature information society in Belarus – according to ICT (information and communication technologies) development index 2013 Belarus was ranked 46th out of 155 countries, outpacing all CIS states except for Russia (Russia is ranked 40th, Kazakhstan – 48th, Moldova – 65nd, Ukraine – 68th).

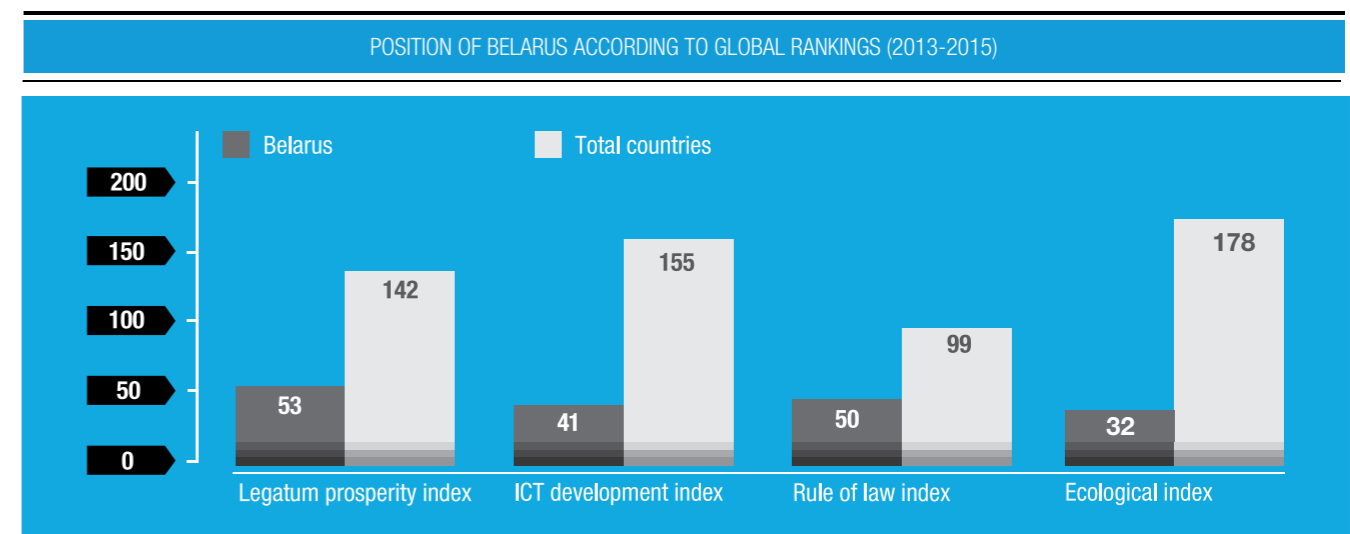


Maturity of investment laws in Belarus, which is highly appreciated by international financial organizations and private investors.

Security and encouragement of investments, corresponding to international standards – according to the rule of law index 2014 Belarus was ranked 50th out of 99 countries.



Favorable environmental conditions – in 2012 Belarus was given the best ecological index among CIS states – 32rd rank out of 178 countries.





Industrial Park is a special economic area which has a special legal status of granting tax privileges which was created in order to attract national and foreign investments for the development and organization of high-tech and competitive production in the sphere of electronics, fine chemistry, biotechnology, engineering industry and new materials.

1. TAX BENEFITS

- Park residents are exempt from all corporation taxes during the first 10 years since the registration day. Tax rates are reduced by 50% during the subsequent 10 years. They are:

- profit tax;
- real estate tax, concerning buildings and constructions on the Park territory;
- land tax, concerning private land parcels on the Park territory.

- Individual income tax rate (for employees) is 9%.

- Residents of the park and their employees are exempt from compulsory insurance contributions from wage and salaries fund.

- Full scale deduction of the VAT paid for purchase of commodities (works, services, rights) for projecting, constructing and equipping buildings and facilities of the park.

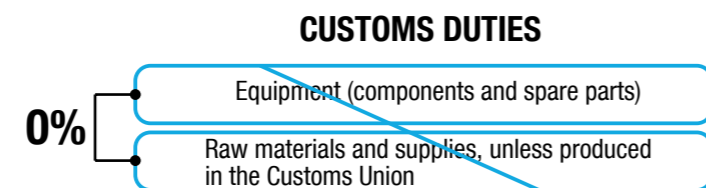
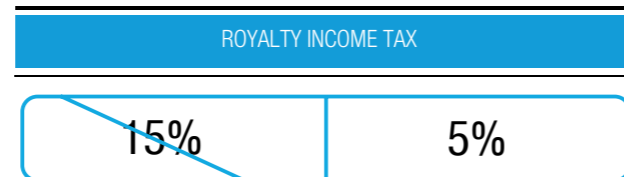
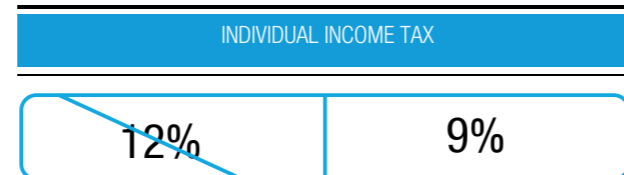
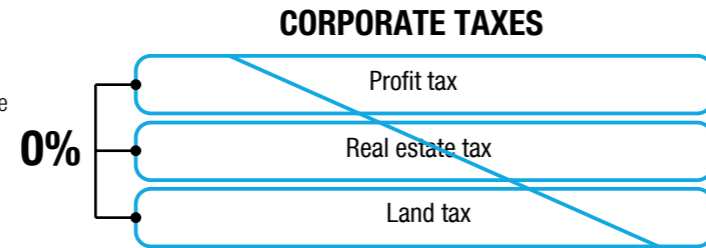
- Exemption from dividend income tax for 5 years since the first year of profit reporting.

- Royalty income tax rate as remuneration for license, patent, useful model, know how, process, is 5%.

2. CUSTOMS PREFERENCES

- Park residents are exempt from customs duties and VAT on goods imported to the territory of the Republic of Belarus for the purpose of investment projects implementation.

- Duty-free zone regime – import of commodities without payment of customs duties in case of further processing and export outside the Customs Union



3. POLICY IN RESPECT OF FOREIGN LABOR

- Exemption from fees for extension of permit to engage foreign labor, special work permits, residence permits.

4. ONE STOP SERVICE

- On the Park territory administrative management is carried out by the Administration functioning according to "one stop service" principle which provides comprehensive and comfortable service for Park residents.

- The Administration fulfills the management function on the Park territory, registers legal entities on the Park territory as well as provides the whole package of administrative procedures.

5. ADDITIONAL GUARANTEES

- Investors will be guaranteed a free transfer of the profits, obtained on the territory of the Republic of Belarus as a result of investment activities in the Park, outside the country.

6. OTHERS

- Grant of privileges, concerning payment of state dues for various administrative producers.
- Possibility to design and construct according to the technical regulations of foreign states

7. GEOGRAPHICAL LOCATION

The Industrial Park is located only 25 kilometers to the east of Minsk, the capital city of Belarus (1,9 mln people) in close vicinity to Minsk National Airport, railways; it is on the crossing of the internal highway M1 which extends to Moscow on the north (the distance of 700 km) and to Berlin on the south (the distance of 1100 km). The distance to the closest seaport in Klaipeda (the Baltic Sea) is 500 km.

8. EXCELLENT ECOLOGY

- Park is surrounded by forests;
- administrative and residential areas will be on the shoreline of Petrovichskoe reservoir;
- there is a part of wildlife preservation with unique species of animals and plants on the Park territory.

Land plots on the park territory are either granted to investors for use (rent) for up to 99 years or can be purchased.

Investor gets ready transport and engineering infrastructure.

Upon establishing new taxes and fees in Belarus, residents of the park are not obliged to pay them.

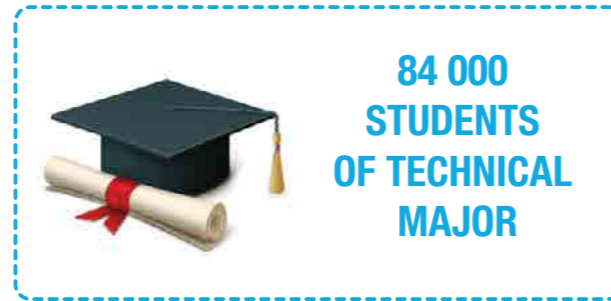


1. HIGH LEVEL HUMAN RESOURCE POTENTIAL

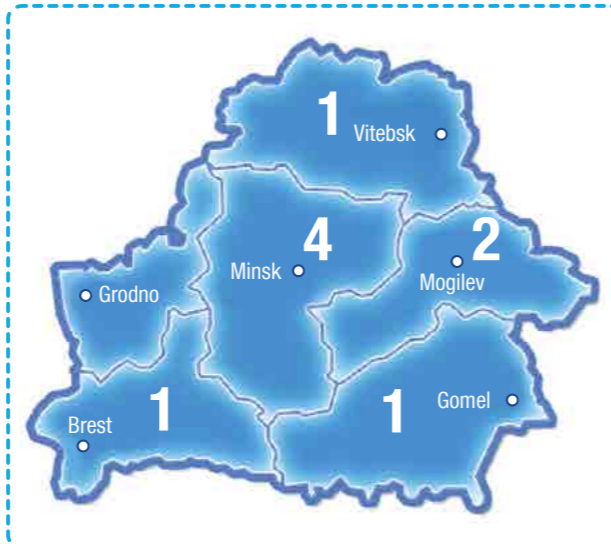
- Availability of skilled personnel. There are 9 higher technical educational institutions in Belarus comprising about 84 thou students.
- Institutions of vocational education and training annually graduate app. 25 thou young professionals majoring in Processes and technology, around 12,7 thou – graduate from technical colleges.
- Belarus higher educational institutions (eg, BNTU, BATU) have specialized departments majoring in agricultural engineering.
- Companies manufacturing tooling equipment and industrial instruments employ more than 2,5 thou specialists.
- Average wages of the industrial labor force in Belarus was USD 636 as of the end of 2013.

2. MECHANICAL ENGINEERING AND MACHINE BUILDING TRADITIONS

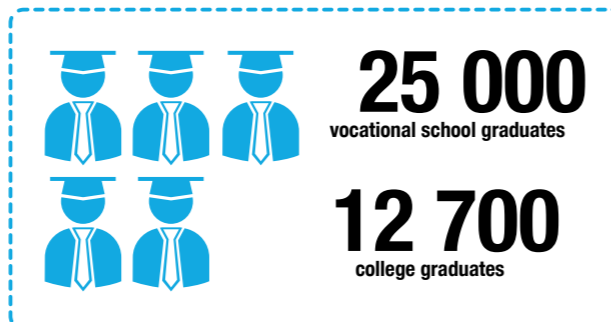
- Around 50 companies are engaged in manufacturing of agricultural equipment in Belarus, outputting more than 350 items of agricultural machinery.
- Machine tool building industry of Belarus comprises about 30 companies. The product range covers all 9 groups according to the classification accepted by machine tool building industry.
- Belarus has experience in implementation of projects on auto parts manufacturing – starters, engines (“BATE” plant), brake systems (“TAIM” plant), automobile filters (“DIFA”), etc.
- Belarus is top European manufacturer of synthetic diamond monocrystals (abrasive materials) in split sphere devices of “BARS” type.
- Belarus machine building industry is concentrated in Minsk and Minsk region (accounting for 67% of total machine building production volume).



HIGHER TECHNICAL EDUCATIONAL INSTITUTIONS IN BELARUS



MAJOR «PROCESSES AND TECHNOLOGY»



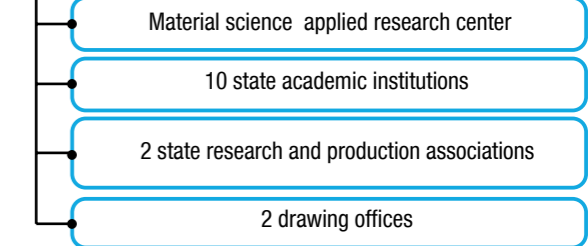
3. EXTENSIVE RESEARCH INFRASTRUCTURE

- Technical department of Belarus Academy of Sciences includes Material science applied research center, 10 state academic institutions, 2 state research and production associations, 2 drawing offices, comprising 14 academicians and 17 associate members; affiliated scientific organizations employ about 5270 people, inc. 1580 researchers, 132 doctors of sciences and 428 candidates of sciences.
- Belarus Academy of sciences comprises a number of organizations specializing in research of metals and metal processing: Material science applied research center, State research and production powder metallurgy association.
- There is a large Physics of high pressure and superhard material synthesis scientific research laboratory, engaged in research of diamond synthesis.

4. EXPORT POTENTIAL OF ENGINEERING PRODUCTS

- Machinery produced in Belarus is mainly exported to the CIS countries (Russia accounts for 50-80% of the exports).

Belarus Academy of Sciences:
Technical department



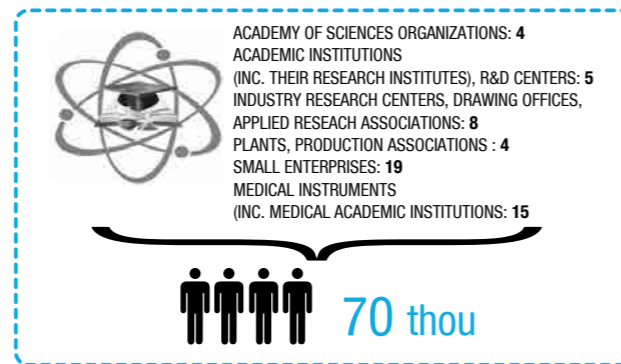
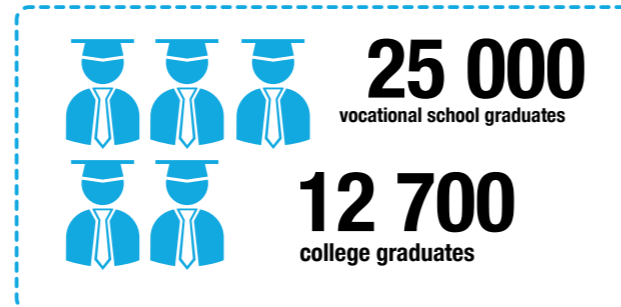


1. HIGH HUMAN RESOURCE POTENTIAL

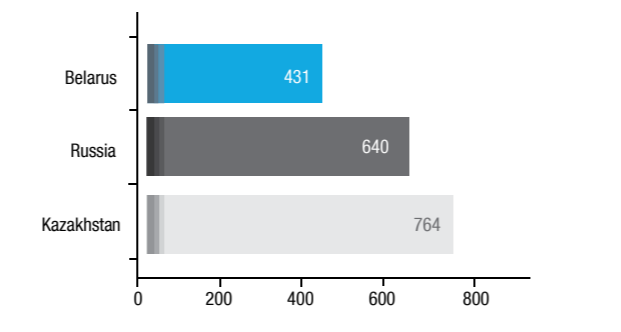
- Institutions of vocational education and training annually graduate app. 25 thou young professionals majoring in "Processes and technology", around 12,7 thou – graduate from technical colleges.
- Electronics and optics industries employ more than 70 thou specialists.
- 55 organizations are engaged in research and development in the field of photonics, manufacturing of such equipment and training of personnel majoring in "Laser and optics".
- Cost of labor force engaged in manufacturing of electro-, electronics and optics equipment in Belarus is lower than in the neighboring countries: average wages in the industry in 2012 totaled USD 431, which is 77% and 48% less than in Kazakhstan and Russia respectively.

2. CONSIDERABLE GROUNDWORK IN OPTICAL AND LASER EQUIPMENT MANUFACTURING

- Launch of Belarus-made Land remote sensing satellite, the equipment for which was manufactured by OJSC "Peleng" – top design and engineering company in Belarus specialized in optical-electronic instrument engineering.
- Stepanov Institute of Physics, Belarus Academy of Sciences developed new generation lasers (new by size, mass, energy efficiency laser emitters with sphere of application from medicine to industry).



AVERAGE WAGES IN OPTICS AND ELECTRONICS INDUSTRY IN 2012, USD



3. WORLD-CLASS SCIENTIFIC PROVISION OF OPTICAL INDUSTRY IN BELARUS

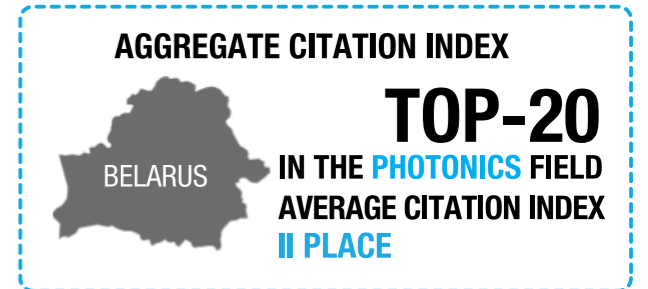
- Belarus is among top 20 according to aggregate citation index in the photonics field, on the 2nd place – according to average one.

4. TRADITIONS OF ELECTRONICS AND HOUSEHOLD APPLIANCES MANUFACTURING

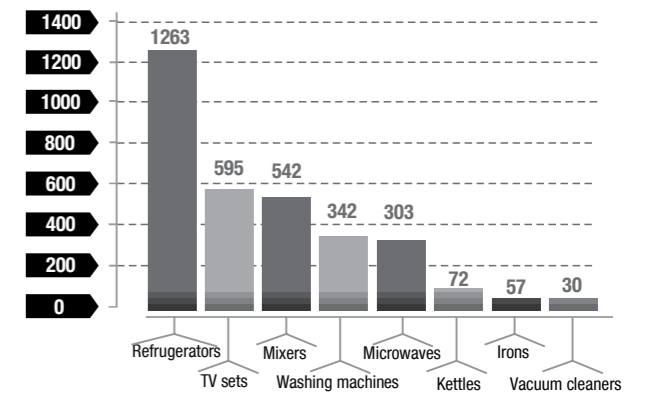
- There are 40 companies operating in the industry, outputting more than 30 items of household appliances and electronics.
- Belarus has experience in implementation of projects on electronics manufacturing at high-technology companies such as "Integral", "Tranzistor", "Peleng", etc.
- Belarus is top household appliances (refrigerators, freezers, washing machines, TV sets) manufacturer among CIS countries.

5. DEVELOPMENT OF LASER AND OPTICAL EQUIPMENT MANUFACTURING IS SUPPORTED AT THE STATE LEVEL

- Optical industry development programs; decrees inducing development of optical-electronic technologies.
- Development of optical technologies is included in the List of priority areas (Council of Ministers) for science development in Belarus.



HOUSEHOLD ELECTRONICS AND APPLIANCES OUTPUT IN BELARUS, thou items



1. HIGH LEVEL HUMAN RESOURCE POTENTIAL

- Availability of skilled personnel. There are 9 higher technical educational institutions in Belarus comprising about 84 thou students, 14 higher educational institution have departments of chemistry.
- There are 63,5 thou people engaged in chemical industry.
- Average wages of the industrial labor force in Belarus was USD 636 as of the end of 2013.

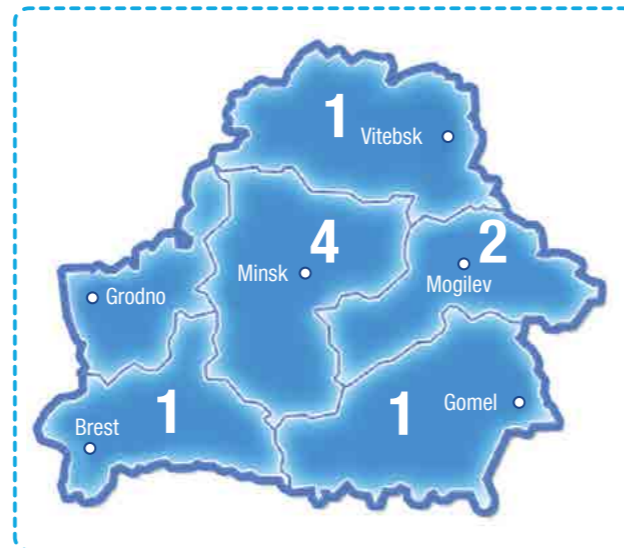
2. RAW MATERIAL RESOURCES

- The volume of identified quartz sand deposits in Belarus is 175 mn t.
- Preferential oil prices for Belarus (as the Customs Union member, Belarus doesn't pay duties) – lower cost of raw materials for petrochemical and chemical industries.
- Belarus is the 4th in the worldwide flax production.
- There is a raw material base for leather goods manufacturing. Cattle stock in Belarus is growing every year – 4,4 mn head in 2012.

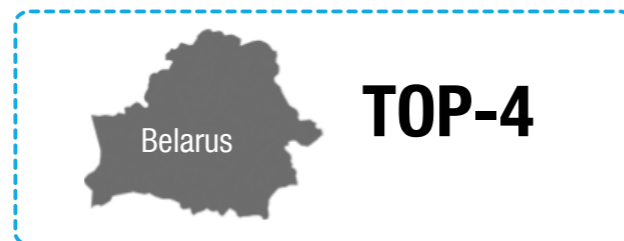
3. RESEARCH INFRASTRUCTURE

- Technical department of Belarus Academy of Sciences includes Material science applied research center, 10 state academic institutions, 2 state research and production associations, 2 drawing offices, comprising 14 academicians and 17 associate members; affiliated scientific organizations employ about 5270 people, inc. 1580 researchers, 132 doctors of sciences and 428 candidates of sciences.
- OJSC «Belgorchimprom» - a leading research and design organization in the industry, having accumulated solid experience in the field of mining and processing industry.

TECHNICAL EDUCATIONAL INSTITUTIONS IN BELARUS



GLOBAL FLAX PRODUCTION



2 MAJOR METAL RESEARCH CENTERS



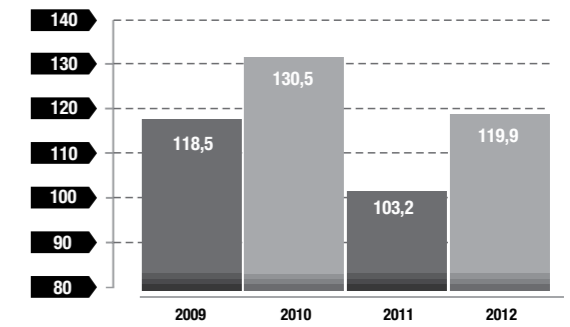
4. TRADITIONS, EXPERIENCE IN IMPLEMENTATION OF PROJECTS

- Developed mining industry in Belarus ("Belaruskaliy", Gomel mining and processing complex, "Dolomit", "Granit", etc.)
- Chemical industry in Belarus is presented by 83 enterprises – members of state concern "Belneftechim" and accounting for 15% of total industrial output (Gomel chemical plant, OJSC "Lakokraska", etc.).
- By 2015 number of modernized flax-mills in Belarus is projected to reach 22.
- Leather industry in Belarus is presented by 5 enterprises, which are being modernized today, inc. foreign financing, which will help increase output and improve rawstock quality in Belarus.
- Belarus has experience in project implementation in quartz industry – quartz glass (OJSC "Coral", medical glass (Borisov cut-glass plant), etc.
- Experience in implementation of projects in manufacturing of heat insulating materials and glass fiber products – OJSC "Polotsk-steklovolokno".

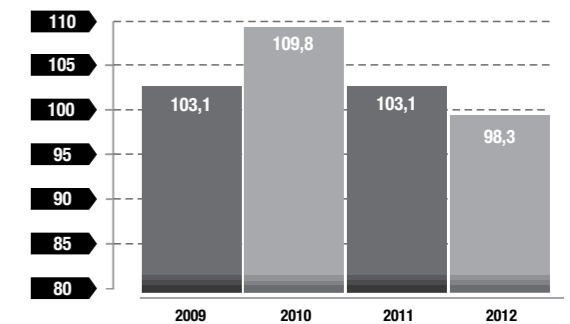
5. DEVELOPMENT OF CHEMICAL, FLAX AND OTHER INDUSTRIES IS SUPPORTED AT THE STATE LEVEL

- State research and development program "Chemical technologies and industries".
- Industry-wide program "Flax" implying reconstruction of flax-mills' technological capacities.

INDUSTRIAL PRODUCTION INDEX OF CHEMICAL INDUSTRY, %



INDUSTRIAL PRODUCTION INDEX OF MINING INDUSTRY, %



State research and development program «Chemical technologies and industries»

- State research and development program «Chemical technologies and industries»
- Subprogram «Chemical technologies and equipment»



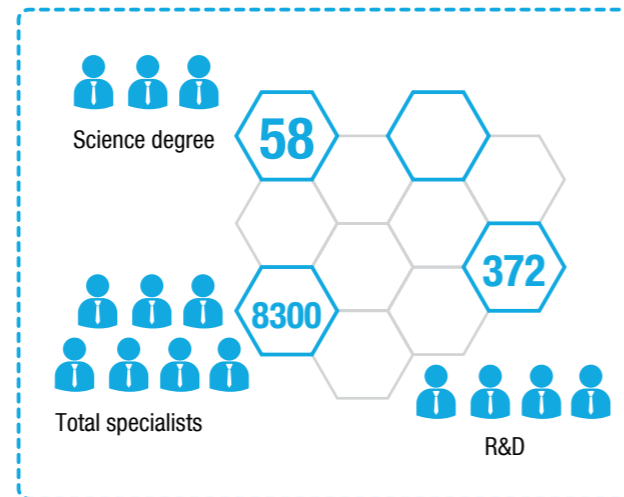
1. HIGH-LEVEL HUMAN RESOURCE POTENTIAL

- There are 8 thou specialists engaged in pharmaceutical industry in Belarus.
- About 500 young professionals graduate from industry specific academic institutions every year.
- Cost of labor force engaged in pharmaceutical industry in Belarus is lower than in the Customs Union countries: average wages in the industry in 2012 totaled USD 477, which is 12% and 46% less than in Kazakhstan and Russia respectively.

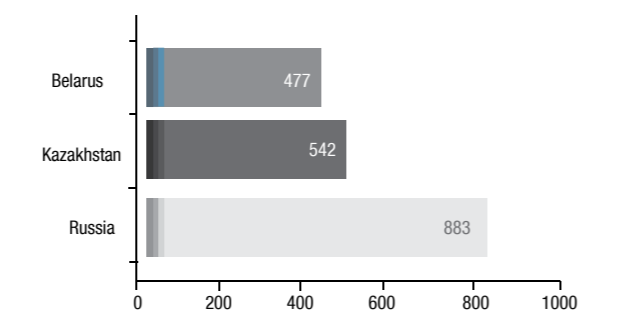
2. HIGH INTEGRATION LEVEL OF BELARUS IN THE INTERNATIONAL SYSTEM OF LABORATORY TESTING AND QUALITY CONTROL FOR MEDICINES

- Belarus hits TOP 4 among 101 countries according to the WHO pharmacovigilance rating.
- Since 2012 laboratories in Belarus are included in the OMCL (Official medicines control laboratories) network of European Directorate for the quality of medicines (EDQM).
- Mutual recognition of marketing authorizations of the Customs Union members GMP quality assured since 2015.
- Gradual harmonization of legislative requirements toward circulation of drugs with the EU requirements.
- Medicine quality control laboratory UP "Center for examination and testing in health service", accredited to carry out 66 types of testing, passed the first stage of requalification by WHO as its expert laboratory for Eastern European markets.

PHARMACEUTICAL INDUSTRY



AVERAGE WAGES IN PHARMACEUTICAL INDUSTRY IN 2012, USD



WHO PHARMACOVIGILANCE RATING

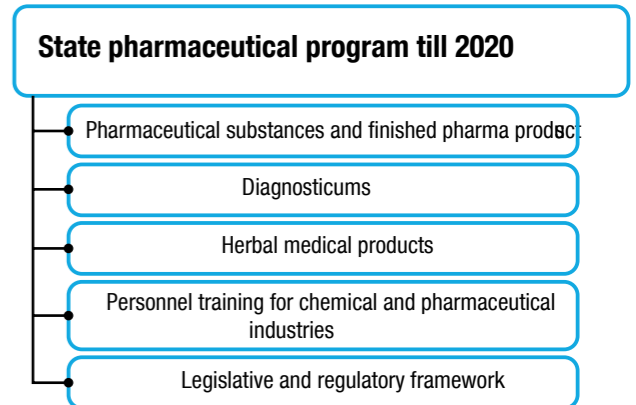


3. TRADITIONS AND SCIENTIFIC RESEARCH RESULTS IN PHARMACEUTICS

- Developed scientific base, scientific potential of bioengineering industry: developments of Institute of bioorganic chemistry, Belarus Academy of Sciences (department of pharmaceutical chemistry, department of pharmacy and pharmacology) and higher educational institutions in the field of genomic bioengineering, veterinary, agrarian bioengineering.
- There are 504 institutions and organizations engaged in research and development.

4. BIOENGINEERING AND PHARMACEUTICS DEVELOPMENT IS SUPPORTED AT THE STATE LEVEL

- Bioengineering development is included in the List of priority areas (Council of Ministers) for science development in Belarus.
- State pharmacopeia of the Republic of Belarus is European pharmacopoeial commission observer.





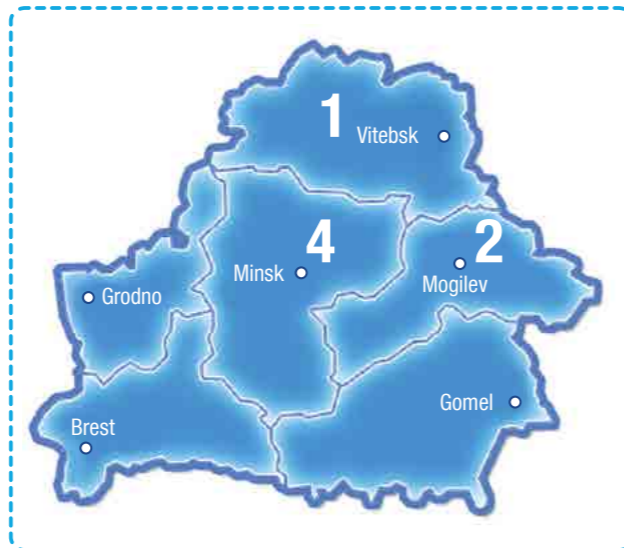
1. HIGH HUMAN RESOURCE POTENTIAL

- Availability of skilled personnel. There are 55 higher educational institutions in Belarus, 9 out of which are technical. Number of students with technical major is about 84 thou.
- Highly qualified specialists in the field of medical equipment manufacturing, experienced design engineers. The largest number of doctoral candidates (27%) in 2012 was accounted for by medical field of study.
- Cost of labor force engaged in manufacturing of electrical, electronic and optical equipment in Belarus is lower than in the neighboring countries: average wages in the industry in 2012 totaled USD 431, which is 77% and 48% less than in Kazakhstan and Russia respectively.

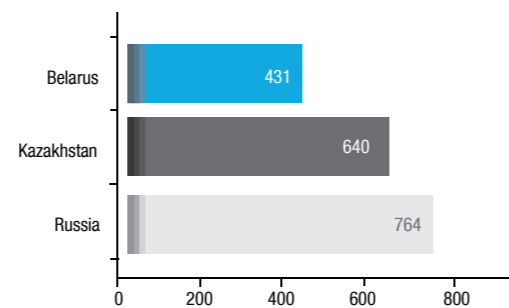
2. WORLD-CLASS LEVEL OF RESEARCH AND DEVELOPMENT

- Belarus is one of the world major centers engaged in laser and laser technologies, inc. for medical use, research. There is a number of successful projects on launching production based on such technologies.
- There are scientific research results in the field of X-ray equipment manufacturing with higher quality of X-ray image and low-level dose. Many developments are patented in different countries across the globe.
- Scientific research results in the field of implant manufacturing (a number of patents have been obtained – in Russia, Belarus, Euroasian patent, CE certification).

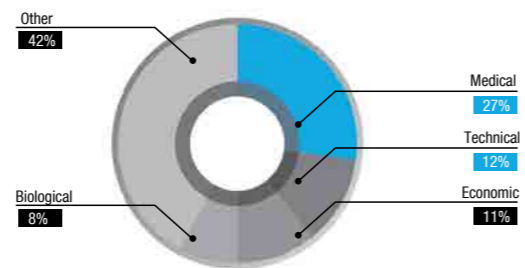
HIGHER TECHNICAL EDUCATIONAL INSTITUTIONS IN BELARUS



AVERAGE WAGES IN OPTICS AND ELECTRONICS INDUSTRY IN 2012, USD



NUMBER OF DOCTORAL CANDIDATES BY FIELDS OF STUDY, 2012



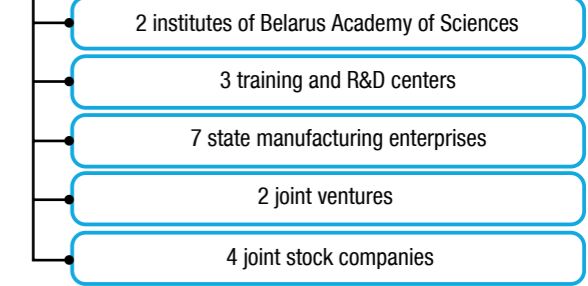
3. TRADITIONS OF MEDICAL EQUIPMENT MANUFACTURING

- Strong traditions of complex techware manufacturing in Belarus.
- Traditions of establishment and development of complex assembling based on a wide range of components.

4. SUPPORT AT THE STATE LEVEL

- Development of laser and optical equipment manufacturing is supported at the state level (optical industry development programs; decrees inducing development of optical-electronic technologies; science and research association "Optics and lasers").
- As medical equipment market is mainly presented by inpatient sector (state), chances of participation in the Customs Union's government procurement for Belarusian companies are significantly higher than for importers, taking into account knowledge and understanding of procedures, strong traditions of sales, Customs Union market regulations (standardization, certification).

Association «Optics and lasers»





MECHANICAL ENGINEERING



PROJECT

For implementation there is provided a project on manufacturing of abrasive tools .

The project is considered promising due to the following reasons:

- 38.2 billion USD was a global volume of abrasive tools production in 2013. 7% was CAGR of abrasive tools market for last 5 years. Asia is a largest abrasives consumer in the world (56%).
- 80-90% is a share of import abrasives in total abrasives consumption in Russia and Belarus. 163 million USD was an volume of abrasive tools import to Russia in 2012. CAGR for last 5 years was 18%.

- Production of non-metallic abrasive tools (including diamonds) is one of the most promising market segment.
- Belarus has unique technologies in synthetic diamond production (20 thousand carat per year).
- Capex varies between USD 10-30 mn, IRR 20-25%.

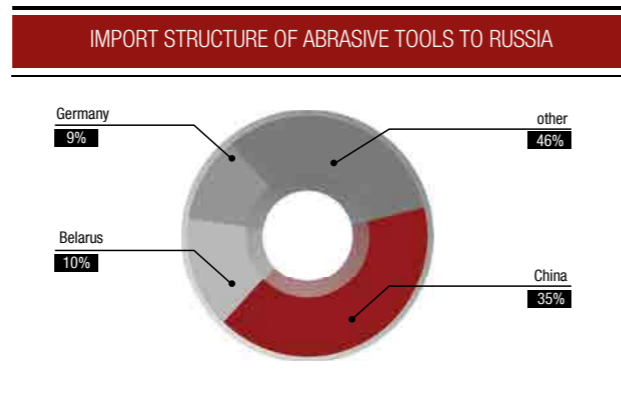
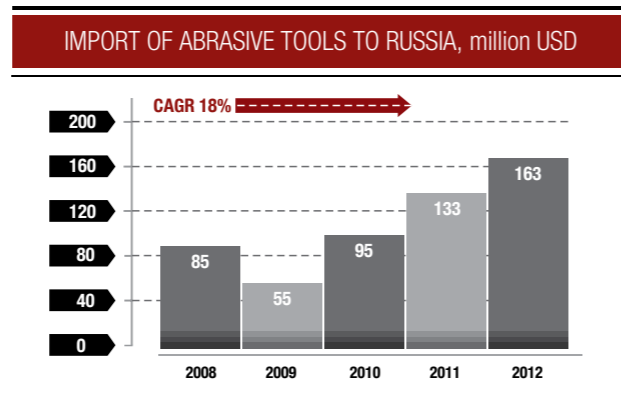
MARKETS

BELARUSIAN MARKET:

- 30 million USD was an volume of abrasive tools import to Belarus in 2012. CAGR for last 5 years was 3%.
- Russian Federation (49.5%), China (13.5%) and Germany (8%) are the largest exporters of abrasive tools to Belarus.

MARKET OF CUSTOM UNION:

- 163 million USD was an volume of abrasive tools import to Russia in 2012. CAGR for last 5 years was 18%.
- China (35%), Belarus (10%), Germany (9%) are the largest exporters of abrasive tools to Russia.



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

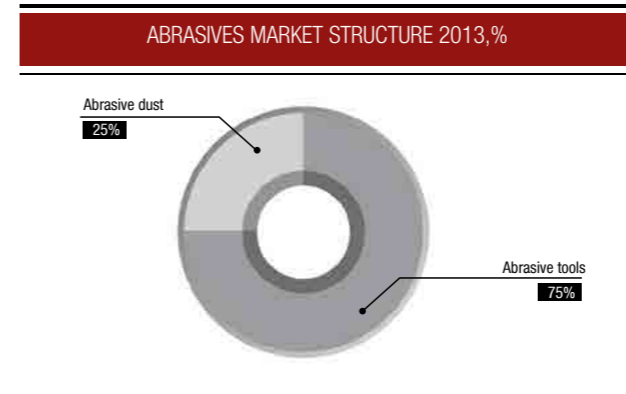
- 38.2 billion USD was a global volume of abrasive tools production in 2013.
- 7% was CAGR of abrasive tools market for last 5 years.
- 4-5% is an expected growth rate till 2017.
- Abrasives market consists from 2 segments: abrasive tools(75%) and abrasive dust(25%).

REGIONAL OPPORTUNITIES:

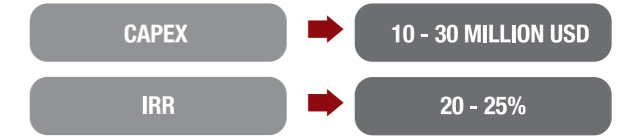
- Russian Federation is reckoned among top ten largest importers of abrasives.
- The structure of Russian abrasives market can be characterized as unconsolidated
- Cutting circles dominate Russian abrasives market (38%). 14% is a share of flexible abrasives. 31% is a share of combined abrasives. 9% and 8% is a share of diamond abrasive tools and tools for construction correspondently.
- Till 2020 Russia plans to spend 130 billion USD according to the industry development program.

ATTRACTIVE SEGMENTS:

- Production of non-metallic abrasive tools (including diamonds) is one of the most promising market segment.

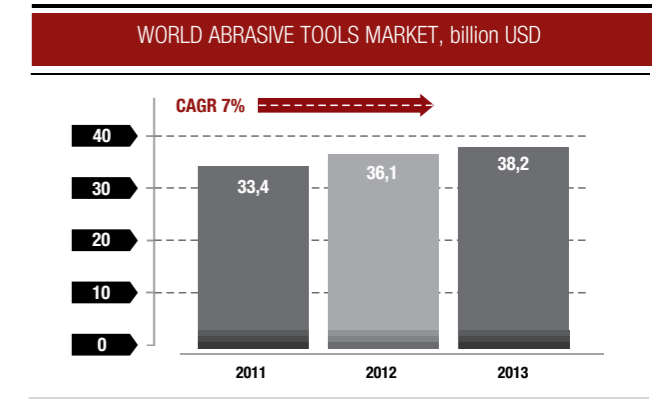


INVESTMENT OPPORTUNITIES



POTENTIAL INVESTORS

Large producers of abrasive tools from China, South Korea, Germany, Austria and Poland.





PROJECT

There is provided a project on **launching production of transmissions**.

The Project is worth of implementation due to the following factors:

- The segment is expected to be top leading by profitability in the near 10 years.
- Imports of parts and components for motor vehicles in Russia in 2012 totaled more than **USD 10,8 bn** and grew by **57%** on average annually over 2009-2012.

- In spite of continuing growth, Russian auto parts industry is underdeveloped – in case of competitive products manufacturing, there is no access barriers in the market.
- Global auto parts market is projected to reach **USD 900 bn** by 2020 (in 2008 – app. **USD 675 bn**).
- Capital expenditures for the project are estimated at **USD 50-70 mn**, payback period is about **5-6 years**.

MARKETS

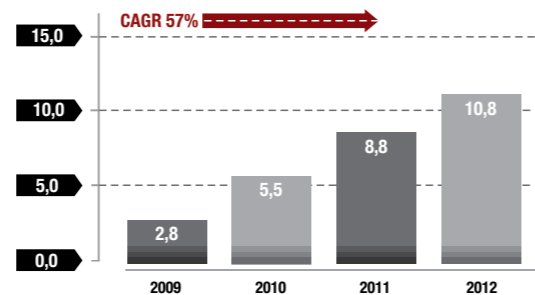
CUSTOMS UNION MARKET:

- In 2012 Russia imported parts and components for motor vehicles to the value of more than **USD 10,8 bn**, annual average growth rate of the imports totaled **57%**.
- Russia's imports of transmissions and their parts was growing even faster – **71%** on average per year over 2009-2012, the imports totaled **USD 1,55 bn** in 2012.
- Russian car industry is characterized by developed car assembling, auto parts manufacturing, in its turn, is still poorly developed segment of car industry in Russia.

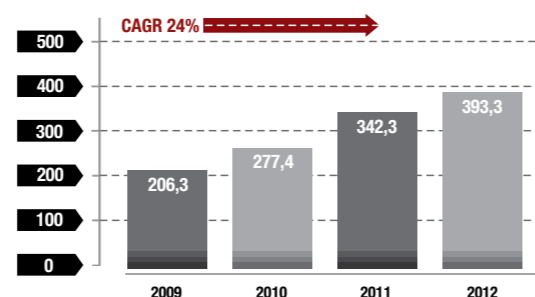
INTERNAL MARKET OF BELARUS:

- In 2012 Belarus imported parts and components for motor vehicles to the value of more than **USD 393 mn**, annual average growth rate of the imports over 2009-2012 totaled **24%**.

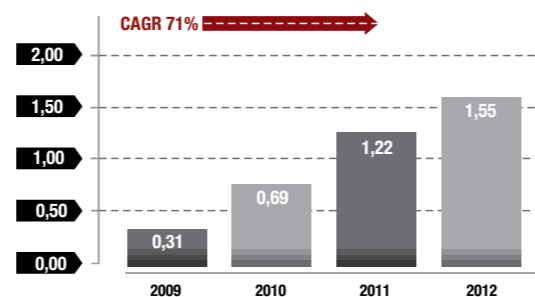
IMPORTS OF PARTS AND COMPONENTS FOR MOTOR VEHICLES IN RUSSIA, USD bn



IMPORTS OF PARTS AND COMPONENTS FOR MOTOR VEHICLES IN BELARUS, USD bn



IMPORTS OF TRANSMISSIONS AND THEIR PARTS IN RUSSIA, USD bn



MARKET OPPORTUNITIES

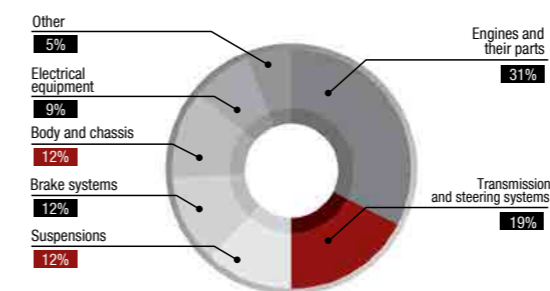
GLOBAL OPPORTUNITIES:

- According to Roland Berger, world auto parts market is projected to reach **USD 900 bn** by 2020 (in 2008 – USD 675 bn).
- Annual average growth rate of car manufacturing over 2011-2018 – **5,3%**, projected output in 2018 is **USD 106 mn**.
- **83%** of global car market growth over 2011-2018 will be generated by rapidly developing economies (BRIC).
- Extra profit will be gained by the companies operating on Brazilian, Russian, Indian and Chinese markets, as well as suppliers of auto components (mass serial manufacture and budget models).

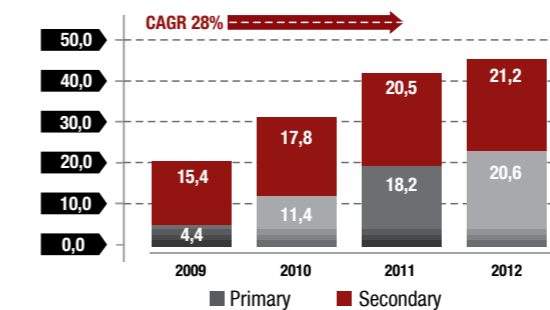
LOCAL OPPORTUNITIES:

- In 2012 auto parts market in Russia reached **USD 41,8 bn**, annual average growth rate over 2009-2012 was **28%**. There has been a significant change in the market structure – in 2009 primary market accounted for 22%, in 2012 – **49%**.
- More than **2,8 mn cars**, out of which 73% – foreign brands assembled in Russia, are projected to be manufactured in 2016 in Russia.
- In spite of continuing growth, Russian car industry is underdeveloped, which is caused by the following factors:
 - Low competition and low product quality;
 - Underinvestment in advanced technologies;
 - Decrease in import duties and possibility to import auto parts at low tariff.

GLOBAL AUTO PARTS MARKET STRUCTURE



AUTO PARTS MARKET IN RUSSIA, USD bn



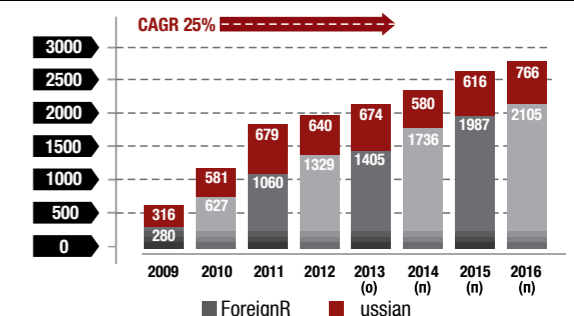
INVESTMENT OPPORTUNITIES

- Capex for the project may total **USD 50-70 mn**.
- Payback period is about **5-6 years**.
- IRR varies between **15-18%**.

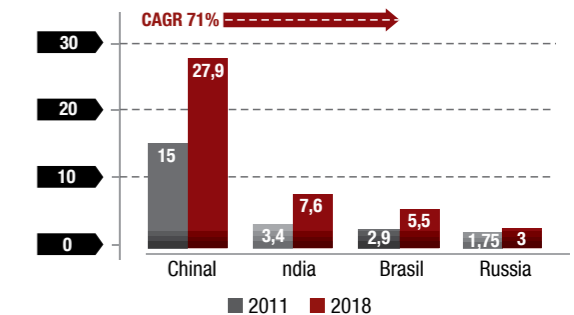
POTENTIAL INVESTORS

- **Strategic investors** – companies with appropriate technologies and experience in auto parts manufacturing in general or transmissions manufacturing in particular.
- **Forward integration** – companies engaged in the industries – key auto parts consumers (automobile industry, auto parts distributors, etc.).

AUTO OUTPUT IN RUSSIA, thou pieces



AUTO MANUFACTURING IN BRIC COUNTRIES IN 2018, mn pieces





PROJECT

There is provided a project on **launching production of plastic auto parts** (bumpers, dashboards, etc.)

Project attractiveness is preconditioned by the following:

- Imports of parts and components for motor vehicles in Russia in 2012 totaled more than **USD 10,8 bn** and grew by **57%** on average annually over 2009-2012.
- Usage of plastics in automobile construction helps decrease its weight by 15-30%, reduction in weight by 100 kg, in its turn, leads to decrease in fuel consumption by 0,5 litres per each 100 km.

- Plastic auto parts market in Russia totals around **USD 1 bn**.
- Global auto parts market is projected to reach **USD 900 bn** by 2020 (in 2008 – app. **USD 675 bn**).
- Capital expenditures for the project are estimated at **USD 30-40 mn**, payback period is about **4-5 years**.

MARKETS

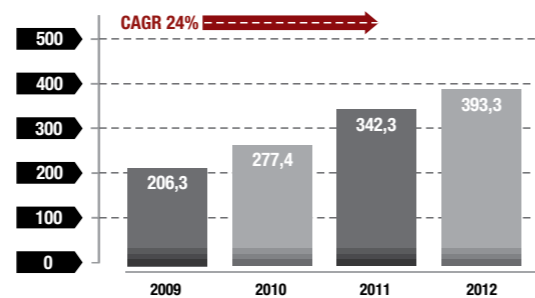
CUSTOMS UNION MARKET:

- In 2012 Russia imported parts and components for motor vehicles to the value of more than **USD 10,8 bn**, annual average growth rate of the imports totaled **57%**.
- Russian car industry is characterized by developed car assembling, auto parts manufacturing, in its turn, is still poorly developed segment of car industry in Russia.
- Plastic auto parts market in Russia grows by **20-30%** a year due to localization of foreign car assembly, market volume is around **USD 1 bn**.

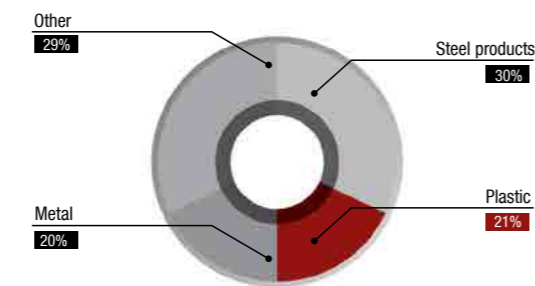
INTERNAL MARKET OF BELARUS:

- In 2012 Belarus imported parts and components for motor vehicles to the value of more than **USD 393 mn**, annual average growth rate of the imports over 2009-2012 totaled **24%**.

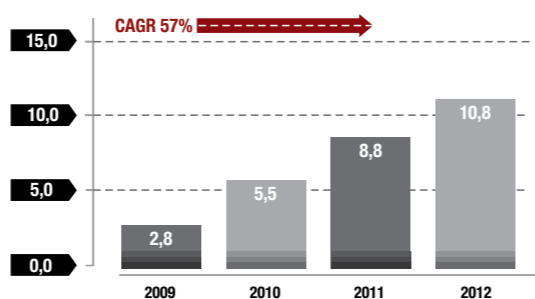
IMPORTS OF PARTS AND COMPONENTS FOR MOTOR VEHICLES IN BELARUS, USD bn



MATERIALS USED IN AUTOMOBILE CONSTRUCTION



IMPORTS OF PARTS AND COMPONENTS FOR MOTOR VEHICLES IN RUSSIA, USD bn



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- According to Roland Berger, world auto parts market is projected to reach **USD 900 bn** by 2020 (in 2008 – USD 675 bn).
- Annual average growth rate of car manufacturing over 2011-2018 – **5,3%**, projected output in 2018 is **USD 106 mn**.
- 83%** of global car market growth over 2011-2018 will be generated by rapidly developing economies (BRICS).
- Usage of plastics in automobile construction helps decrease its weight by 15-30%, reduction in weight by 100 kg, in its turn, leads to decrease in fuel consumption by 0,5 litres per each 100 km.
- Almost three fourths of interior trim is made of plastics, synthetic films, fabrics, synthetic leather.

LOCAL OPPORTUNITIES:

- In 2012 auto parts market in Russia reached **USD 41,8 bn**, annual average growth rate over 2009-2012 was **28%**. There has been a significant change in the market structure – in 2009 primary market accounted for **22%**, in 2012 – **49%**.
- More than **2,8 mn cars**, out of which **73%** – foreign brands assembled in Russia, are projected to be manufactured in 2016 in Russia.

- In spite of continuing growth, Russian car industry is underdeveloped, which is caused by the following factors:

- Low competition and low product quality;
- Underinvestment in advanced technologies;
- Decrease in import duties and possibility to import auto parts at low tariff.

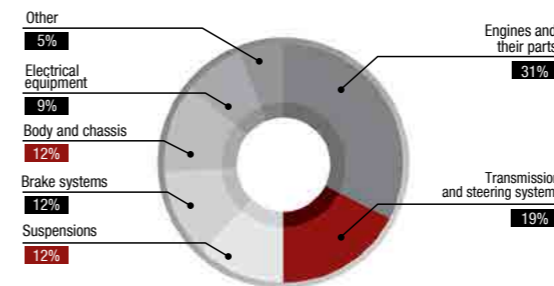
INVESTMENT OPPORTUNITIES

- Capex for the project may total **USD 30-40 mn**.
- Payback period is about **4-5 years**.
- IRR varies between **18-22%**.

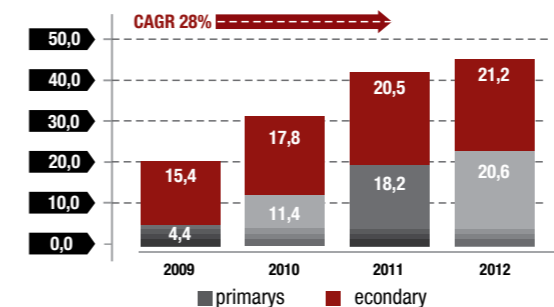
POTENTIAL INVESTORS

- Strategic investors** – companies with appropriate technologies and experience in auto parts manufacturing.
- Forward integration** – companies engaged in the industries – key auto parts consumers (automobile industry, auto parts distributors, etc.).
- Backward integration** – companies engaged in the industries – main plastics suppliers (petrochemical, etc.).

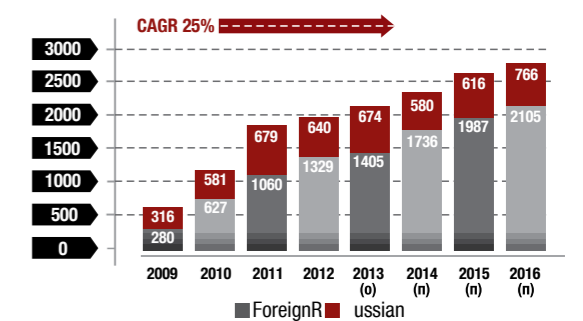
GLOBAL AUTO PARTS MARKET STRUCTURE



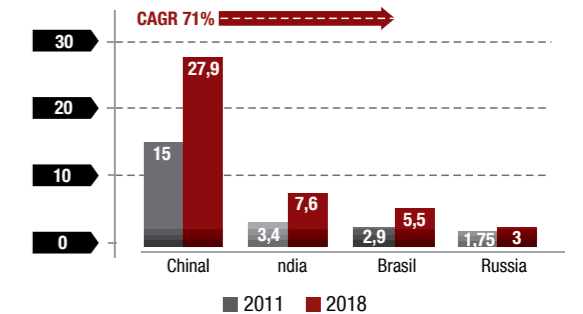
AUTO PARTS MARKET IN RUSSIA, USD bn



AUTO OUTPUT IN RUSSIA, thou pieces



AUTO MANUFACTURING IN BRIC COUNTRIES IN 2018, mn pieces





PROJECT

There is provided a project on **launching production of filters for automobiles** (air, oil, fuel).

The project is worth implementing due to the following factors:

- Imports of parts and components for motor vehicles in Russia in 2012 totaled more than **USD 10,8 bn** and grew by **57%** on average annually over 2009-2012.

- Number of oil filter is projected to increase equally to the number of cars.
- Global auto parts market is projected to reach **USD 900 bn** by 2020 (in 2008 – app. **USD 675 bn**).
- Capital expenditures for the project are estimated at **USD 10-15 mn**, payback period is about **3-4 years**.

MARKETS

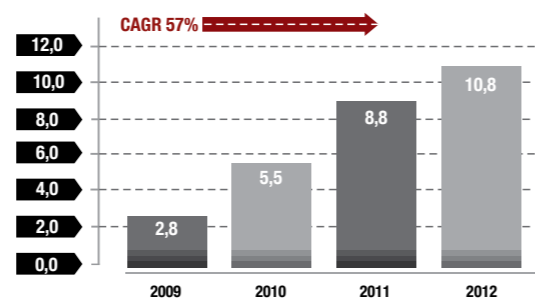
CUSTOMS UNION MARKET:

- In 2012 Russia imported parts and components for motor vehicles to the value of more than **USD 10,8 bn**, annual average growth rate of the imports totaled **57%**.
- Imports of air filters in Russia in 2012 totaled more than **USD 144 mn**, annual average growth rate over 2009-2012 was **28%**.
- Imports of oil and fuel filters in Russia, exceeded **USD 240 mn** in 2012, annual average growth rate was **25%** over 2009-2012.

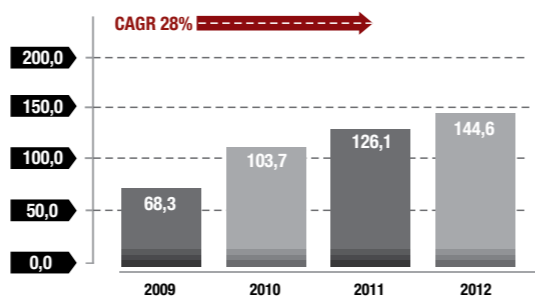
INTERNAL MARKET OF BELARUS:

- In 2012 Belarus imported parts and components for motor vehicles to the value of more than **USD 393 mn**, annual average growth rate of the imports over 2009-2012 totaled **24%**.

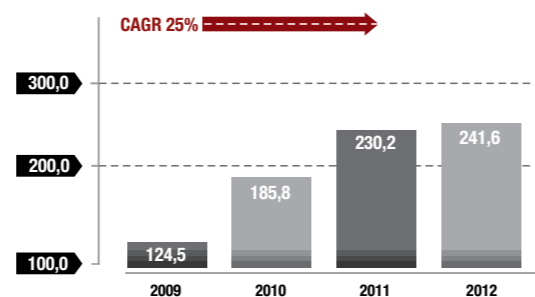
IMPORTS OF PARTS AND COMPONENTS FOR MOTOR VEHICLES IN RUSSIA, USD bn



IMPORTS OF AIR FILTERS IN RUSSIA, USD mn



IMPORTS OF OIL AND FUEL FILTERS IN RUSSIA, USD mn



MARKET OPPORTUNITIES

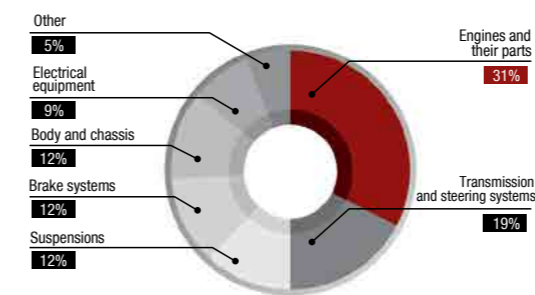
GLOBAL OPPORTUNITIES:

- According to Roland Berger, world auto parts market is projected to reach **USD 900 bn** by 2020 (in 2008 – USD 675 bn).
- Annual average growth rate of car manufacturing over 2011-2018 – **5,3%**, projected output in 2018 is **USD 106 mn**.
- 83%** of global car market growth over 2011-2018 will be generated by rapidly developing economies (BRICS).
- In the near 8-10 years automobile filters market will increase in proportion to number of cars, saturation will come no earlier than 2020-2022.

LOCAL OPPORTUNITIES:

- In 2012 auto parts market in Russia reached **USD 41,8 bn**, annual average growth rate over 2009-2012 was **28%**. There has been a significant change in the market structure – in 2009 primary market accounted for 22%, in 2012 – **49%**.
- More than **2,8 mn cars**, out of which 73% – foreign brands assembled in Russia, are projected to be manufactured in 2016 in Russia.
- In spite of continuing growth, Russian car industry is underdeveloped, which is caused by the following factors:
 - Low competition and low product quality;
 - Underinvestment in advanced technologies;
 - Decrease in import duties and possibility to import auto parts at low tariff.

GLOBAL AUTO PARTS MARKET STRUCTURE



AUTO OUTPUT IN RUSSIA, thou pieces



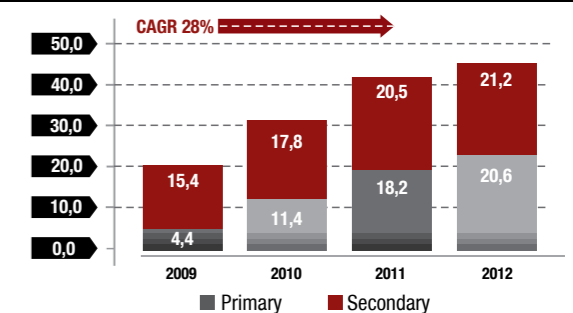
INVESTMENT OPPORTUNITIES

- IRR проекта колеблется на уровне **22-28%**.
- Capex for the project may total **USD 10-15 mn**.
- Payback period is about **3-4 years**.
- IRR varies between **22-28%**.

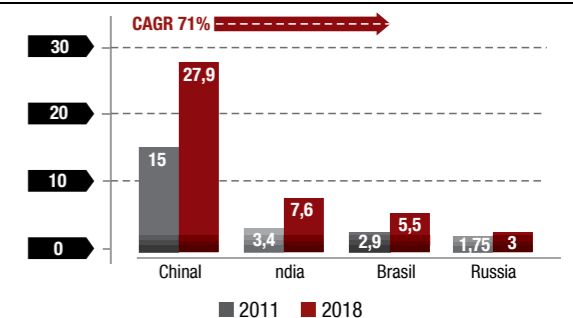
POTENTIAL INVESTORS

- Strategic investors** – companies with appropriate technologies and experience in auto parts manufacturing.
- Forward integration** – companies engaged in the industries – key auto parts consumers (automobile industry, auto parts distributors, etc.).

AUTO PARTS MARKET IN RUSSIA, USD bn



AUTO MANUFACTURING IN BRIC COUNTRIES IN 2018, mn pieces





PROJECT

For implementation there is provided a project on manufacturing of woodworking machines.

The project is considered promising due to the following reasons:

- 93 billion USD was a volume of world machine tools market in 2012. CAGR for last 5 years was 19%. 117 billion USD was a volume of world furniture market in 2012.
- Russia needs 50 000 new machine tools annually. 85% is the share of import in the machine tools consumption in Russia.
- Belarusian Forestry Development program includes modernization of wood processing enterprises.

- Belarusian machine tools sector includes 30 enterprises.
- Production of woodworking machines is oriented on the Custom Union market. Total import volume of woodworking machines to Russia is more than 680 million USD).
- Band machines and circular saw machines are the most promising segments in Russian woodworking machines market.
- Capex varies between USD 10-50 mn, IRR 15-20%.

MARKETS

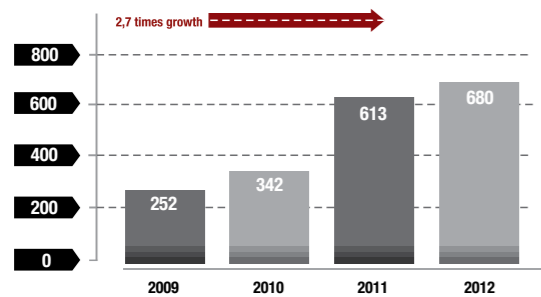
BELARUSIAN MARKET:

- 65 million USD was an volume of woodworking machines import to Belarus in 2012.
- Belarusian Forestry Development program includes modernization of wood processing enterprises.

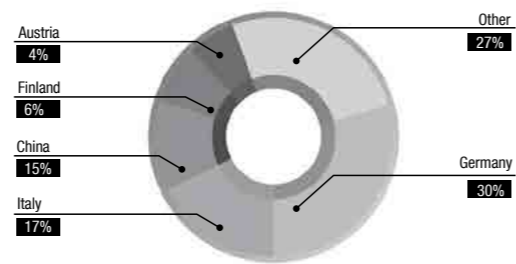
MARKET OF CUSTOM UNION:

- 680 million USD was an volume of woodworking machines import to Russia in 2012.
- Germany (30%), Italy (17%), China (15%) are the largest exporters of woodworking machines to Russian Federation.

IMPORT OF WOODWORKING MACHINES TO RUSSIA, million USD



IMPORT STRUCTURE OF WOODWORKING MACHINES TO RUSSIA, %



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- 93 billion USD was a volume of world machine tools market in 2012. CAGR for last 5 years was 19%. Experts expect further growth of the machine tool market at 8.6% per year till 2017.
- 117 billion USD was a volume of world furniture market in 2012.

REGIONAL OPPORTUNITIES:

- Russian Federation is reckoned among top ten largest importers of machine tools. 3% is a share of Russian market in global machine tool market.
- Russia needs 50 000 new machine tools annually. 85% is the share of import in the machine tools consumption in Russia.
- 4 163 woodworking machines were produced in Russia in 2012 (21% growth).
- Till 2020 Russia plans to spend 130 billion USD according to the industry development program.
- 12 billion USD was a volume of Russian furniture market in 2012. Объем продаж мебели CAGR for last 5 years was 4%.

ATTRACTIVE SEGMENTS:

- Band machines and circular saw machines are the most promising segments in Russian woodworking machines market.

POTENTIAL INVESTORS

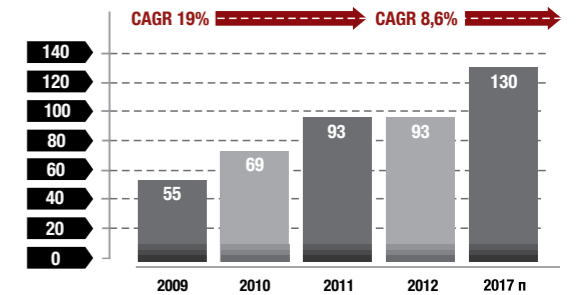
Large producers of woodworking machines from China, Japan, South Korea, Taiwan and Europe.

INVESTMENT OPPORTUNITIES

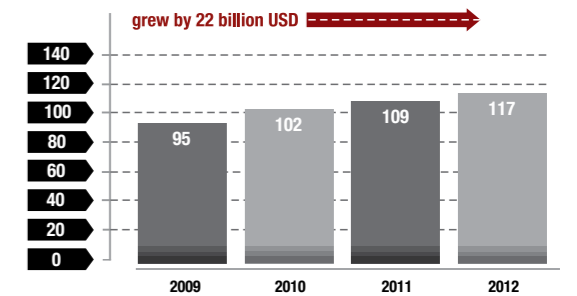
CAPEX → 10 - 50 MILLION USD

IRR → 15-20%

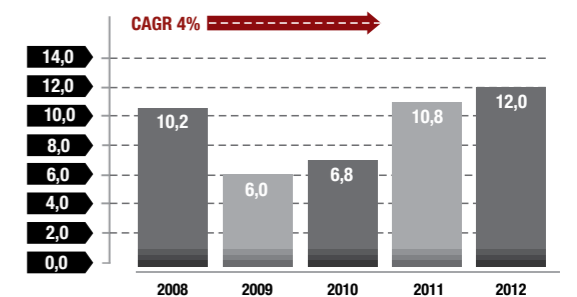
WORLD MACHINE TOOLS MARKET, billion USD



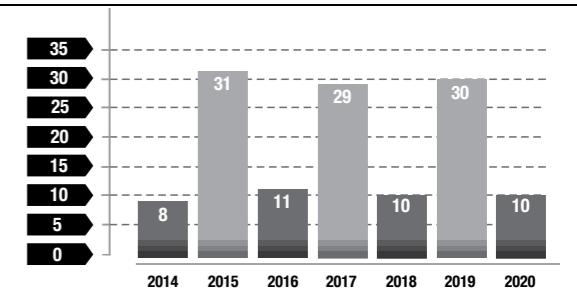
GLOBAL FURNITURE MARKET, billion USD



RUSSIAN FURNITURE MARKET, billion USD



BUDGET FUNDING ACCORDING TO THE RUSSIA INDUSTRY DEVELOPMENT PROGRAM, billion USD





PROJECT

There is provided a project on launching production of laser equipment for metal processing.

This is a high-opportunity project due to the following reasons:

- Laser industry is one of the **fastest growing** in the world.
- Annual average growth rate of world laser manufacturing systems output totaled **10%** over 1986-2011, compared with only **1,3%** for metal processing machines.
- **World-class scientific provision** of optical industry in Belarus (top 20 according to aggregate citation index in the photonics field, 2nd place – according to average one), considerable groundwork in optical equipment manufacturing.

MARKETS

CUSTOMS UNION MARKET:

- Russian market of laser equipment for materials processing exceeds **USD 100 mn.**
- Russia imports basically finished laser systems with embedded laser – the imports reaches app. **70-80%.**
- Annual average growth rate of laser materials processing equipment imports in Russia over 2009-2012 was **51%.**

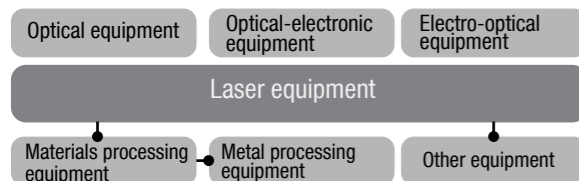
INTERNAL MARKET OF BELARUS:

- Annual average growth rate of laser materials processing equipment imports in Belarus over 2009-2012 was **43%**, exports – **130%**, which indicates a high export-orientedness of production.

BRICS COUNTRIES MARKET:

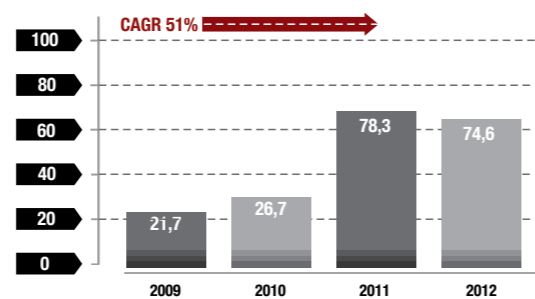
- In 2012 dominant positions in purchase of laser equipment (**24%** of world sales) were held by South Asia countries.

MAJOR SEGMENTS OF PHOTONICS MARKET

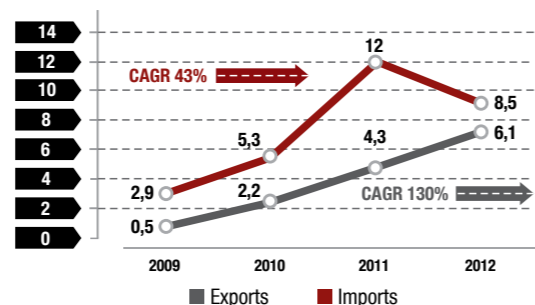


- **Human resources** with the lowest labor cost among Customs Union members, development of laser and optical equipment manufacturing is supported at the state level.
- Potential markets – Customs Union (annual average growth rate of laser equipment in Russia is **51%**, in Belarus – **43%**) and South Asia countries (China in the first place) consuming more than a third of global laser equipment volume.
- Capital expenditures for launching production of laser metal processing equipment vary within **USD 10-150 mn**, IRR – **20-40%**.

IMPORTS OF MATERIALS PROCESSING EQUIPMENT IN RUSSIA, USD mn



FOREIGN TRADE OF MATERIALS PROCESSING EQUIPMENT IN BELARUS, USD mn



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Laser technologies are an engine for innovations in the modern world. The European Commission estimated that world photonics market will reach **USD 500 bn** in 2015.
- Annual average growth rate of world laser manufacturing systems output totaled **10%** over 1986-2011, compared with only **1,3%** for metal processing machines.
- In 2012 world market of laser equipment for materials processing reached **USD 2,1 bn**, having increased by **10%** compared to 2011.
- Metal processing remains the main part of industrial lasers market, accounting for **70%** of annual sales of laser materials processing equipment (growth **11%** over 2001-2013).

LOCAL OPPORTUNITIES:

- Russia accounts for up to **1,5%** of the world market (inc. both domestic and foreign sales). More than **70%** of the equipment doesn't correspond to international standards.
- In Russia the leading position in sales is held by industrial lasers for materials processing, which are in great demand. There are **360** job shops throughout 45 regions. The equipment there is obsolete and requires replacement, which is a huge potential market for new machines.

ATTRACTIVE SEGMENTS:

- During the current decade the highest growth rates are typical of demand for **fiber lasers**, which are actively forcing traditional ones out of such areas as laser cutting and welding.
- In spite of the fact that the leading position on the laser equipment market is held by carbon dioxide lasers, their share in 2013 is estimated to decrease to **61%**, while fiber lasers will generate the highest growth in sales – by **7%** as compared to 2012.

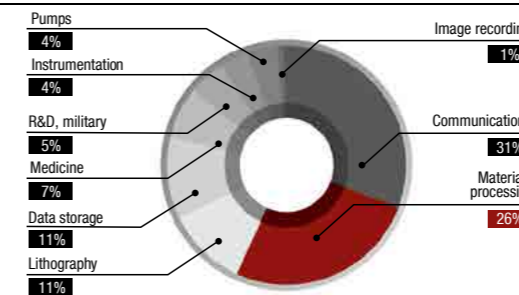
INVESTMENT OPPORTUNITIES

- Capex for building laser equipment manufacturing plant on average totals **USD 10-150 mn.**
- Production profitability depends on the purpose of the equipment and on average amounts to **30-35%**, reaching up to **50%**.
- IRR of the project varies within **20-40%**.

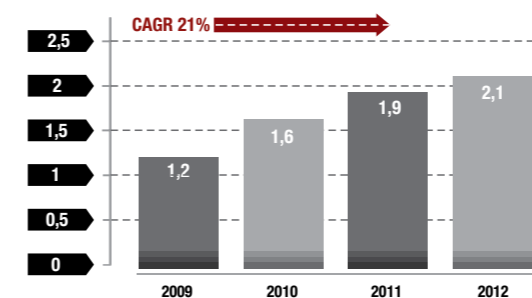
POTENCIAL INVESTORS

- Special-purpose venture funds.
- Branded manufacturers of laser equipment (Russia, USA, Europe, Japan, Taiwan).

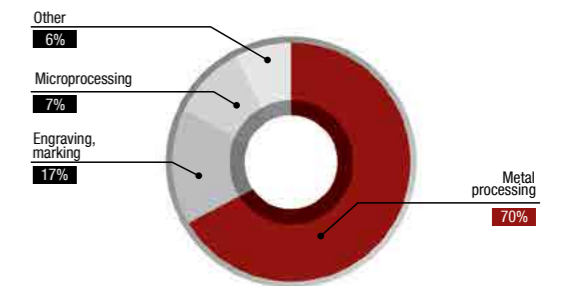
GLOBAL LASER MARKET BY APPLICATION



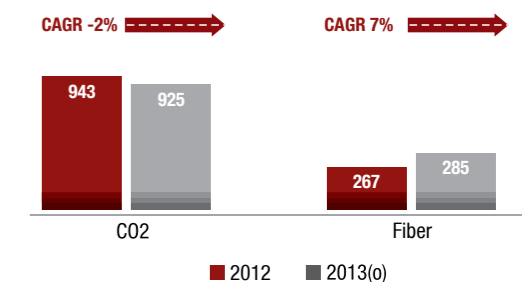
WORLD MARKET OF LASER EQUIPMENT FOR MATERIALS PROCESSING EQUIPMENT, USD bn



WORLD MARKET OF LASER EQUIPMENT FOR MATERIALS PROCESSING, MAIN SEGMENTS



LASERS FOR METAL PROCESSING EQUIPMENT





PROJECT

For implementation there is provided a project on manufacturing of metalworking machines.

The project is considered promising due to the following reasons:

- 93 billion USD was a volume of world machine tools market in 2012. CAGR for last 5 years was 19%.
- Experts expect further growth of the machine tool market at 8.6% per year till 2017.
- Russia needs 50 000 new machine tools annually. 85% is the share of import in the machine tools consumption in Russia.

- Laser metalworking machines, ultrasonic metalworking machines, electrochemical metalworking machines and waterjet cutting machines are the most promising segments in the metal working machines.
- Belarusian machine tools sector includes 30 enterprises.
- Production of metalworking machines is oriented on the Custom Union market. Total import volume of metalworking machines to Russia is more than 1.6 billion USD).
- Capex varies between USD 10-50 mn, IRR 15-20%.

MARKETS

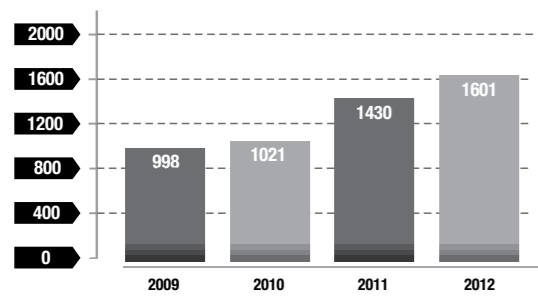
BELARUSIAN MARKET:

- 189 million USD was an volume of metalworking machines import to Belarus in 2012.
- Germany and Italy are the largest exporters of woodworking machines to Belarus.

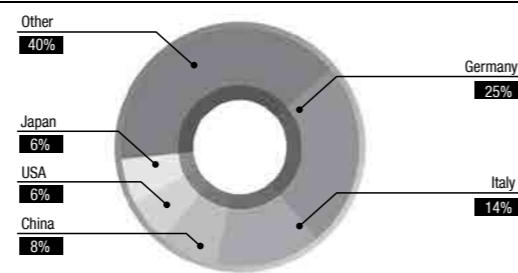
MARKET OF CUSTOM UNION:

- 1601 million USD was an volume of woodworking machines import to Russia in 2012.
- Germany (25%), Italy (14%), China (8%) are the largest exporters of woodworking machines to Russian Federation.

IMPORT OF METALWORKING MACHINES TO RUSSIA, million USD



IMPORT STRUCTURE OF METALWORKING MACHINES TO RUSSIA, %



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- 93 billion USD was a volume of world machine tools market in 2012. CAGR for last 5 years was 19%.
- Experts expect further growth of the machine tool market at 8.6% per year till 2017.
- China (30%), Japan (20), Germany (15%) are the largest machine tools producers.

REGIONAL OPPORTUNITIES:

- Russian Federation is reckoned among top ten largest importers of machine tools. 3% is a share of Russian market in global machine tool market.
- Russia needs 50 000 new machine tools annually. 85% is the share of import in the machine tools consumption in Russia.
- 85% is a share of import in metalworking machines consumption
- Till 2020 Russia plans to spend 130 billion USD according to the industry development program.
- Till 2020 Russia plans to spend 300 billion USD according to the military-industrial complex development program.

ATTRACTIVE SEGMENTS:

- Laser metalworking machines, ultrasonic metalworking machines, electrochemical metalworking machines and waterjet cutting machines are the most promising segments in the metal working machines.

POTENTIAL INVESTORS

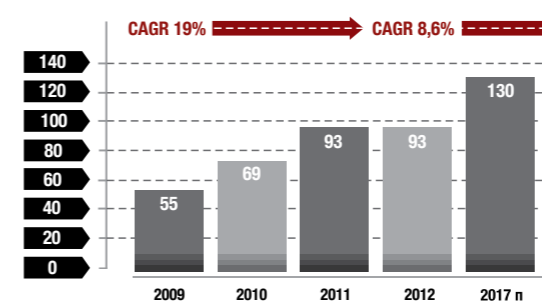
- Large producers of woodworking machines from China, Japan, South Korea, Taiwan and Europe.

INVESTMENT OPPORTUNITIES

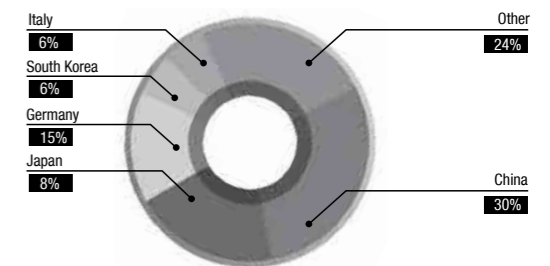
CAPEX → 10 - 50 MILLION USD

IRR → 15 - 20%

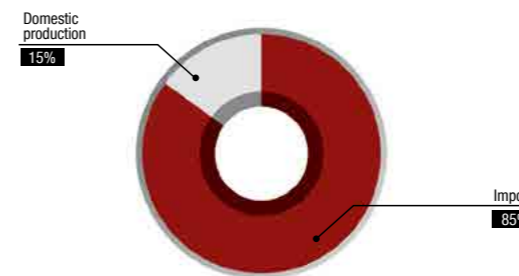
WORLD MACHINE TOOLS MARKET, billion USD



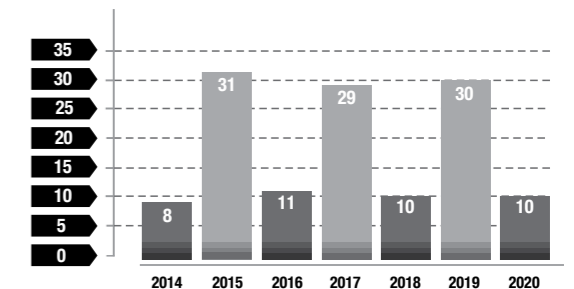
GLOBAL METALWORKING MACHINES MARKET, LARGEST PRODUCERS, 2012



STRUCTURE OF RUSSIAN METALWORKING MACHINES MARKET, 2012



BUDGET FUNDING ACCORDING TO THE RUSSIA INDUSTRY DEVELOPMENT PROGRAM, billion USD





PROJECT

For implementation there is provided a project on manufacturing of equipment for agriculture.

The project is considered promising due to the following reasons:

- 112 billion USD was a volume of global agricultural machinery and equipment market in 2012. Global agricultural machinery and equipment market will reach 143 billion USD till 2018.
- Population growth and growing demand for food are the key drivers of agricultural machinery and equipment market.

- 105 million USD was an import of agricultural machinery and equipment to Belarus in 2012. 954 million USD was an import of agricultural machinery and equipment to Russia in 2012.
- Till 2020 Russia plans to spend 65 billion USD according to the agricultural industry complex development program.
- Capex varies between USD 10-30 mn, IRR 15-20%.

MARKETS

BELARUSIAN MARKET:

- 105 million USD was an import of agricultural machinery and equipment to Belarus in 2012. CAGR for last 5 years was 5.1%.
- Germany, Denmark, Finland and the UK are the largest exporters of agricultural machinery and equipment to Belarus.

MARKET OF CUSTOM UNION:

- 954 million USD was an import of agricultural machinery and equipment to Russia in 2012. CAGR for last 5 years was 4.5%.
- Germany, the Netherlands, Finland are the largest exporters of agricultural machinery and equipment to Russian Federation.

MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- 112 billion USD was a volume of global agricultural machinery and equipment market in 2012.
- Annual average growth rate of agricultural machinery and equipment market is expected to reach 5% by 2018. Global agricultural machinery and equipment market will reach 143 billion USD till 2018.
- Population growth and growing demand for food are the key drivers of agricultural machinery and equipment market.
- It is expected that the demand for agriculture equipment will grow even faster than the demand for agricultural machinery. Agriculture equipment has a wide range of commodity.

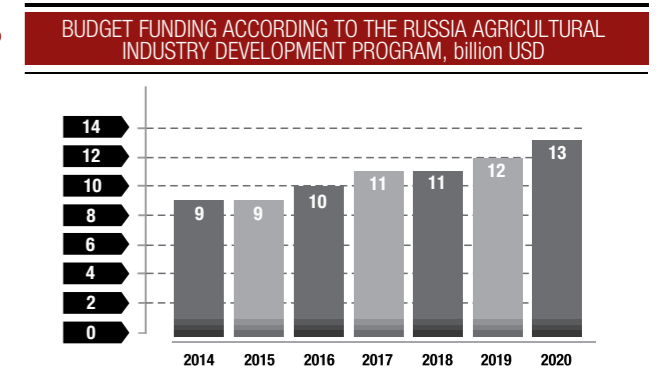
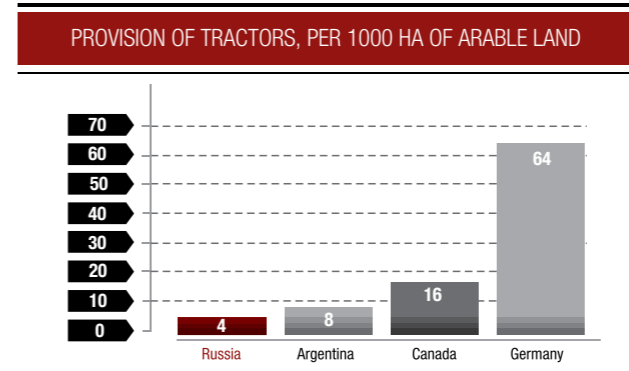
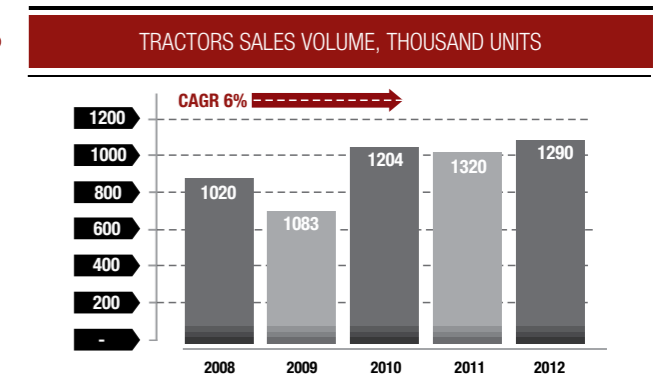
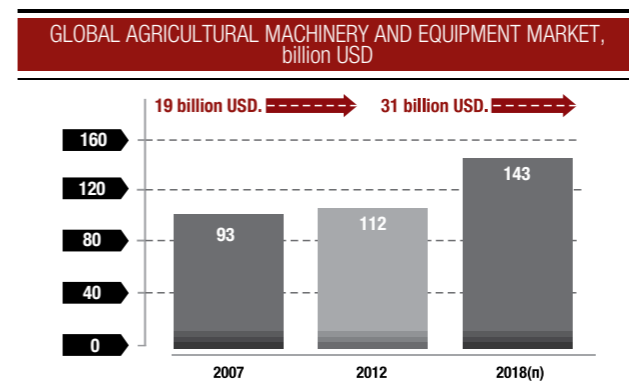
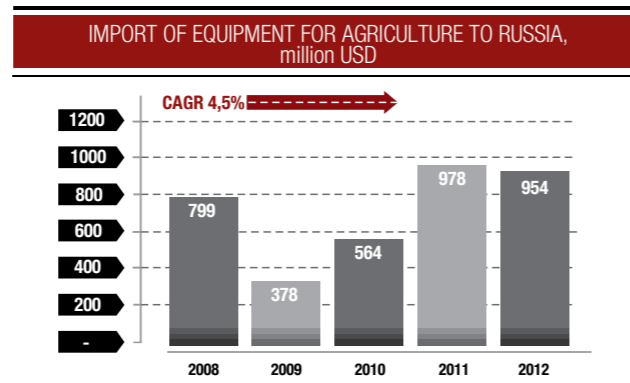
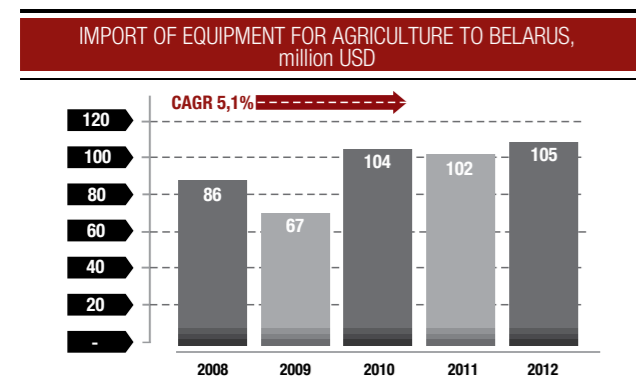
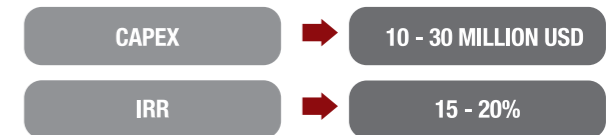
REGIONAL OPPORTUNITIES:

- Agricultural industry is the largest consumer of agricultural equipment. Till 2020 Russia plans to spend 65 billion USD according to the agricultural industry complex development program.
- The provision of tractors in Russia 2 times lower than in Argentina and 4 times lower than in Canada (largest agricultural products producers). The same indicators characterize situation in agricultural machinery provision. Agriculture equipment is optional when buying agricultural machinery. The demand for agricultural equipment will grow rapidly in Russia due to the low provision.

POTENTIAL INVESTORS

- Large producers of agricultural machinery and equipment from China and Europe.

INVESTMENT OPPORTUNITIES





PROJECT

For implementation there is provided a project on manufacturing of tooling.

The project is considered promising due to the following reasons:

- It was a sustained growth of world tooling market in 2009-2013 (CAGR = 17%). 103 billion USD was volume of tooling production of 28 largest country-producers in 2013.
- Industry development program in Belarus and Russia intends the construction of new plants and reconstruction of existing enterprises.

- Belarusian machine building industry includes 350 enterprises. Russian machine building sector includes 2000 enterprises
- Till 2020 Russia plans to spend 130 billion USD according to the industry development program.
- 1.6 billion USD was an volume of tooling import to Russia in 2012. 85% is a share of import in total consumption of tooling in Russia.
- Capex varies between USD 40-200 mn, IRR 15-20%.

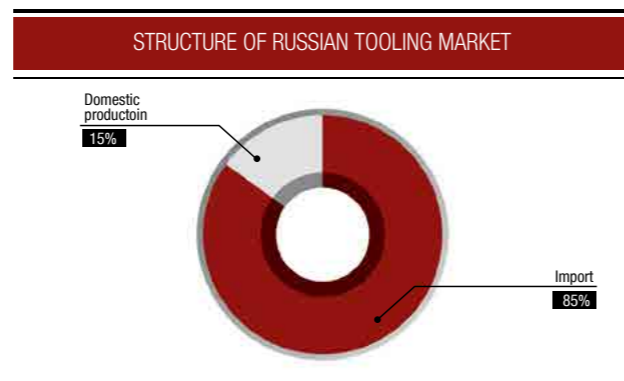
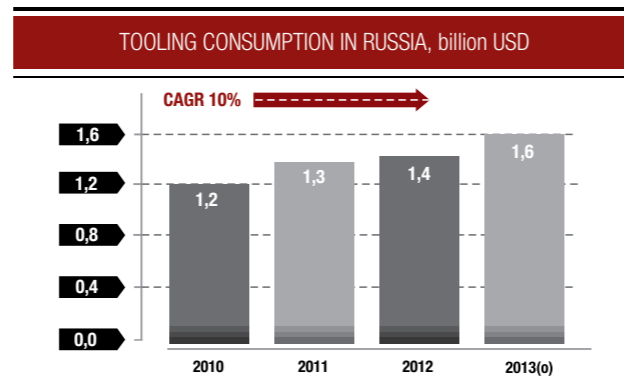
MARKETS

BELARUSIAN MARKET:

- Belarusian machine building industry includes 350 enterprises.
- 12.7 billion USD was a production volume of Belarusian machine building sector in 2012 (+21%).
- In Belarus only 2 plants specialize in production of tooling (Republican Unitary Enterprise «Gomel Factory of Special Instruments and Technological Equipment» and Minsk Special Instrument and Technological tooling Plant). 60 million USD is a total production volume of both plants.

MARKET OF CUSTOM UNION:

- 1.6 billion USD was an volume of tooling import to Russia in 2012.
- Russian machine building sector includes 2000 enterprises.
- 85% is a share of import in total consumption of tooling in Russia.



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

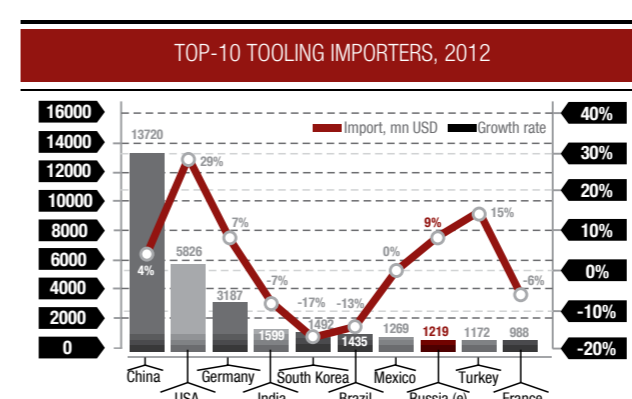
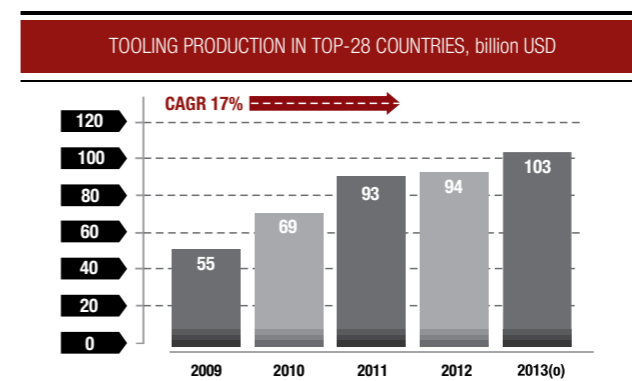
- It was a sustained growth of world tooling market in 2009-2013 (CAGR = 17%).
- 103 billion USD was volume of tooling production of 28 largest country-producers in 2013.
- Automobile industry (38%), machine building industry (16%), metal industry (10%) are the largest consumers of tooling.
- Sustained growth of the world economy is a key driver of the demand for tooling.

REGIONAL OPPORTUNITIES:

- Russian market is top-3 rapid growing and top-10 largest tooling market in the world.
- 1219 million USD was a volume of tooling import to Russia in 2012 (9% growth).
- Till 2020 Russia plans to spend 130 billion USD according to the industry development program.
- Till 2020 Russia plans to spend 300 billion USD according to the military-industrial complex development program.

ATTRACTIVE SEGMENTS:

- Grinding tools, abrasive tools, press mould, monolithic and carbide tools are the most promising segments in tooling market.



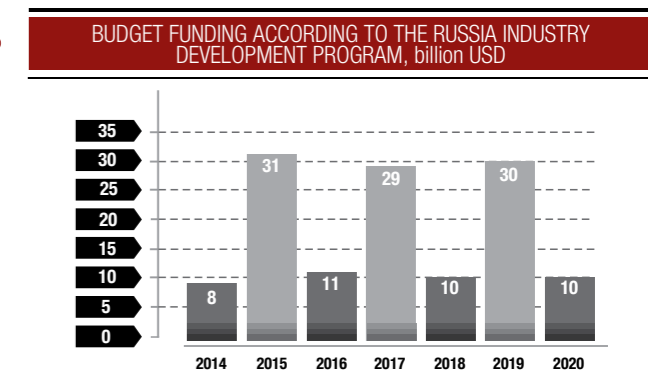
POTENTIAL INVESTORS

- Large producers of tooling from China, Japan, South Korea, Taiwan and India.
- Large companies from automobile and machine building industries which have their plants in Russia.

INVESTMENT OPPORTUNITIES

CAPEX → 400 - 200 MILLION USD

IRR → 15 - 20%



Automobile industry

Military industry

Aviation and space industry

Power Engineering

Railway engineering and shipbuilding



PROJECT

Proposed project – production of combined heat and power plants.

Feasibility of establishing a production of CHP plants is determined by the following factors:

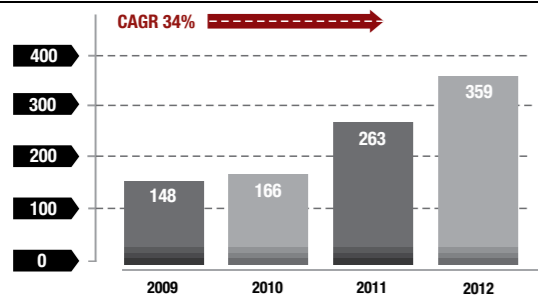
- The growing popularity of CHP plants worldwide.
- Russia's weak position in small-scale power generation while the production of large hydropower and nuclear equipment is highly developed.
- High growth rate of imports both to Belarus (CAGR +34% since 2009)

SALES MARKETS

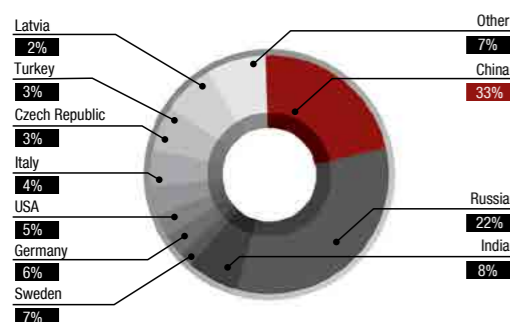
DOMESTIC MARKET:

- Large share of power equipment on the Belarusian market is imported. Imports of different power equipment (engines, electric generator, boilers, etc.) in 2012 amounted to 359,1 mn USD, CAGR for 2009-2012 exceeds 34%.
- There is a state program for the Belarusian energy system development till 2016, which provides for the development of import-substituting production including production of cogeneration plants working on local fuels.

POWER EQUIPMENT IMPORTS TO BELARUS, mn USD



STRUCTURE OF POWER EQUIPMENT IMPORTS TO BELARUS SPLIT BY COUNTRIES



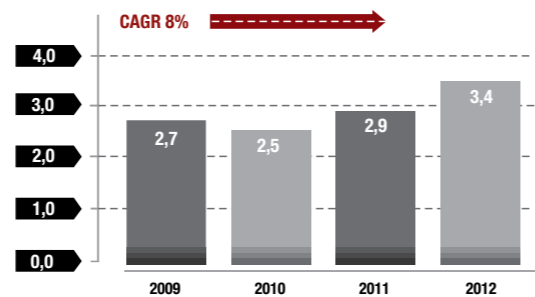
and to Russia (CAGR +8% since 2009). At the same time there are governmental programs for import substitution of power equipment.

- Localization of production close to final consumers (growth in demand for CHP plants in Belarus and Russia).
- The main markets are the domestic market of Belarus as well as the market of Customs Union.
- Investment costs for the creation of the CHP plants production are estimated at 5-10 mn USD, payback period – 3-4 years.

CUSTOMS UNION MARKET:

- Duty-free access to the market of the Customs Union.
- Significant volume of imports to the Russian Federation: 3,4 bn USD in 2012. Annual import growth is around 8%.
- 4 large engineering companies dominate the global market of power equipment, especially the markets of developed countries. These producers are: Alstom, General Electric, SIEMENS and Mitsubishi Heavy Industries. The share of these companies on global market is around 57%.
- Thus, the competition among producers for the market of developed countries is very high. In this regard, the most promising markets are the domestic market of Belarus and the Customs Union market.

POWER EQUIPMENT IMPORTS TO RUSSIA, bn USD



MARKET OPPORTUNITIES

CONSUMPTION GROWTH:

- There is a constant growth of electricity consumption in Belarus, except for the crisis 2009. Electric power consumption increased from 36,2 bn kWh in 2007 to 38,4 bn kWh in 2012.
- The consumption of electricity is growing while the production is reducing. This makes it necessary to increase imports of this energy. Construction of CHP plants will increase the production and reduce the need for imports.

- Constant growth of electricity production in Russia – from 996 bn kWh in 2006 to 1055 bn kWh in 2011.

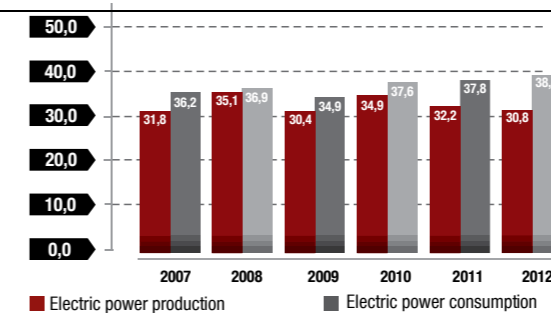
DEPRECIATION OF PRODUCTION FACILITIES:

- Production facilities of energy systems in Belarus and Russia require modernization. Depreciation of facilities in Belarus is gradually reducing (to 51% in 2012), but is still quite high.
- Wear of power generating facilities in Russia exceeds 60%.

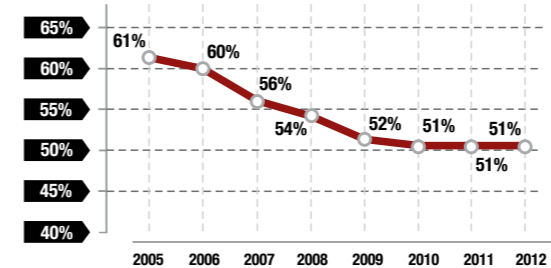
CROSS-SUBSIDIZATION OF ELECTRIC POWER:

- There is a cross-subsidization of electricity in Belarus and Russia. Tariff for legal entities was 2,7 times higher than for population in Belarus in 2013. The government is planning to eliminate a cross-subsidization, but this process will be gradual.

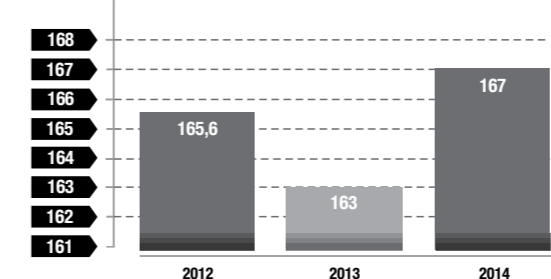
PRODUCTION AND CONSUMPTION OF ELECTRIC POWER IN BELARUS, bn kWh



DEPRECIATION OF ENERGY SYSTEM PRODUCTION FACILITIES IN BELARUS, %



PRICE OF RUSSIAN GAS FOR BELARUS, USD for thou m3

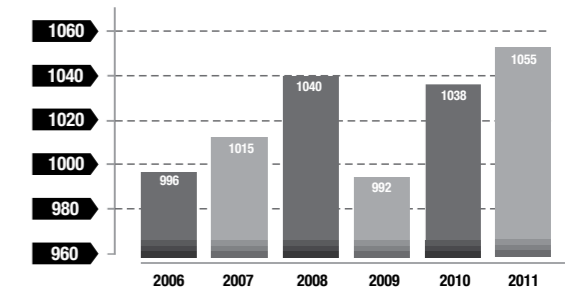


- A low price for Russian gas encourage the power production by own resources. Average prices for Russian gas fluctuated within 160-170 USD/thou m3 in recent years. In 2014 the price for gas is 167 USD/thou m3 (for reference, a price for Ukraine in 2013 amounted to about 400 USD/thou m3).

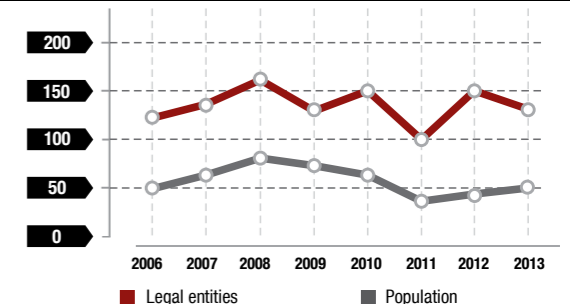
Every year new production facilities are commissioned which are future electricity consumers and potential CHP plant buyers. By 2013 production facilities have increased by almost 2,4 times compared to 2005.

- The approximate calculation of the effect from the construction of CHP plant compared to buying given the cross-subsidization:
 - Electric power consumption – 1 MWh
 - Working hours per year – 8000 hours
 - Tariff when buying electric power – 0,15 USD/kWh
 - Approximate electricity cost at own CHP plant – around 0,06 USD/kWh
- Saving = (0,15 - 0,06) x 1000 x 8000 = 720 000 USD/year*
- *cost of heat which gives an additional effect is not included.

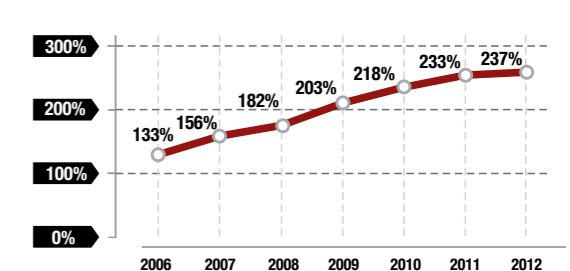
ELECTRIC POWER PRODUCTION IN RUSSIA, bn kWh



ELECTRICITY TARIFFS IN BELARUS, USD for 1000 kWh



COMMISSIONING OF FIXED ASSETS (in %, 2005=100)





**ELECTRONICS AND
ELECTRICAL ENGINEERING**



PROJECT

For implementation there is provided a project on manufacturing of 3D printers.

3D printers production is promising due to the rapid growth of the demand in the market.

- Custom Union, CIS countries, BRIC countries and Eastern Europe are the main markets for 3D printers.
- The impact of the widespread implementation of 3D-printers in manufacturing companies can have a global positive economic impact estimated at 550 billion USD by 2025.

MARKETS

- 3D-printers are at the growth stage of the product life cycle. This stage is characterized by rapid growth and high profits.
- Custom Union, CIS countries, BRIC countries and Eastern Europe are the main markets.
- Rapid growth of the demand on 3D printing will be the key driver in the market.

BELARUSIAN MARKET:

- В Беларуси в секторе машиностроения работает 350 предприятий, большинство из которых нуждаются в современном оборудовании.

- 3D printers sales volume increased by 17 times since 2010. Annual sales of 3D printers will reach 6 million units by 2018.
- 2.4 billion USD was sales volume of 3D printers in 2013. Experts suppose that 3d printers sales volume will increase up to 8.41 billion USD by 2020 (CAGR=19%).
- Aerospace sector, education, medicine and jewelry are the most promising segments for 3D printers implementation
- Capex varies between USD 20-100 mn, IRR 30-40%.

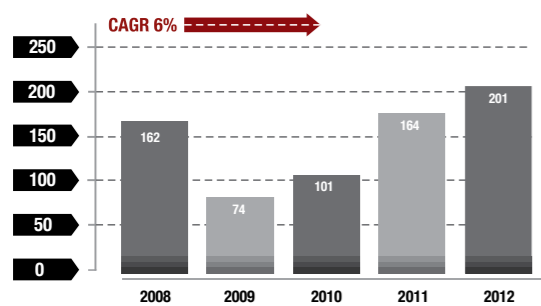
- Belarusian machine-building sector includes 350 companies. They need modern equipment.

12.7 billion USD is a total volume of machine-building sector in Belarus in 2012 (+21%in comparison with 2011).

RUSSIAN MARKET:

- 201 million USD is an import of plastics processing equipment (which includes 3D printers) to the Russian Federation. 6% is CAGR for the last 5 years.
- Germany and China are the largest exporters of 3D printers to Russia.

IMPORT OF PLASTICS PROCESSING EQUIPMENT TO RUSSIA, mn USD.*



* plastics processing equipment includes 3D printers



MARKET OPPORTUNITIES

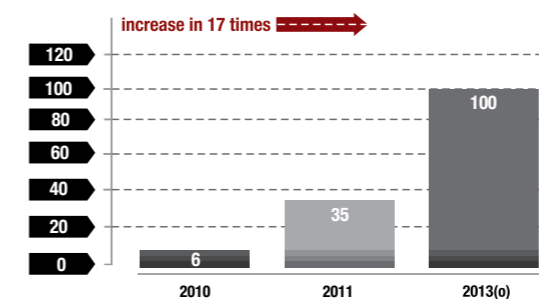
GLOBAL OPPORTUNITIES:

- McKinsey experts believe that the impact of the widespread implementation of 3D-printers in manufacturing companies can have a global positive economic impact estimated at 550 billion USD by 2025.
- 100 thou. units is the global sales volume of 3D printers in 2013.
- 3D printers sales volume increased by 17 times since 2010. Annual sales of 3D printers will reach 6 million units by 2018.
- 2.4 billion USD was sales volume of 3D printers in 2013. Experts suppose that 3d printers sales volume will increase up to 8.41 billion USD by 2020 (CAGR=19%).
- The price for 3D printers will significantly reduced in the near future. 800-1500 USD will be an average price.
- At the moment 3D printers are used for the goods production industry (29%), automobile industry (19%), medicine (13%), education (10%), aerospace industry (8%) and industrial engineering (7%).
- Machine building industry will be they main consumer of 3D printers. Currently Boeing uses 3D-printing for the production of more than 200 aircraft items.

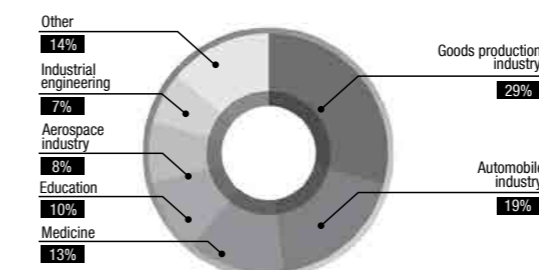
REGIONAL OPPORTUNITIES:

- 11 million USD is the Russian 3D printers market size (0.45% from the global market).

GLOBAL SALES VOLUME OF 3D PRINTERS, thou UNITS



3D PRINTERS CONSUMPTION STRUCTURE, 2013



- Russian 3D printers market will reach 34 million USD in 2020 году (CAGR=17,5%).
- RGT (model PrintBox3D) produces 3D printers in Russia.
- Russia has a state industry development program till 2020. Total budget allocation is about 130 billion USD.

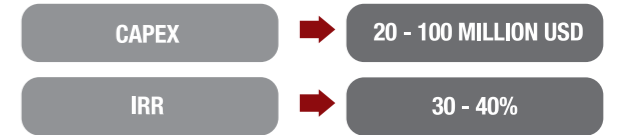
ATTRACTIVE SEGMENTS:

- Aerospace sector, education, medicine and jewelry are the most promising segments for 3D printers implementation.

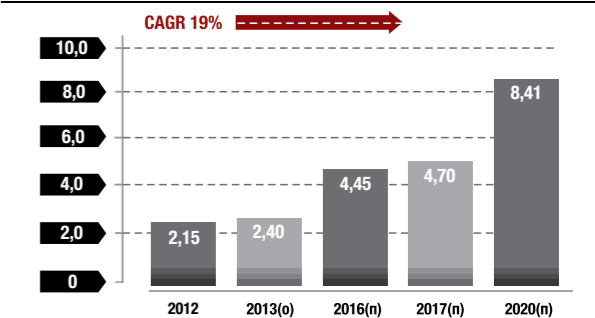
POTENTIAL INVESTORS

- 3D printers producers from China, Sweden and Germany.

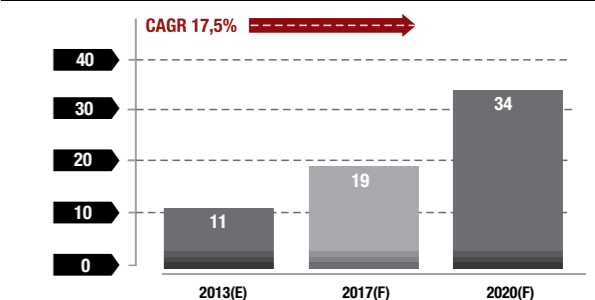
INVESTMENT OPPORTUNITIES



GLOBAL SALES VOLUME OF 3D PRINTERS, billion USD



RUSSIAN 3D PRINTER MARKET, million USD





PROJECT

There is provided a project on launching production of auto electronics (dashboard camera, on-board computer, gps-navigator, etc.).

The project is promising due to the following reasons:

- The segment is expected to be top leading by profitability in the near 10 years.
- Imports of parts and components for motor vehicles in Russia in 2012 totaled more than USD 10,8 bn and grew by 57% on average annually over 2009-2012.

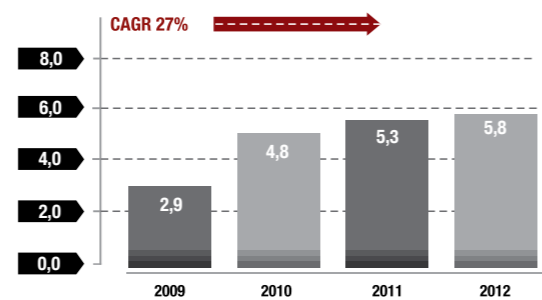
- World auto electronics market is projected to reach USD 18,5 bn with annual average growth rate of about 3,1%.
- Global auto parts market is projected to reach USD 900 bn by 2020 (in 2008 – app. USD 675 bn).
- Capital expenditures for the project are estimated at USD 70-100 mn, payback period is about 6-7 years.

MARKETS

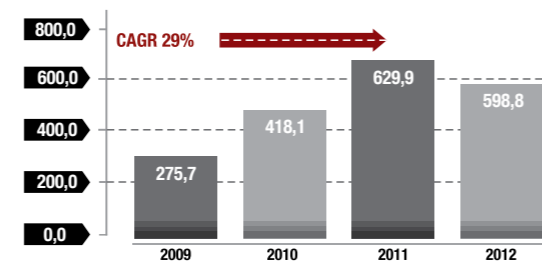
CUSTOMS UNION MARKET:

- In 2012 Russia imported parts and components for motor vehicles to the value of more than USD 10,8 bn, annual average growth rate of the imports over 2009-2012 totaled 57%.
- Imports of on-board computers in Russia grew by 27% a year on average over 2009-2012, and in 2012 the imports totaled USD 5,3 bn.
- Imports of gps-navigators in Russia grew by 47% a year on average over 2009-2012, and in 2012 the imports totaled USD 392,8 mn.
- Imports of dashboard cameras in Russia grew by 11% a year on average over 2009-2012, and in 2012 the imports totaled USD 206 mn.
- Russian car industry is characterized by developed car assembling, auto parts manufacturing (electronics in particular), in its turn, is still poorly developed segment of car industry in Russia.

IMPORTS OF ON-BOARD COMPUTERS* IN RUSSIA, USD bn



IMPORTS OF GPS-NAVIGATORS AND DASHBOARD CAMERAS* IN RUSSIA, USD mn



* Import according to a wide commodity item, comprising indicated devices (customs tariff code 8471 – for on-board computers, 852691 – for gps-navigators, 852190 – for dashboard cameras).

MARKET OPPORTUNITIES

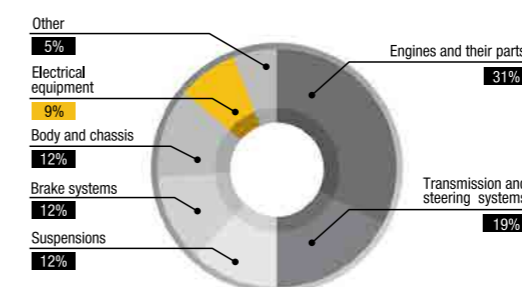
GLOBAL OPPORTUNITIES:

- According to Roland Berger, world auto parts market is projected to reach USD 900 bn by 2020 (in 2008 – USD 675 bn).
- Annual average growth rate of car manufacturing over 2011-2018 – 5,3%, projected output in 2018 is USD 106 mn.
- Global auto electronics market is projected to reach USD 18,5 bn with annual average growth rate by 1% exceeding the one of world's GDP.
- App. 30% of an automobile cost is formed by electronic components, and the figure is expected to further grow in the future.

LOCAL OPPORTUNITIES:

- In 2012 auto parts market in Russia reached USD 41,8 bn, annual average growth rate over 2009-2012 was 28%. There has been a significant change in the market structure – in 2009 primary market accounted for 22%, in 2012 – 49%.
- More than 2,8 mn cars, out of which 73% – foreign brands assembled in Russia, are projected to be manufactured in 2016 in Russia.
- In spite of continuing growth, Russian car industry is underdeveloped, which is caused by the following factors:
 - Low competition and low product quality;
 - Underinvestment in advanced technologies;
 - Decrease in import duties and possibility to import auto parts at low tariff.

GLOBAL AUTO PARTS MARKET STRUCTURE



WORLD CAR MARKET DRIVERS (MEGATRENDS)

- Increase of data flow and entertainment inside the car
- Demand for higher safety level
- Environmental concern

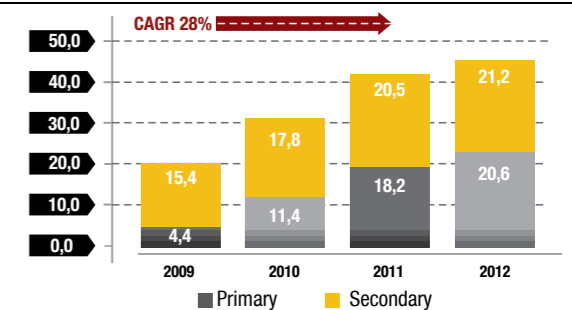
INVESTMENT OPPORTUNITIES

- Capex for the project may total USD 70-100 mn.
- Payback period is about 6-7 years.
- IRR varies between 13-15%.

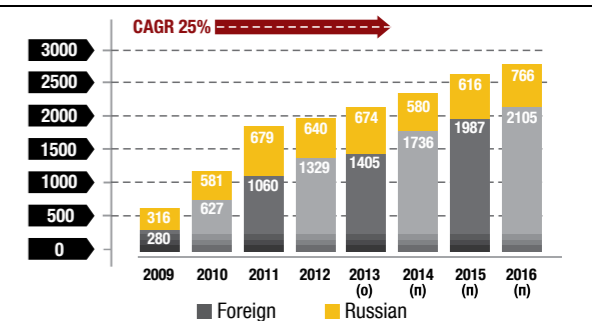
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in electronics manufacturing in general or auto electronics in particular.
- Forward integration – companies engaged in the industries – key auto parts and electronics consumers (automobile industry, auto parts distributors, retail, etc.).

AUTO PARTS MARKET IN RUSSIA, USD bn



AUTO OUTPUT IN RUSSIA, thou pieces





PROJECT

Proposed project – production of household air conditioners.

Feasibility of establishing a production of household air conditioners is determined by the following factors:

- Mass consumer orientation, household air conditioners account for more than 50% of global market.
- High growth rate of imports both to Russia (CAGR +64% since 2009) and to Belarus (CAGR +27% since 2009), lack of domestic production.

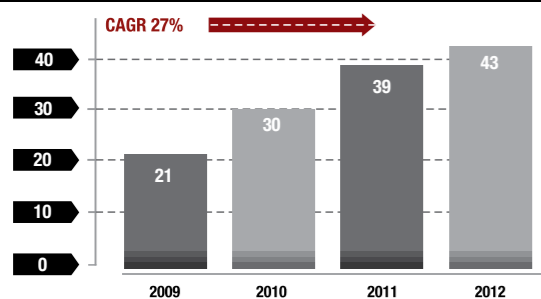
- Localization of production close to final consumers (demand growth in Russia – in particular in Moscow, as well as in Belarus).
- The main markets are the growing market of Customs Union as well as the domestic market of Belarus.
- Investment costs for the creation of the household air conditioners production (including warehouses) are estimated at 20-27 mn USD, payback period – 6-7 years.

SALES MARKETS

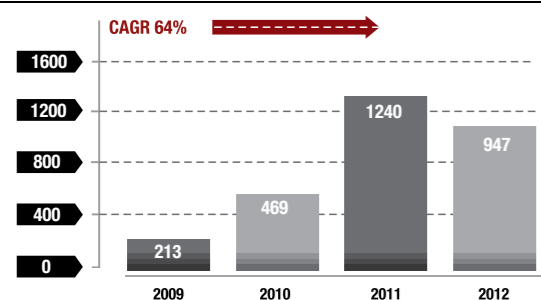
DOMESTIC MARKET:

- There is almost no domestic production of air conditioners in Belarus. Only the factory "Belit" produces a small volume of air conditioners – about 1000-1500 units per year. At the same time Belarusian market size is estimated at 20-25 thousand units. Moreover, Belarusian air conditioners with usually a higher price offer a lower efficiency compared to foreign analogues.
- Imports of air conditioners to Belarus in 2012 amounted to 43 mn USD with CAGR for 2009-2012 exceeding +27%. The main supplier of air conditioners is China (22%).

IMPORTS OF AIR CONDITIONERS TO BELARUS, mn USD



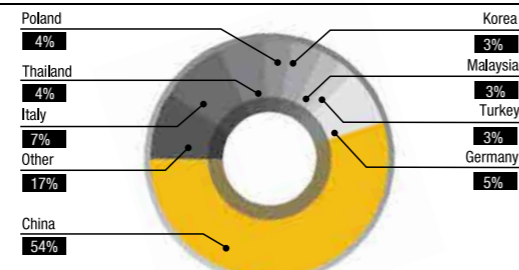
IMPORTS OF AIR CONDITIONERS TO BELARUS, mn USD



CUSTOMS UNION MARKET:

- Russia made several attempts to establish production of air conditioners (Telebalt, Rolsen, Kupol, EVGO), but products of these companies can not compete with Chinese manufacturers and often abandon the market.
- The production volume of air conditioners in Russia in 2010-2012 amounted to about 100 thousand units per year while sales were estimated at 2-3 million units.
- Imports of air conditioners to Russia is constantly growing: compound annual growth rate of imports in 2009-2012 exceeds +64%. In 2012, Russia imported about 950 mn USD of air conditioners.
- More than a half of imports of air conditioners in Russia comes from China – 54%.
- Thus, the most promising sales markets are the Customs Union market and the Belarusian domestic market.

STRUCTURE OF AIR CONDITIONERS IMPORTS TO RUSSIA SPLIT BY COUNTRIES OF ORIGIN



MARKET OPPORTUNITIES

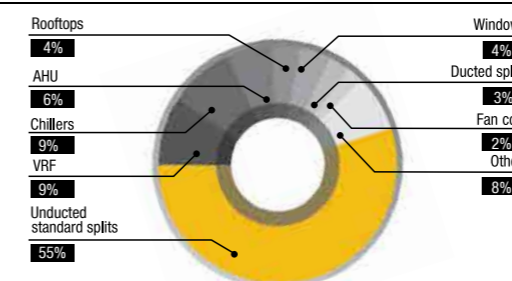
GLOBAL OPPORTUNITIES:

- Unducted splits dominate the world market of air conditioning with major part of the market.
- Global air conditioning market is forecasted to continue its growth. In 2016 market size is expected to exceed 100 bn USD (+15% compared to 2013). CAGR in 2010-2016 may amount to around 5%.
- The highest growth is estimated to be observed in the BRICS countries, for example, growth rate in 2012-2016 in Russia may amount to about 35%.

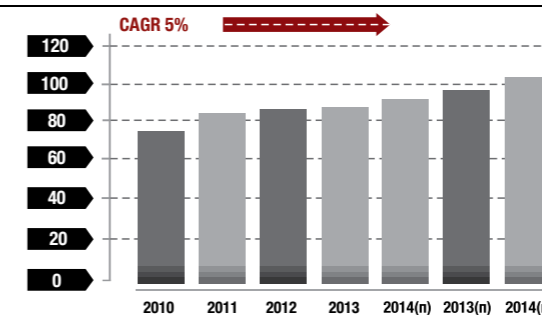
REGIONAL OPPORTUNITIES:

- Russia's share of the global air conditioning market is only 2%, but experts estimate it as one of the most promising in the world taking into account the growing welfare of the Russians and the extremely low level of market saturation. Russia is in the TOP-7 countries by the air conditioning market capacity and in the TOP-3 by market growth rate.
 - It is expected that the demand for splits will grow at the most rapid pace: the whole market will grow by 8-9% per year while the growth in demand for splits may reach on average 20% per year (in 2013-2016).
- Air conditioning market is also affected by the following factors:
- global warming
 - new standards for modern buildings, growth of construction and welfare cause a growing number of existing and new buildings equipped with air-conditioning systems.

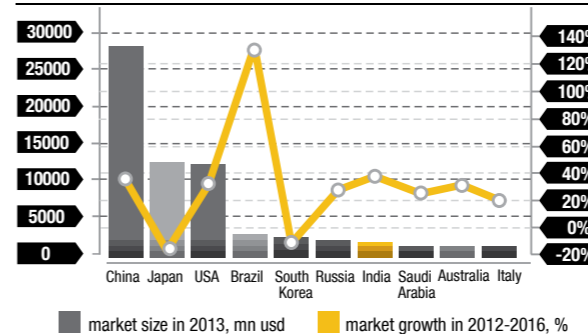
AIR CONDITIONERS MARKET STRUCTURE



GLOBAL AIR CONDITIONERS MARKET, bn USD



FORECAST OF AIR CONDITIONERS MARKET SIZE GROWTH IN TOP COUNTRIES IN 2012-2016



INVESTMENT OPPORTUNITIES

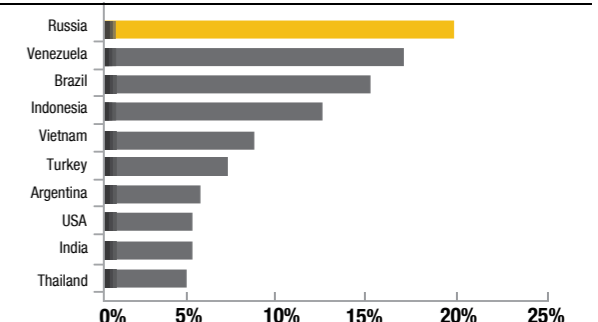
- Organization of this type of production require the production area of 5000 m² as well as storage facilities – about 10-15 thou m².
- Investment costs for the creation of facilities for the household air conditioners assembly and warehouses are estimated at 20-27 mn USD.
- Profitability of air conditioners production amounts to on average 15-20%.
- Payback period of the project may vary within 6-7 years.

POTENTIAL INVESTORS

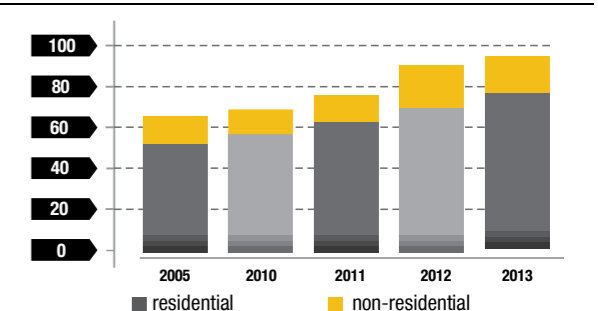
STRATEGIC INVESTORS

- International companies producing air conditioners and wishing to localize production facilities close to sales markets
- Companies producing component parts for air conditioners production (vertical integration)

CAGR OF SPLIT SYSTEMS MARKET, %



COMMISSIONING OF REAL ESTATE, mn M²





PROJECT

For implementation there is provided a project on manufacturing of compact household appliances.

The project is considered promising due to the following reasons:

- The project on manufacturing of compact household appliances is oriented on the Custom Union market. 172 million USD was an import of compact household appliances to Belarus in 2012. CAGR for last 5 years was 10%. 3962 million USD was an import of compact household appliances to Russia in 2012. CAGR for last 5 years was 12%.

- 1 trillion USD was a volume of world household appliances and electronics market in 2012. Growth in middle class consumer expenditures is the main driver of demand for household appliances and electronics. By 2012 the total consumer expenditures of the middle class in the world will reach 8.5 trillion USD.
- Russian household appliances and electronics market is the largest market in Europe (509,5 billion Euro in 2012). 31 billion USD was a volume of Russian compact household appliances market in 2013 (CAGR=11%).
- Capex varies between USD 20-50 mn, IRR 20-25%.

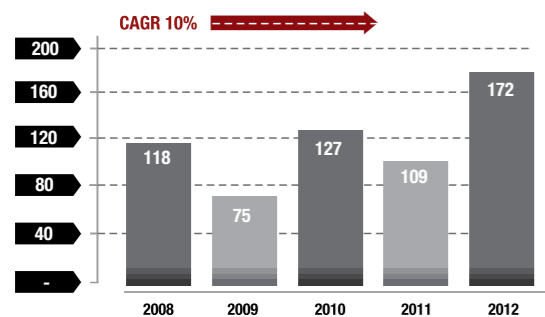
- About 3% is a share of expenditures on household appliances in Russia. It is expected that this share will reach 4%.
- Russian market of kitchen appliances (microwaves, breadmaker, steamers, mixers, blenders, etc.) increased by 6.7% in 2013. Hair dryers, shavers, etc. increased by 18.8% in 2013.

MARKETS

BELARUSIAN MARKET:

- 172 million USD was an import of vacuum cleaners, mixers, blenders, electric shavers, electric irons, microwave ovens, hair dryers and other compact household appliances to Belarus in 2012. CAGR for last 5 years was 10%.
- China, Germany and Russia are the largest exporters of compact household appliances to Belarus.

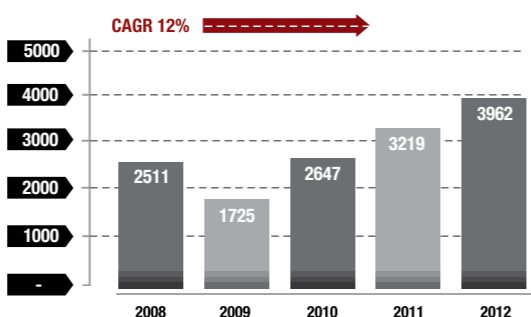
IMPORT OF COMPACT HOUSEHOLD APPLIANCES TO BELARUS, million USD



RUSSIAN MARKET:

- 3962 million USD was an import of compact household appliances to Russia in 2012. CAGR for last 5 years was 12%.
- China, Germany, South Korea and Belarus are the largest exporters of compact household appliances to Russia

IMPORT OF COMPACT HOUSEHOLD APPLIANCES TO RUSSIA, million USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

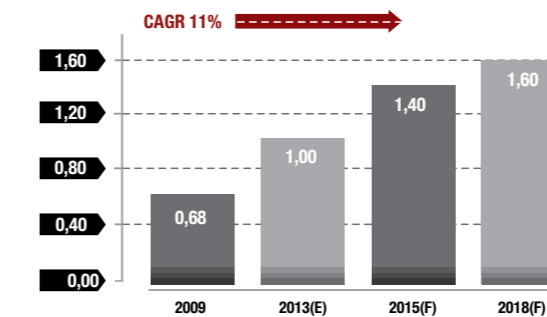
- 1 trillion USD was a volume of world household appliances and electronics market in 2012.
- It is expected that consumer electronics and household appliances market will reach 1.6 trillion USD by 2018. (CAGR =11%).
- Growth in middle class consumer expenditures is the main driver of demand for household appliances and electronics. By 2012 the total consumer expenditures of the middle class in the world will reach 8.5 trillion USD.
- Consumer expenditures for household appliances grow faster than expenditures for other nonfood goods.

- Asia Pacific is the most promising consumer electronics and household appliances market (CAGR=17.6%).

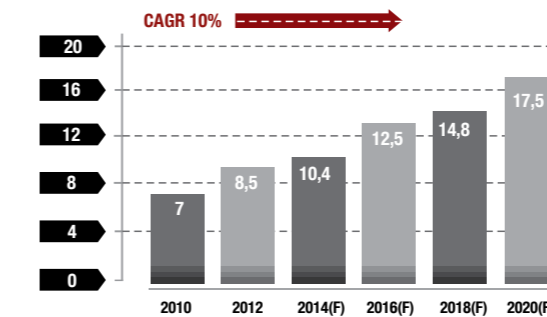
REGIONAL OPPORTUNITIES:

- Russian household appliances market is the largest market in Europe (509,5 billion Euro in 2012). 418.2 billion Euro is a volume of French household appliances market. 410.1 billion Euro is a volume of German household appliances market.
- Russian market is in top-25 rapid growing market of household appliances.
- 31 billion USD was a volume of Russian compact household appliances market in 2013 (CAGR=11%).

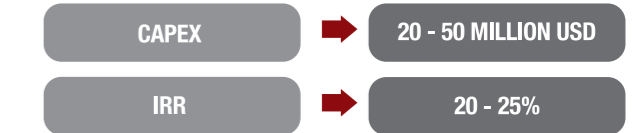
HOUSEHOLD APPLIANCES AND ELECTRONICS MARKET, trillion USD



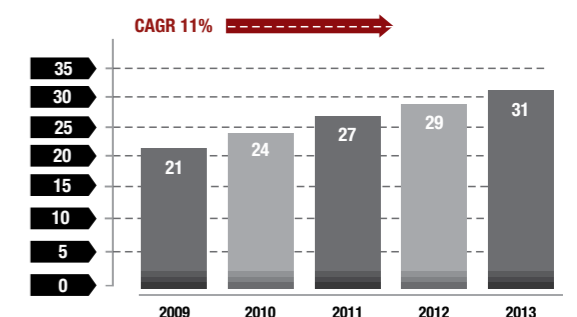
CONSUMER EXPENDITURES OF THE MIDDLE CLASS IN THE WORLD, trillion USD



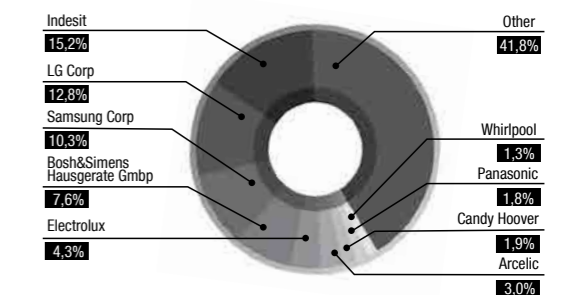
INVESTMENT OPPORTUNITIES



RUSSIAN HOUSEHOLD APPLIANCES AND ELECTRONICS MARKET, billion USD



STRUCTURE OF RUSSIAN HOUSEHOLD APPLIANCES AND ELECTRONICS MARKET, 2012, %





PROJECT

Proposed project – production of non-volatile storage devices.

Feasibility of establishing this production is determined by the following factors:

- Lack of domestic production in Belarus and high demand for these devices.
- High growth rate of storage devices imports both to Belarus and Russia (CAGR +28% and +38% since 2009 respectively).

- Localization of production close to sales markets and availability of highly qualified work force in the sphere of microelectronics.
- The main markets are the domestic market of Belarus and the Customs Union market.
- Investment costs for the creation of the storage devices production are estimated at 50-300 mn USD, IRR – 12-15%.

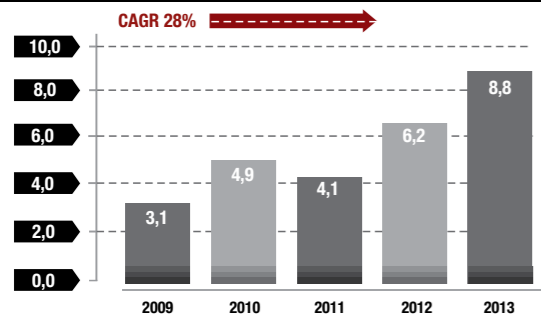
- Demand for data storage devices is directly dependent on the demand for computers and mobile phones. Imports of mobile phones and computers increase every year both to Russia and to Belarus. Imports to Russia in 2012 reached 8 bn USD, imports to Belarus in 2013 exceeded 400 mn USD.
- Belarus is the leader among the CIS countries in terms of computer market growth (+56% in 2012 compared to 2011).

SALES MARKETS

DOMESTIC MARKET OF BELARUS :

- There is no domestic production of solid-state non-volatile data storage devices in Belarus (SSD, USB devices, memory cards).
- Internal demand for data storage devices – more than 1 million units – is fully covered by imports.
- Growth rate of data storage devices market capacity in volume terms in Belarus in 2009-2013 amounted to on average 40% per year.

IMPORTS OF SOLID-STATE DATA STORAGE DEVICES TO BELARUS, mn USD



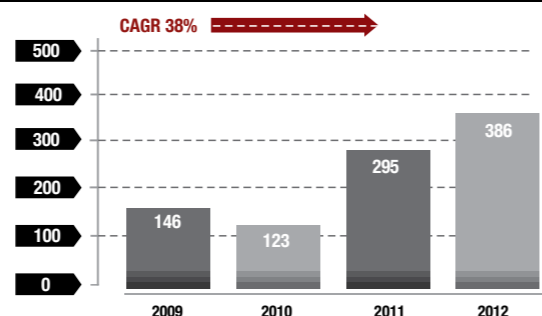
- Imports of solid-state non-volatile storage devices to Belarus in 2013 amounted to 8,8 mn USD, compound annual growth rate of imports – 28%.

CUSTOMS UNION MARKET:

- Imports of solid-state data storage devices to Russia is growing by on average 38% per year and amounted to 386 mn USD in 2012.

Thus, the most promising sales markets are the Customs Union market and the Belarusian domestic market.

IMPORTS OF SOLID-STATE DATA STORAGE DEVICES TO RUSSIA, mn USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- The global market is forecasted to incur a deficit of storage devices. By 2020 consumers will need about 6 ZettaByte of memory for data storage. At the same time if producers doesn't increase their production capacity and technologies used are not changed then the demand for data storage will be satisfied only by 50%.
- It is expected that the global SSD market will grow by 24-25% annually and may exceed 20 bn USD in 2016.
- According to forecasts a global USB devices market will grow at CAGR of 14%.

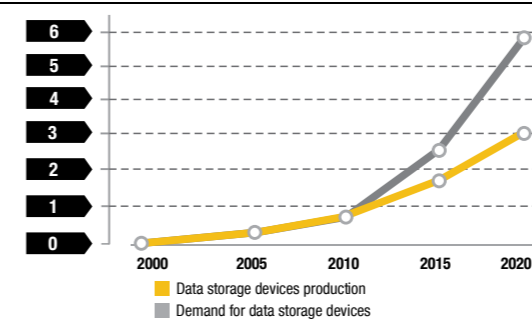
REGIONAL OPPORTUNITIES:

- Growth of disposable income in countries in transition. Real disposable income in Belarus have doubled since 2005.
- The Customs Union countries occupy the leading positions in the CIS region by the ICT Development Index (index that takes into account, inter alia, the number of computers and mobile phones per 100 inhabitants): Russia – 40, Belarus – 41 and Kazakhstan – 48 position.
- In 2012 for the third time Belarus was one of the 10 economies in the world with the greatest changes in terms of access to and use of ICT.

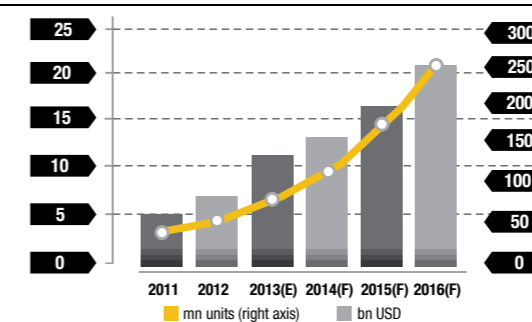
INVESTMENT OPPORTUNITIES

- Investment costs are estimated to amount from 50 to 300 mn USD.
- Profitability of production may vary within 13-17%.
- IRR – 12-15%.
- Project payback period may amount to 6-8 years.

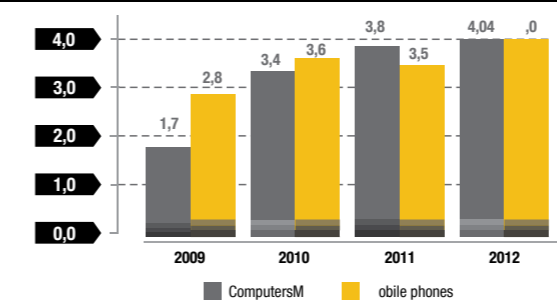
GLOBAL DATA STORAGE DEVICES MARKET FORECAST, ZettaByte



GLOBAL SSD DEVICES MARKET FORECAST



GLOBAL USB DEVICES MARKET FORECAST, mn units



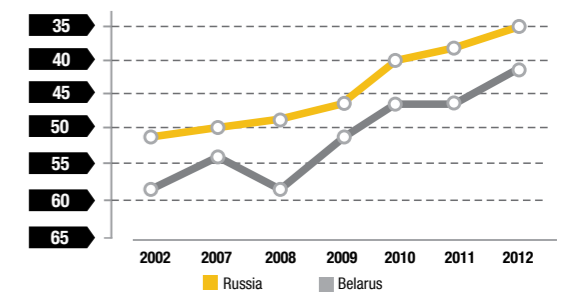
POTENTIAL INVESTORS

STRATEGIC INVESTORS

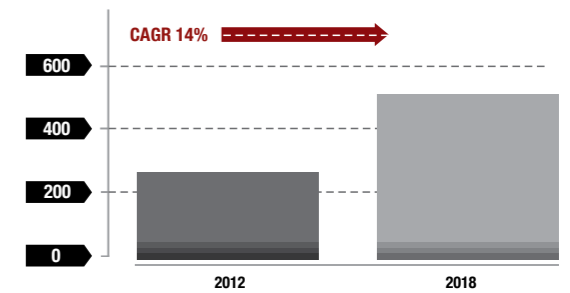
Producers of chips for electronics

International manufacturers of data storage devices wishing to localize their production close to sales markets

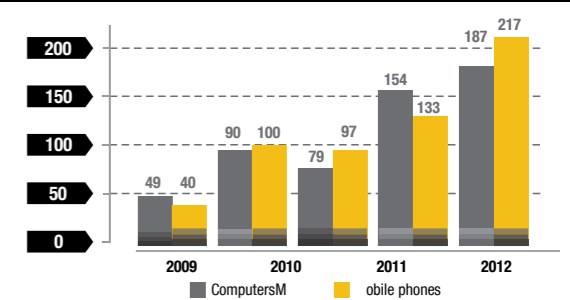
POSITION OF RUSSIA AND BELARUS IN ICT DEVELOPMENT INDEX



IMPORTS OF COMPUTERS AND MOBILE PHONES TO BELARUS, mn USD



IMPORTS OF COMPUTERS AND MOBILE PHONES TO RUSSIA, bn USD





PROJECT

For implementation there is provided a project on manufacturing of video control systems.

The project is considered promising due to the following reasons:

- 12.6 billion USD was a volume of world video control systems market in 2012 (12% was CAGR of video control systems market for last 5 years).
- It is expected that world video control systems market will reach 42.8 billion USD by 2019. It is expected that the CAGR for the period will be 19,1%.

- 90-100 million USD was a sales of CCTV cameras in Russia in 2012. It is only 3-4% from the global market.
- 636 USD is an average salary in Belarusian industrial sector. Belarus has good traditions in optical industry.
- Market of Custom Union is a major market for the products. 300 million USD is a volume of video control systems import to Belarus, Russia, The Ukraine and Kazahshtan.
- Capex varies between USD 5-40 mn, IRR 20-25%.

MARKETS

RUSSIAN MARKET:

- 251 million USD was an volume of video control systems import to Russian Federation in 2012. CAGR for last 4 years was 12%.
- China (67%), South Korea and Malaysia are the largest exporters of video control systems to Russian Federation.

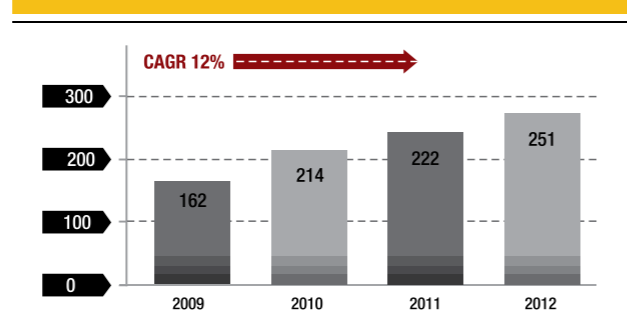
BELARUSIAN MARKET:

- About 10 million USD was an volume of video control systems import to Belarus in 2012.
- China and South Korea are the largest exporters of video control systems to Belarus.

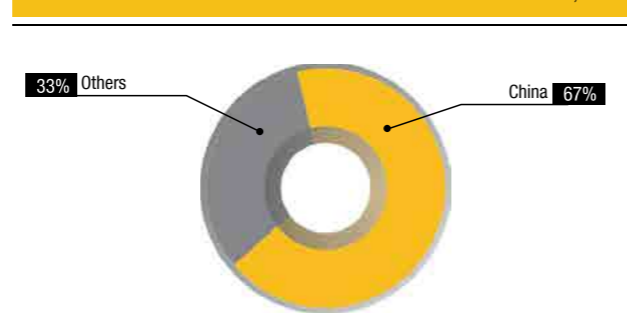
MARKET OF THE UKRAINE AND KAZAKHSTAN:

- About 40 million USD was an volume of video control systems import to Kazakhstan and the Ukraine in 2012.

IMPORT OF VIDEO CONTROL SYSTEMS TO RUSSIA, million USD



STRUCTURE OF RUSSIAN VIDEO CONTROL SYSTEMS IMPORT, %



MARKET OPPORTUNITIES

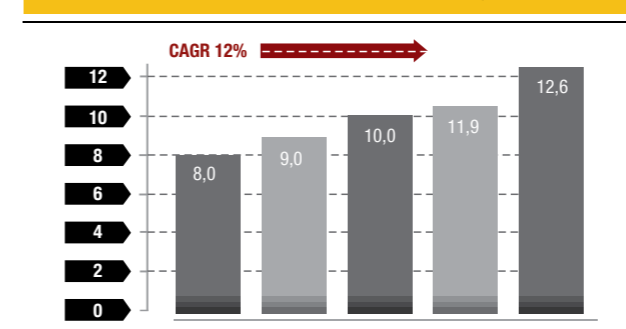
GLOBAL OPPORTUNITIES:

- 12.6 billion USD was a volume of world video control systems market in 2012 (12% was CAGR of video control systems market for last 5 years).
- 24% was a share of CCTV cameras in video control systems market.
- Solutions for vehicles traffic monitoring, surveillance and demographic observation form the main demand for the video control systems. Video surveillance systems are also used to increase security measures to prevent and combat criminal and terrorist activities.
- It is expected that world video control systems market will reach 42.8 billion USD by 2019. It is expected that the CAGR for the period will be 19,1%.
- Large sport events such as Winter Olympic Games in Sochi in 2014 or World Cup 2018 in Russia form a significant demand for video control systems.
- North America and Asia Pacific are the largest video control systems markets.

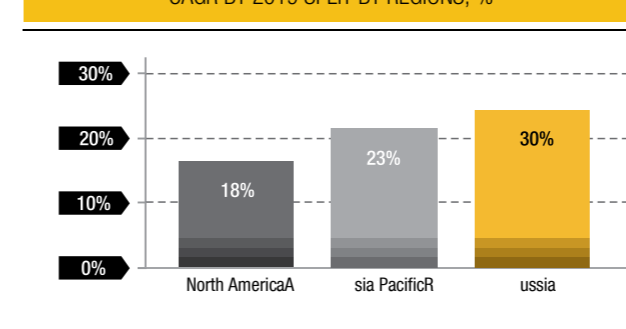
REGIONAL OPPORTUNITIES:

- 90-100 million USD was a sales of CCTV cameras in Russia in 2012. It is only 3-4% from the global market.
- It is expected that the share o Russian market will reach 5% by 2016.
- Eastern Europe and the CIS are the most promising markets for video control systems. It is expected 30% growth rate by 2019.

GLOBAL VIDEO CONTROL SYSTEMS MARKET, billion USD



CAGR BY 2019 SPLIT BY REGIONS, %



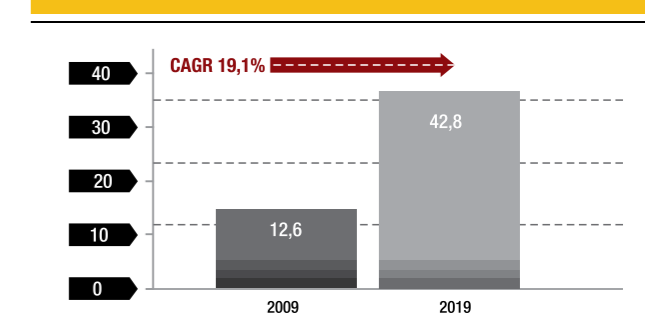
POTENTIAL INVESTORS

- Large producers of video control systems from China, South Korea and South-East Asia.

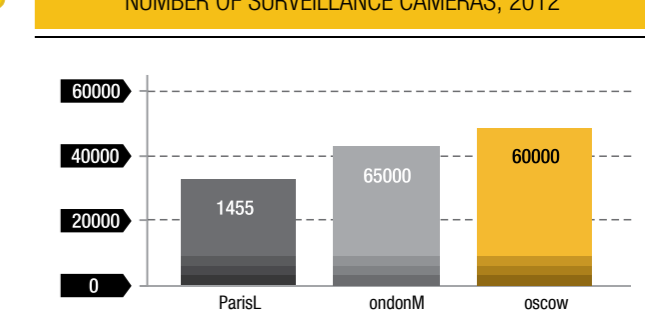
INVESTMENT OPPORTUNITIES



FORECAST OF VIDEO CONTROL SYSTEMS MARKET, billion USD



NUMBER OF SURVEILLANCE CAMERAS, 2012





PROJECT

For implementation there is provided a project on manufacturing of satellites and equipment for satellites.

The project is considered promising due to the following reasons:

- Military complex, telecommunication sector and navigation services companies are the largest consumers of satellites and equipment for satellites now.
- 189.5 billion USD was a volume of global satellites and services market in 2012. Satellites market has tripled since 2001.

- Euroconsult suppose that 1220 satellites will be constructed by 2019. Revenues from the production and launch of 1220 satellites experts estimate 194 billion USD.
- Belarus has a successful experience in the contraction and launch of the satellite.
- Manufacturing of satellites and equipment for satellites is oriented on the BRIC countries, CIS countries and Gulf countries markets.
- Capex varies between USD 100-500 mn, IRR 25-40%.

MARKETS

FOREIGN MARKETS:

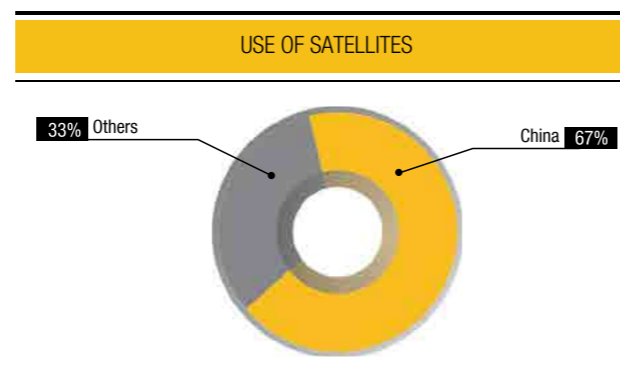
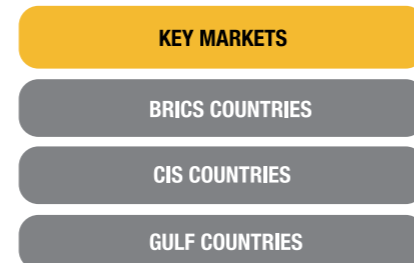
- BRICS countries, CIS countries and Gulf countries are the key markets for satellites and equipment for satellites.
- USA (32%), China (23%) and EU (22%) are the largest satellites markets in the world.
- 62% is a share of commercial satellites in the USA. Military satellites dominate Russian market.
- Rapid growth is expected in commercial satellites segment.
- Military complex, telecommunication sector and navigation services companies are the largest consumers of satellites and equipment for satellites now.

RUSSIAN MARKET:

- 16% is a share of Russian Federation in global satellites market.

MARKET OF CHINA:

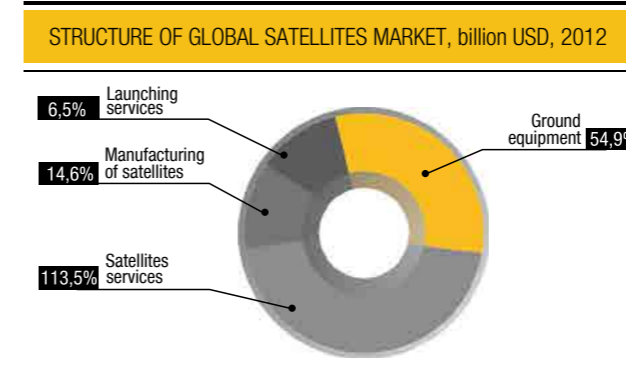
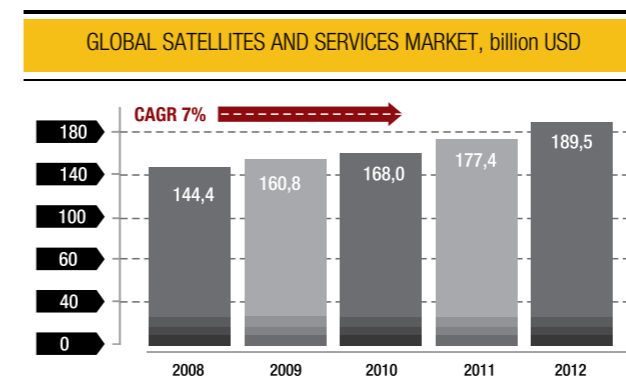
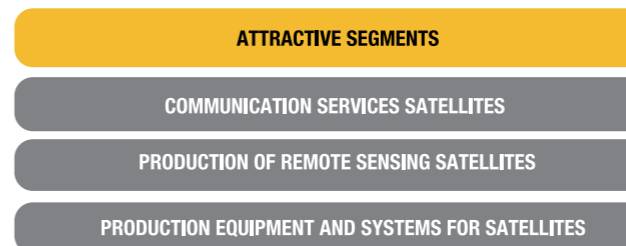
- By 2020 China plans to reach 15% from global satellites market.



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- 189.5 billion USD was a volume of global satellites and services market in 2012. Satellites market has tripled since 2001.
- 7% was CAGR of global satellites and services market for last 5 years.
- The USA own 41.2% of all the satellites
- 14.6 billion USD was a volume of global satellites and equipment for satellites production in 2012. 9% was CAGR for last 5 years.
- Manufacturing of satellites is one of the most promising segment in satellites market. Growth rate of the segment was 23% in 2012.
- Euroconsult suppose that 1220 satellites will be constructed by 2019.
- Revenues from the production and launch of 1220 satellites experts estimate 194 billion USD.

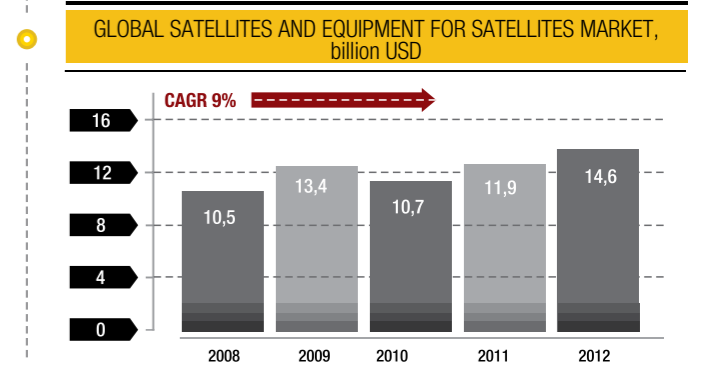
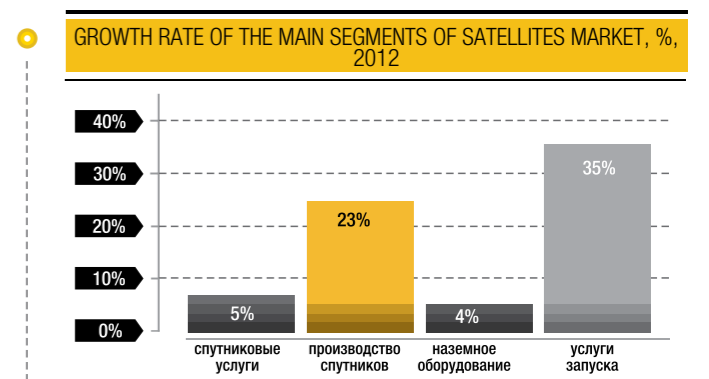


- «Lockheed Martin» - 16.1%; «EADS Astrium» - 9.5%; «Thales Alenia Space» - 7.6%; «Space Systems» / «Loral» - 6.7%; «Boeing» - 6.4% are the largest satellites producers.

REGIONAL OPPORTUNITIES:

- Substantial funding of satellite industry is planned according to the Russian broadcasting development program.
- French Thales Alenia Space and Russian JSC «Information Satellite Systems» create a joint venture for the production of satellite systems.
- Till 2020 Russia plans to spend 300 billion USD according to the military-industrial complex development program.

POTENTIAL INVESTORS





OPTICS



PROJECT

There is provided a project on launching **production of laser light sources**. This is a high-opportunity project due to the following reasons:

- Annual average growth rate of global laser light sources output over 1970-2010 was **18%**, sales in 2012 totaled **USD 8,8 bn**.
- World-class scientific provision** of optical industry in Belarus (top 20 according to aggregate citation index in the photonics field, 2nd place – according to average one), **considerable groundwork** in optical equipment manufacturing.

MARKETS

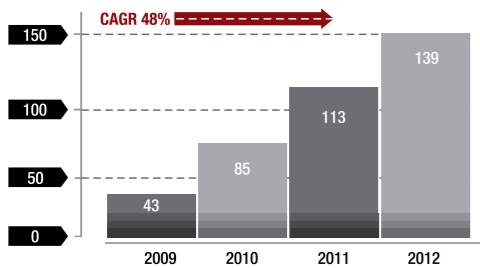
EAST ASIA MARKET:

- In 2012 **49%** of world laser equipment sales was accounted for by East Asia countries, inc. Japan, which are the major consumers of solid, excimer and other types of laser, applied in information and communication systems.
- China** is the main consumer of laser markers and laser equipment for sheet metal processing in the region.

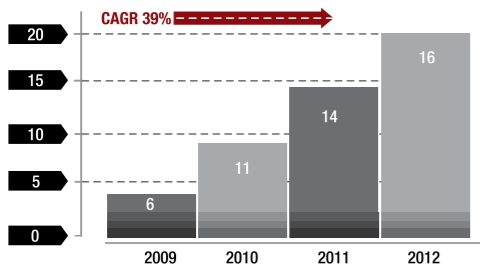
CUSTOMS UNION MARKET:

- Annual average growth rate of laser light sources imports in Russia over 2009-2012 was **48%**.
- Annual average growth rate of laser light sources in Belarus over 2009-2012 was **39%**.

IMPORTS OF LASER LIGHT SOURCES IN RUSSIA, USD mn

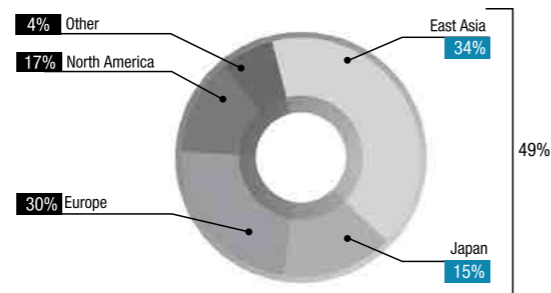


IMPORTS OF LASER LIGHT SOURCES IN BELARUS, USD mn



- Human resources** with the lowest labor cost among Customs Union members, development of laser and optical equipment manufacturing is supported at the state level.
- Potential markets – Customs Union (annual average growth rate of laser light sources in Russia is **48%**, in Belarus – **39%**) and East Asia countries, inc. China and Japan, consuming almost a half of global laser light sources volume.
- Capital expenditures for launching production of laser light sources vary within **USD 5-70 mn**, IRR is **20-30%**.

STRUCTURE OF WORLD LASER LIGHT SOURCES MARKET



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Laser industry is one of the fastest growing in the world. Annual average growth rate of global laser light sources output over 1970-2010 was **18%**.
- In 2010 laser light sources growth rates reached **30%** to slow down later due to the ongoing recession in the economy. World laser light sources sales totaled **USD 8,8 bn** in 2012

LOCAL OPPORTUNITIES:

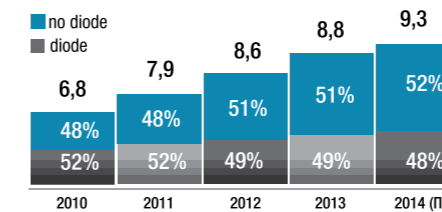
- The volume of competitive laser and optical equipment on the Russian market is small (share in the global market is about **1%**).
- Saturation of laser light sources market in Russia is up to **10-20%**, and its size is estimated at **USD 0,5-1 bn**.

ATTRACTIVE SEGMENTS:

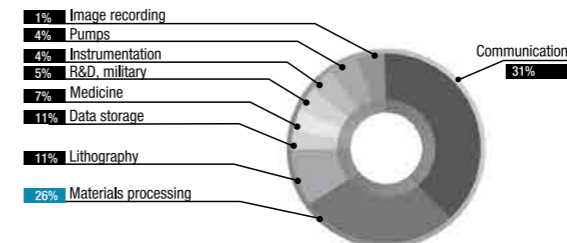
- Major market segments are communications and materials processing, the fastest growing – instrumentation and sensors (CAGR **31%**) and entertainment and displays (CAGR **29%**).

- In 2012 scale of application of excimer and, particularly, diode lasers has broadened – in the first place in semiconductor industry and microprocessing. As well as there was expansion in application of powerful diode lasers in automobile industry.
- The highest growth rates are typical of demand for **fiber lasers**: their share in total sales over 2010-2013 increased from **24,9%** to **28,3%**, rate of increase totaled **25%**.
- In the segment of laser sheet metal cutting share of carbon dioxide lasers fell to **61%** in 2013 due to increase in sales of other lasers, **fiber lasers** in particular – by **7%** as compared to 2012.
- Further growth is expected in sales of lasers for semiconductor industry and microprocessing, where the leading positions are held by solid and fiber lasers. **Ultrafast impulse lasers** are considered extremely attractive, in 2012 their sales exceeded by **60%** the level of 2011.
- In the sector of medical laser market the growing popularity is being gained by **femtosecond solid lasers**.

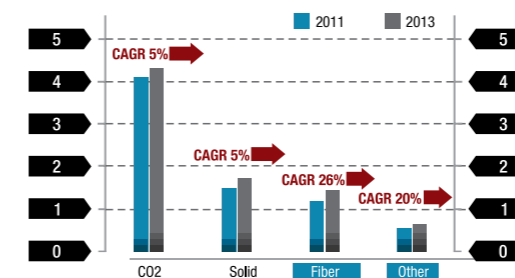
GLOBAL LASER LIGHT SOURCES MARKET, USD bn



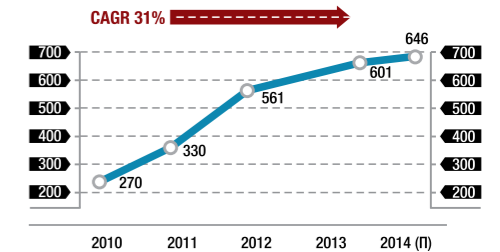
GLOBAL LASER MARKET BY APPLICATION



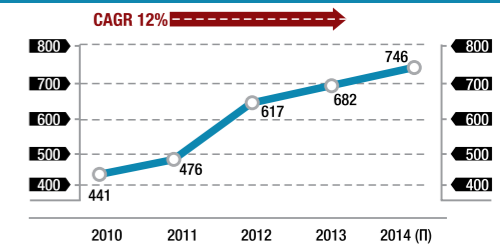
WORLD SALES OF LASER LIGHT SOURCES, USD bn



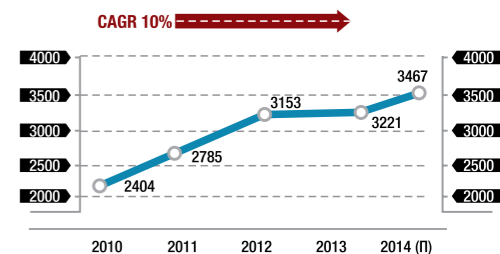
Instrumentation and sensors, USD mn



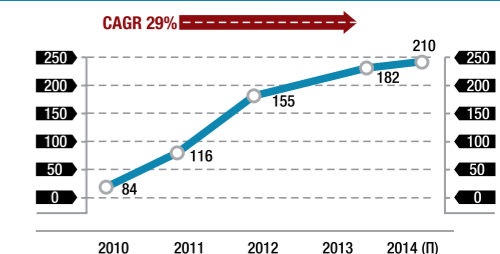
Medicine and aesthetics, USD mn



Material processing and lithography, USD mn



Entertainment and displays, USD mn



POTENCIAL INVESTORS

- Special-purpose venture funds.
- Branded manufacturers of laser equipment (Russia, USA, Europe, Japan, Taiwan).

INVESTMENT OPPORTUNITIES

- Capex for building laser equipment manufacturing plant on average totals **USD 5-70 mn**.
- Production profitability depends on the purpose of the equipment and on average amounts to **25-30%**, reaching more than **50%**.
- IRR of the project varies within **20-30%**.



PROJECT

For implementation there is provided a project on building of optical equipment plant.

The project is considered promising due to the following reasons:

- World market of optical systems and components totals USD 22,8 bn growing annually on average 7% during the last 5 years. The market is forecasted to double by 2020.
- World-class scientific provision of optical industry in Belarus (top 20 according to aggregate citation index in the photonics field, 2nd place – according to average one), considerable groundwork in optical equipment manufacturing.

MARKETS

CUSTOMS UNION MARKET:

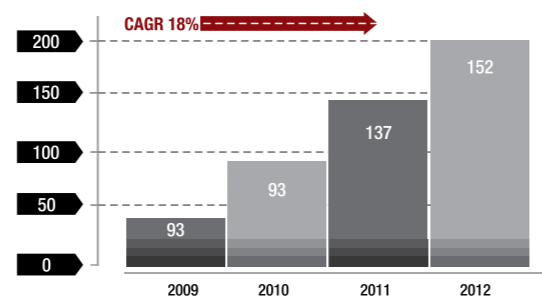
- Annual average growth rate of optical equipment imports in Russia over 2009-2012 is 18%, the imports exceeded USD 150 mn in 2012.
- Annual average growth rate of optical microscopes over 2009-2012 is 26% (the imports in 2012 – USD 86 mn); binocular and astronomical instruments – 76% (the imports in 2012 – USD 29 mn).

INTERNAL MARKET OF BELARUS:

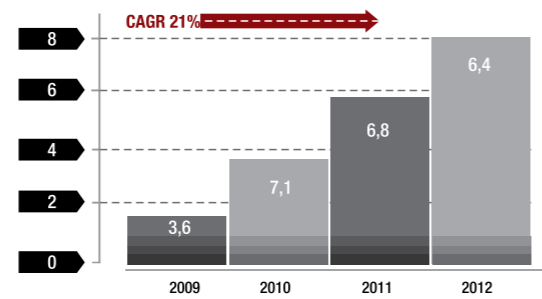
- Annual average growth rate of optical equipment imports in Belarus over 2009-2012 is 21%.
- Annual growth rate of optical microscopes imports in Belarus over 2009-2012 amounted to 23% (the imports in 2012 – USD 3,1 mn); binoculars and astronomical instruments – 19% (the imports in 2012 – USD 3,2 mn).

- Human resources with the lowest labor cost among Customs Union members, development of laser and optical equipment manufacturing is supported at the state level.
- Potential market is Customs Union (average annual growth rate of Russian optical equipment imports is 18%, Belarusian one – 21%, Russian imports totaled USD 150 mn in 2012).
- Capex varies between USD 30-40 mn, IRR – 15-20%.

OPTICAL EQUIPMENT IMPORTS IN RUSSIA, USD mn



OPTICAL EQUIPMENT IMPORTS IN BELARUS, USD mn



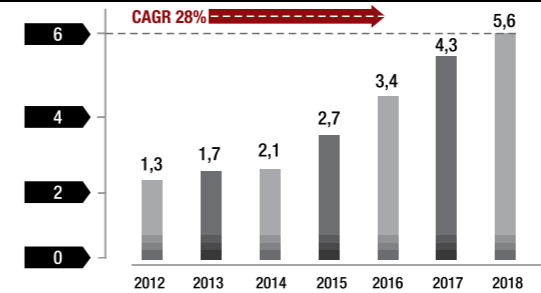
LOCAL OPPORTUNITIES:

- Russia is one of the most dynamic optical equipment markets. Number of outpatient care centers growth rate in Russia over 2009-2012 amounts to 8%.

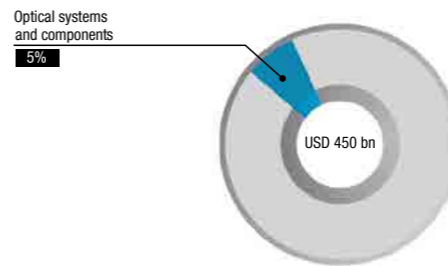
ATTRACTIVE SEGMENTS:

- Optical equipment market in Russia is in its infancy. Demand for beginner-friendly products prevails. Annual average growth rate of the industry exceeds 30%.
- The key growth driver of the microscopy equipment market is world's growing attention to nano research. A highly promising niche in this segment is manufacturing of microfluidic devices, which market is forecasted to reach USD 5,7 bn by 2018 with annual average growth rate of 28%.

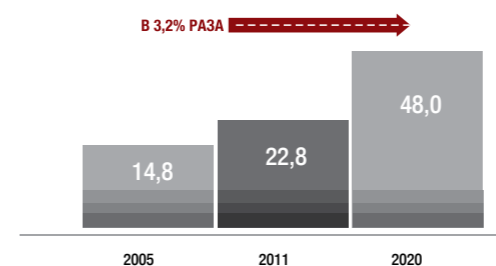
WORLD MICROFLUIDIC DEVICE MARKET, USD bn



WORLD PHOTONICS MARKET



OPTICAL SYSTEMS AND COMPONENTS MARKET, USD mn



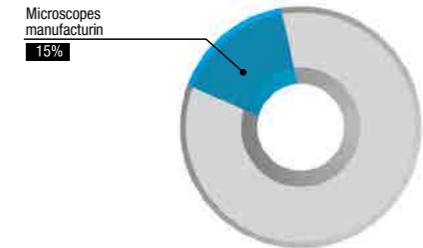
POTENTIAL INVESTORS

- Major manufacturers of optical equipment from China, Europe.
- Possibility of establishing a joint venture with one of the optics manufacturers from Belarus, reorienting military production toward consumer segment.

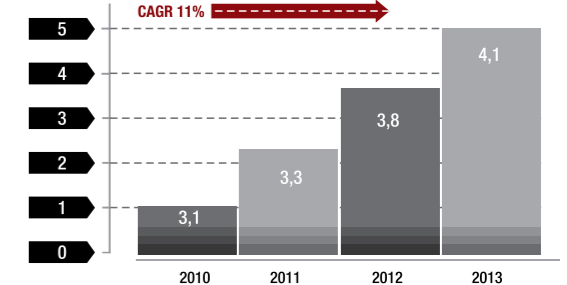
INVESTMENT OPPORTUNITIES

- Capital expenditures for building an optical equipment plant on average vary between USD 30-40 mn.
- Production profitability depends on the purpose of the equipment and on average amounts to 20-30%, payback period is 5-6 years.
- IRR varies within 15-20%.

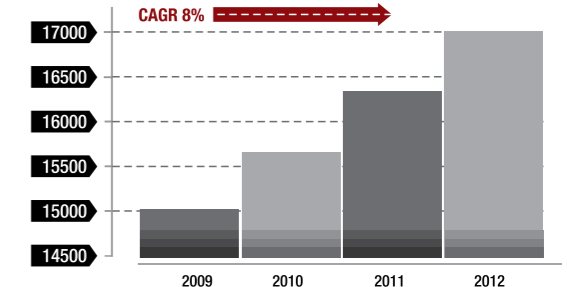
WORLD OPTICAL EQUIPMENT MARKET



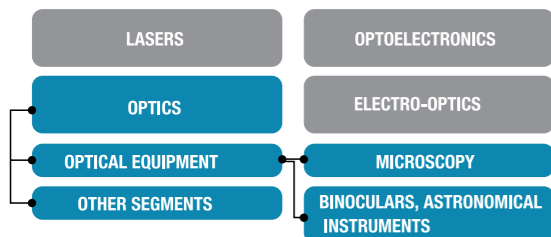
WORLD MICROSCOPES MARKET, USD bn



NUMBER OF OUTPATIENT CARE CENTERS IN RUSSIA



KEY SEGMENTS OF PHOTONICS MARKET



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Optical systems and components segment, accounting for 5% of world photonics market, totals about USD 23 bn.
- And it is expected to reach USD 48 bn by 2018, thus having increased by more than 3 times compared to 2005.
- 15% of world optical equipment market is accounted for by microscopes. World microscopes market exceeded USD 4 bn in 2013, annual average growth over 2010-2013 amounted to 10%. It is expected that the market will reach USD 6,2 bn by 2018.



PROJECT

There is provided a project on building a modern plant on production of optical fiber and fiber-optic cables.

Prerequisites of the project implementation are the following:

- Demand for optical fiber, generating by cable plants in Russia and Belarus, is almost fully covered by import.
- In 2012 Russia imported fiber-optic cables to the value of USD 72 mn, annual average growth rate over the last 4 years was 66%.

- Russian fiber optics market is estimated at more than USD 900 mn.
- In the implementation stage there are "fiber optics to the house" projects – increase of worldwide average internet connection speed from 9 to 34 Mbit/c by 2016.
- Capital expenditures for the project may total USD 25-30 mn, IRR – 15-18%.

MARKETS

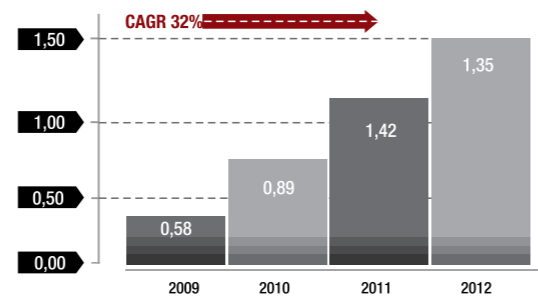
CUSTOMS UNION MARKET:

- Optical fiber import in Russia was doubling annually during 2009-2012.
- Cable imports in Russia in 2012 totaled USD 1,35 bn, growing by 32% per year on average.
- Fiber-optic cables account for slightly more than 5% of total cable imports, but grows twofold faster – 66% a year.
- All cable (inc. fiber optics) manufacturing plants import optical fiber, mostly from the USA and Japan.

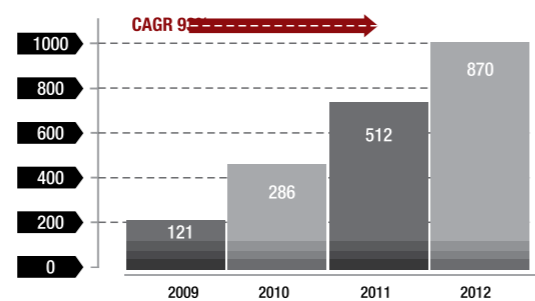
INTERNAL MARKET OF BELARUS:

- In 2012 Belarus exported fiber-optic cables to Russia to the value of USD 34,2 mn, which accounts for 47% of total Russia's fiber optics import in money terms.

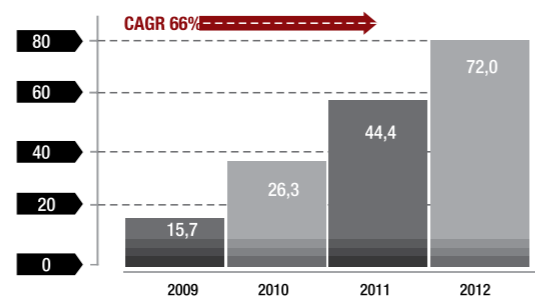
CABLE IMPORTS IN RUSSIA, USD bn



OPTICAL FIBER IMPORTS IN RUSSIA, T



IMPORTS OF FIBER-OPTIC CABLES IN RUSSIA, USD mn



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- During 2007-2011 there has been a trend of fiber optics consumption growth in BRICS countries (from 49% to 64%), which indicates the willingness to reach the data transmission speed of the level of advanced economies.
- Telecommunications market is projected to grow in the near 5 years owing to two key segments: data transmission services and development of fixed and mobile broadband communication.
- With usage of fiber-optic cables the internet access speed by means of broadband channels is projected to grow from 9 to 34 Mbit/c, since such a way of data transmission is the most secure and effective.

LOCAL OPPORTUNITIES:

- FTTx-projects development («fiber optics to the house»): FTTP – fiber optics to the user, FTTB – fiber optics to the building, FTTC – fiber optics to the house and office – increase of data transmission speed.
- The following telecommunication projects are going to be implemented: Vladivostok – Jacksonville (submarine cable of 35000 km length), Europe-Asia via Murmansk (of 17000 km length), etc.

INVESTMENT OPPORTUNITIES

Launching optical fiber manufacturing:

- Capex may total USD 25-30 mn.
- Payback period is 4-5 years.
- IRR varies between 15-18%.

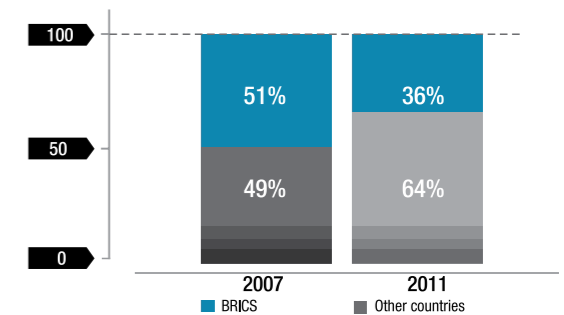
Launching manufacturing of fiber-optic cables:

- Capex may total USD 10-15 mn.
- Payback period is about 3-4 years.
- IRR varies between 20-23%.

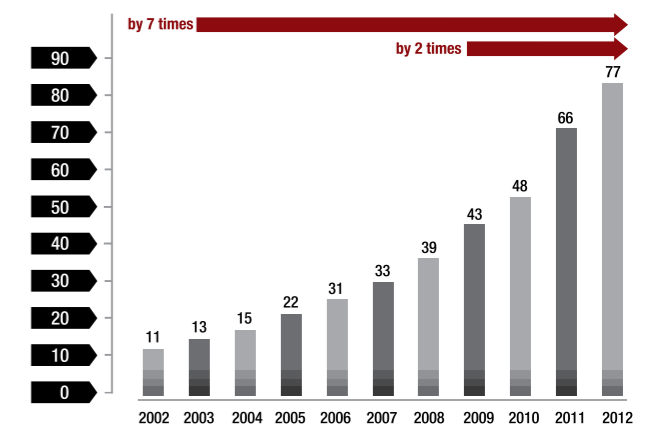
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in fiber optics manufacturing, aimed at local content.
- Backward integration:
 - companies, for which fiber optics is the main raw material (optical, quartz, cable, etc.).
 - companies, for which fiber-optic cables is the main raw material (telecommunication, energy, etc.).

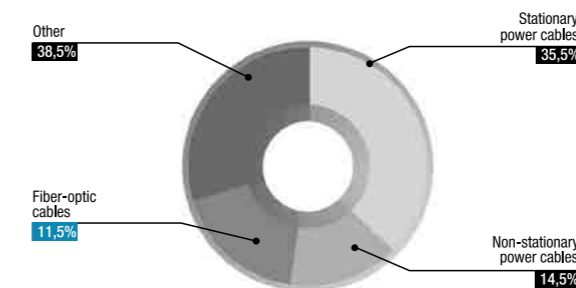
OPTICAL CABLES CONSUMPTION SHARE



AMOUNT OF OPTICAL CABLES LAID WITHIN THE FRAMEWORK OF THE PROJECT "FIBER TO THE HOUSE", mn fiber-kilometres



CABLE OUTPUT STRUCTURE IN RUSSIA, 2010





NEW MATERIALS



PROJECT

There is provided a project on launching **high-purity quartz (HPQ) production**.

This is a high-opportunity project due to the following prerequisites:

- World HPQ market totals about **60 thou t** (app. **USD 500 mn**). The market is characterized of stable growth and annually increases by **3-5%**.

MARKETS

CUSTOMS UNION MARKET:

- By 2020 Russia is planning to commission **152 GW** of solar power stations. Annual average capacity growth is expected to amount to **14%**.
- Russian microelectronics market is growing on average by **21%** a year. It is projected to reach **USD 2,84 bn** by 2015, thus having increased by 3 times since 2009.

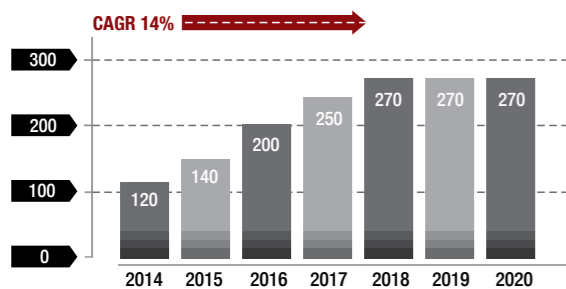
INTERNAL MARKET OF BELARUS:

- Integrated circuit output in Belarus increased by 1,5 times since 2005 and totals **1734 mn pieces**. Annual average growth rate is **6%**.
- There are 22 solar power stations in Belarus of total capacity of **1,89 MW**. National development program of local and renewable energy sources implies installing **172 facilities** by 2015. By 2020 aggregate capacities are expected to get raised to **85 MW**.

EUROPEAN AND SOUTH-EAST ASIA MARKETS:

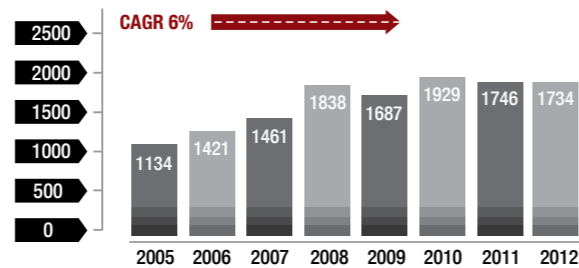
- Since 2009 world volume of solar battery installations is actively growing. In 2010 it increased by **172%**, in 2011 – by **40%** (CAGR **22%**). Leading countries: Germany, China, Japan, India, USA.
- The bulk of the electronic components market is accounted for by **APEC countries** (around **55%**), followed far behind by the USA and European markets.

COMMISSIONING OF SOLAR POWER STATIONS IN RUSSIA, MW

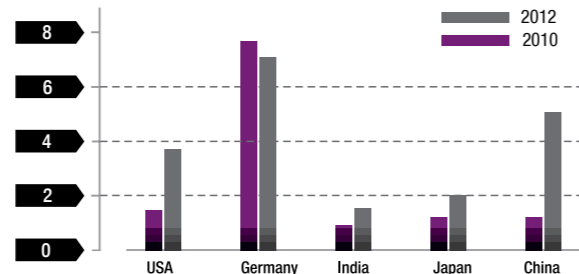


- Developed mining industry in Belarus, research and raw materials (the volume of identified quartz sand deposits is **175 mn t**) base.
- Skilled labor and experience in implementation of projects in quartz industry.
- Capital expenditures for the launching high-purity quartz production are estimated at **USD 30-70 mn**, payback period is **5-6 years**.

INTEGRATED CIRCUIT OUTPUT IN BELARUS, mn pieces



WORLD VOLUME OF SOLAR BATTERY INSTALLATIONS, GW



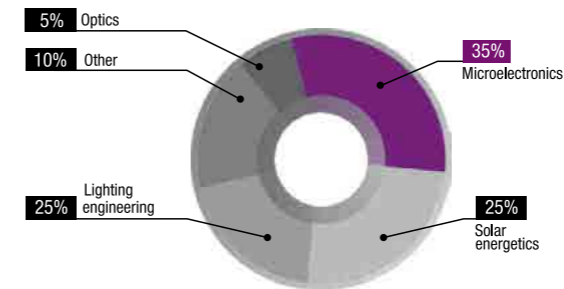
MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

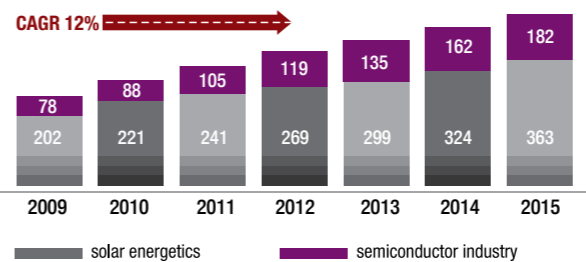
- World HPQ market totals about **60 thou t** (app. **USD 500 mn**).
- The market is characterized of stable growth and annually increases by **3-5%**.
- 60%** of global HPQ consumption is accounted for by **microelectronics** and **solar energetics**.
- World electronics industry is stably growing and reached **10,5 mn sq in** (**USD 338 mn**). With current growth rates, the market may double by 2017.
- Growth driver of HPQ market is **quartz crucibles market**. In 2013 it was estimated at **USD 434 mn** with annual average growth rate of **12%**. The bulk of the market is accounted for by quartz crucibles for semiconductor industry.

- Market of silicon for semiconductor industry is expected to grow at the level of **7%** a year.
- 35%** of all crucibles for microelectronics is of 300 mm technology process, **40%** - of 200 mm one. Demand for **quality products** will grow by means of gradual replacement of 200 mm technology process by 300mm and 450 mm ones.
- Global capacity of solar power stations exceeds **100GW**. Annual average growth rate of solar battery installations is projected to reach **22%**.
- Solar energetics market growth will trig the increase in share of crucibles for solar energetics up to **34%** in 2015 (compared with **21%** in 2008).
- HPQ market is monopolistic and characterized of constant price growth, quality issues, spot prices (customers' concern).

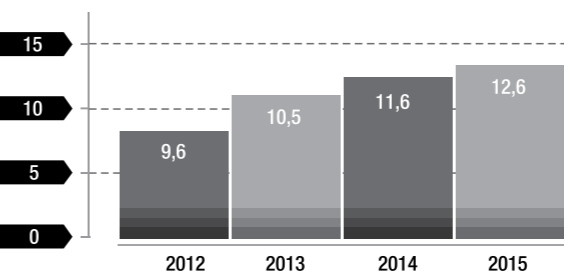
GLOBAL HPQ CONSUMPTION STRUCTURE



QUARTZ CRUCIBLES MARKET, mn USD



GLOBAL ELECTRONICS INDUSTRY, mn sq in



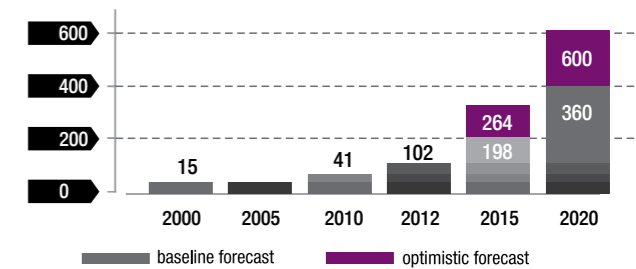
LOCAL OPPORTUNITIES:

- Share of imported silicon on the Russian market is estimated at about **30%**. Necessity of importing high-purity quartz is conditioned by lower quality of silicon produced in Russia and inability of applying it in electronics industry.

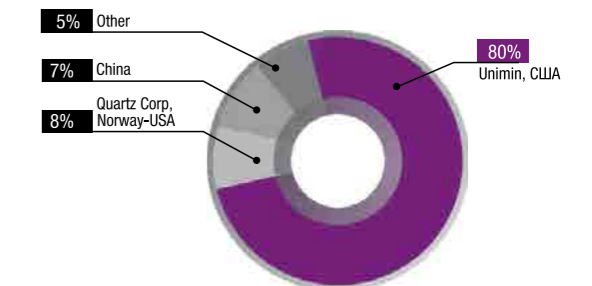
INVESTMENT OPPORTUNITIES

- Capex for the project implementation might total **USD 30-70 mn**.
- Payback period is about **5-6 years**.
- IRR varies within **5-18%**.

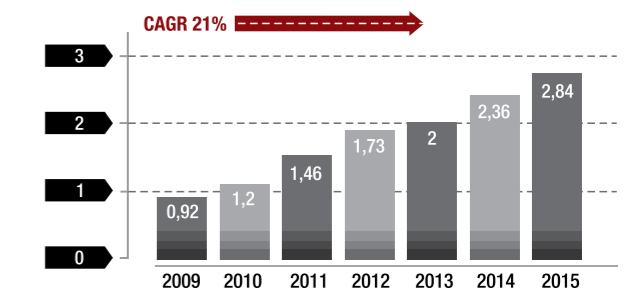
WORLD SOLAR ENERGETICS INSTALLED POWER, GW



HIGH-PURITY QUARTZ MARKET



RUSSIAN MICROELECTRONICS MARKET, USD mn





PROJECT

For implementation there is provided a project on manufacturing ceramics and metal-ceramics products.

The project is considered promising due to the following reasons:

- 47 billion USD was a volume of world special ceramics production in 2013. CAGR for last 5 years was 19%.
- Experts expect 9.8% GAGR in special ceramics market till 2018. World special ceramic market will reach 68 billion USD in 2018.

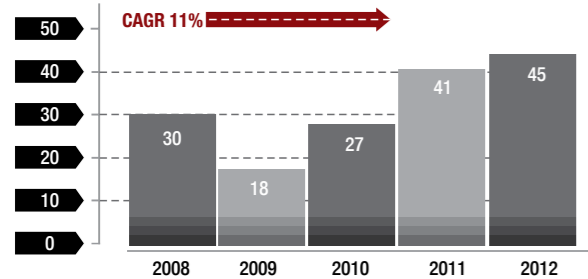
- The production of plain bearings, rings, mechanical seals, wear-resistant industrial products, cutting tools, brake systems are the most promising market segments .
- Key markets – Russian Federation (import volume 190 million USD. CAGR for last 5 years was 15%.) and Belarus (import volume 45 million USD. CAGR for last 5 years was 15%.).
- Capex varies between USD 30-100 mn, IRR 25-30%.

MARKETS

BELARUSIAN MARKET:

- 45 million USD was an volume of metal-ceramics products import to Belarus in 2012. CAGR for last 5 years was 11%.
- Germany, South Korea and Russia are the largest exporters of metal-ceramics to Belarus.

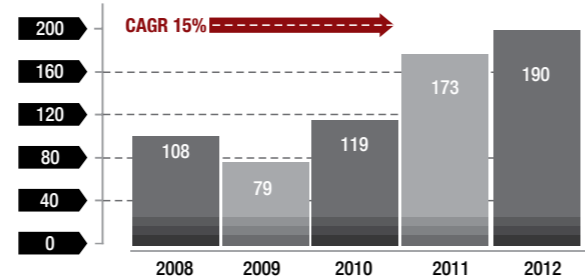
IMPORT OF METAL-CERAMICS PRODUCTS TO BELARUS, million USD



MARKET OF CUSTOM UNION:

- 190 million USD was an volume of metal-ceramics products import to Russia in 2012. CAGR for last 5 years was 15%.
- Germany, China, Sweden are the largest exporters of metal-ceramics to Russia.

IMPORT OF METAL-CERAMICS PRODUCTS TO RUSSIA, million USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- 47 billion USD was a volume of world special ceramics production in 2013. CAGR for last 5 years was 19%.
- Annual average growth rate of special ceramics market is expected to reach 9,8% by 2018. World special ceramic market will reach 68 billion USD in 2018.
- Major consumers will increase metal-ceramics consumption in brake systems up to 60%.

REGIONAL OPPORTUNITIES:

- Industry is a major metal-ceramics consumer. Till 2020 Russia plans to spend 130 billion USD according to the industry development program till 2020.

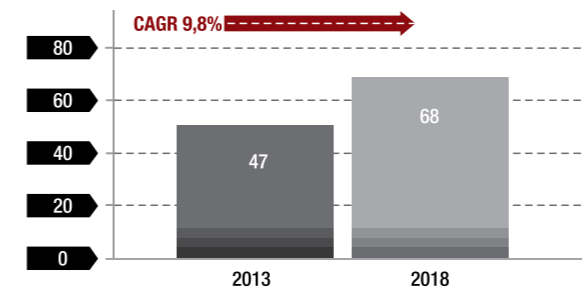
- Metal-ceramics is widespread in automobile industry:

In 2012 Russian automobile market reach pre-crisis level. In 2012 there were 260 automobiles per 1000 people. 2935 thousand automobiles were sold in Russia in 2012 (11% growth).

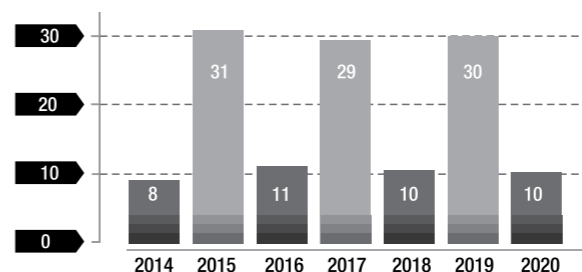
69 thousand motor-buses were sold in Russia in 2012.

41.8 billion USD was a volume of Russia spare car parts market in 2012.

GLOBAL SPECIAL CERAMICS MARKET (INCLUDING METAL-CERAMICS), billion USD



BUDGET FUNDING ACCORDING TO THE RUSSIA INDUSTRY DEVELOPMENT PROGRAM, billion USD



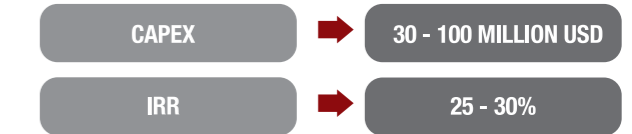
ATTRACTIVE SEGMENTS:

- The production of plain bearings, rings, mechanical seals, wear-resistant industrial products, cutting tools, brake systems are the most promising market segments .

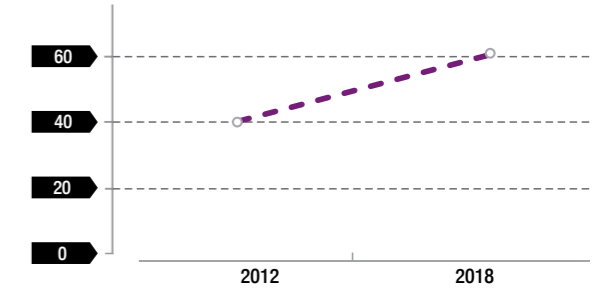
POTENTIAL INVESTORS

Large producers of metal-ceramics from China, South Korea and Russia. Large automobile producers.

INVESTMENT OPPORTUNITIES



METAL-CERAMICS BRACE SYSTEMS, %



MAJOR METAL-CERAMIC CONSUMERS

AUTOMOBILE INDUSTRY, METALLURGY, SHIPBUILDING AND CONSTRUCTION

CHEMICAL, OIL REFINING INDUSTRY

MINING INDUSTRY



PROJECT

There is provided a project on building quartz glass products manufacturing plant.

Due to the following prerequisites the project seems to be high-opportunity:

- Quartz glass world market totals USD 2 bn. The main consuming industries of quartz glass products are electronics and medicine.
- World electronics market is expected to reach USD 12,6 mn sq in by 2015 with annual average increase of 9%.
- CIS market of high-quality ampoules totals around 1600 bn items. Annual average growth rate over 2009-2012 is 19%.

- Developed mining industry in Belarus, research and raw materials (the volume of identified quartz sand deposits is 175 mn t) base.
- Skilled labor and experience in implementation of projects in quartz industry.
- Russian imports of quartz glass products total USD 39,2 mn, annual average growth rate – 18%. Belarus imports quartz glass products to the value of USD 3,5 mn, annual average growth rate is 23%.
- Capital expenditures for launching quartz glass products manufacturing plant are estimated at USD 50-80 mn, payback period is 5-6 years.

MARKETS

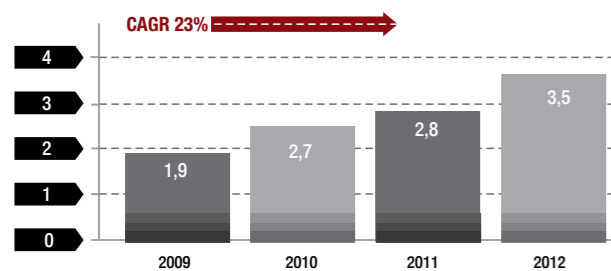
CUSTOMS UNION MARKET:

- In 2012 Russia imported quartz glass products to the value of USD 39,2 mn, annual average growth rate of imports over 2009-2012 is 18%.

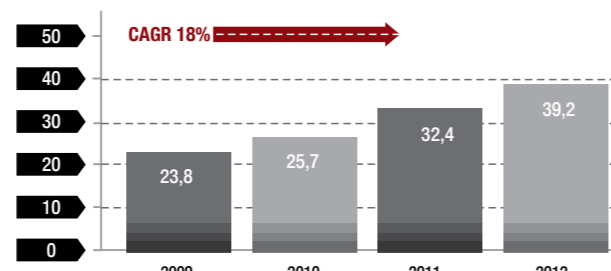
INTERNAL MARKET OF BELARUS:

- In 2012 Belarus imported quartz glass products to the value of USD 3,5 mn, annual average growth rate is 23%

IMPORTS OF QUARTZ GLASS PRODUCTS IN BELARUS, USD mn



IMPORTS OF QUARTZ GLASS PRODUCTS IN RUSSIA, USD mn



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

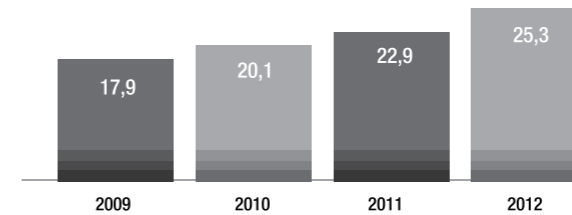
- World quartz glass market totals USD 2 bn.
- The main consuming industries of quartz glass products are electronics and medicine. World electronics market is expected to reach USD 12,6 mn sq in by 2015 with annual average increase of 9%.

LOCAL OPPORTUNITIES:

- Necessity of importing quartz glass products is conditioned by lower quality of silicon produced in Russia and inability of applying it in electronics industry (share of imported silicon is about 30%).

- In spite of developed pharmaceutical industry, there is no production of medical glass (ampoules, vials) in Belarus. Imports of ampoules in Belarus totaled USD 5 mn, annual average growth rate over 2009-2012 – 24%.
- Ampouled and vialled pharmaceuticals output in Belarus has increased by 18% since 2009 and totaled 377 thou items in 2012. Annual average growth rate is 6%.
- In 2012 Russia imported ampoules to the value of almost USD 16 mn, annual average growth rate of imports over 2009-2012 amounted to 8%.
- Annual average growth of Russia's pharmaceutical market over 2009-2012 was 12%, the market volume exceeds USD 25 bn.
- CIS market of high-quality ampoules totals around 1600 bn items. Annual average growth rate over 2009-2012 is 19%.

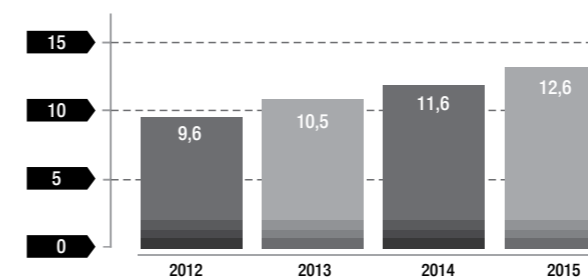
PHARMACEUTICAL MARKET IN RUSSIA, USD bn



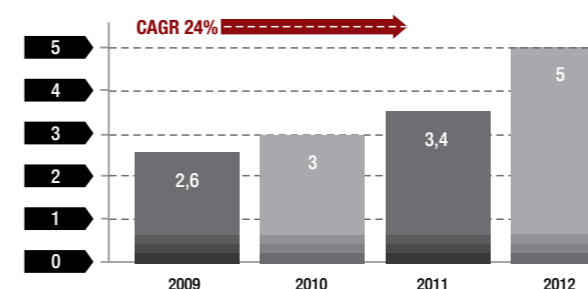
INVESTMENT OPPORTUNITIES

- Capex for the project implementation might total USD 50-80 mn.
- Payback period is about 5-6 years.
- IRR varies within 5-18%.

WORLD ELECTRONICS INDUSTRY MARKET, mn sq in



IMPORTS OF AMPOULES IN BELARUS, USD mn



MONO-AND POLYSILICON
\$ 300 BN

POLYSILICON
\$ 5 BN

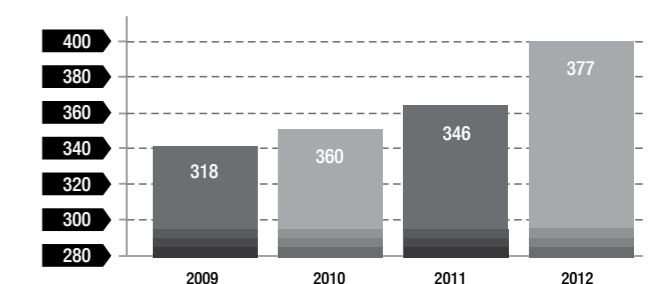
QUARTZ GLASS \$2 BN

HIGH-PURITY SiO2
\$ 0,5 BN

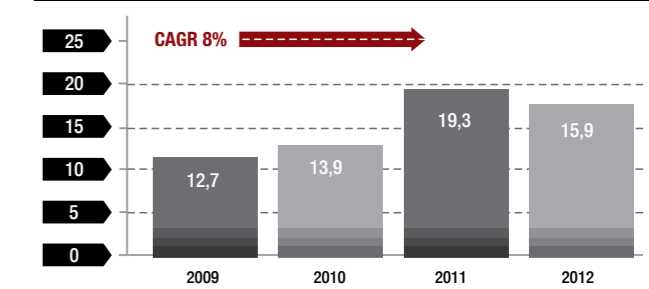
POTENTIAL INVESTORS

- Strategic investors – companies with technologies and experience in production of quartz glass products.
- Forward integration – major players on microelectronics and pharmaceutical markets (medical holdings).

AMPOULED AND VIALED PHARMACEUTICALS OUTPUT IN BELARUS, thou items



IMPORTS OF AMPOULES IN RUSSIA, USD mn





PROJECT

There is provided a project on building a polysilicon production plant. The project is considered high-opportunity due to the following prerequisite:

- World polysilicon market totals 145 thou t (USD 5 bn), annual average growth rate since 2009 – 20%.
- The main consuming industries – microelectronics and solar energetics with projected annual average growth rate of 7% and 24% respectively by 2020.

MARKETS

CUSTOMS UNION MARKET:

- By 2020 Russia is planning to commission 152 GW of solar power stations. Annual average capacity growth is expected to amount to 14%.
- Russian microelectronics market is growing on average by 21% a year. It is projected to reach USD 2,84 bn by 2015, thus having increased by 3 times since 2009.

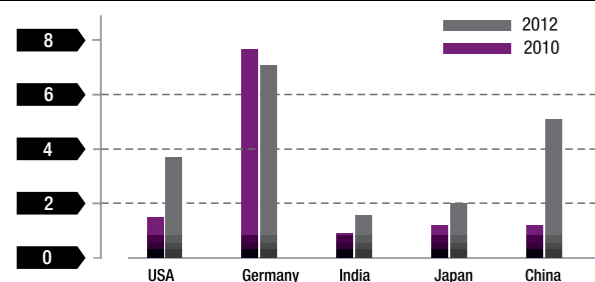
INTERNAL MARKET OF BELARUS:

- Integrated circuit output in Belarus increased by 1,5 times since 2005 and totals 1734 mn pieces. Annual average growth rate is 6%.
- There are 22 solar power stations in Belarus of total capacity of 1,89 MW. National development program of local and renewable energy sources implies installing 172 facilities by 2015. By 2020 aggregate capacities are expected to get raised to 85 MW.

EUROPEAN AND SOUTH-EAST ASIA MARKETS:

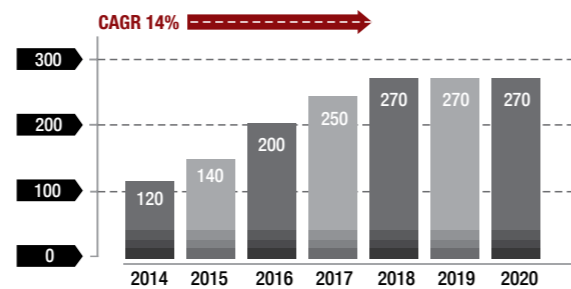
- Since 2009 world volume of solar battery installations is actively growing. In 2010 it increased by 172%, in 2011 – by 40% (CAGR 22%). Leading countries: Germany, China, Japan, India, USA.
- The bulk of the electronic components market is accounted for by APEC countries (around 55%), followed far behind by the USA and European markets.

WORLD VOLUME OF SOLAR BATTERY INSTALLATIONS, GW

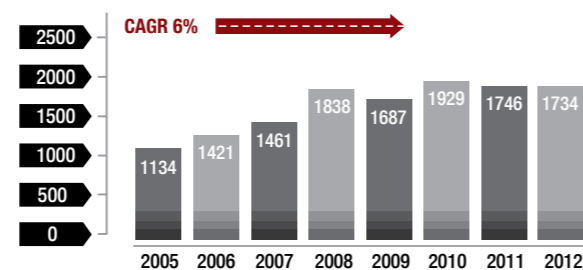


- Developed mining industry in Belarus, research and raw materials (the volume of identified quartz sand deposits is 175 mn t) base.
- Skilled labor and experience in implementation of projects in quartz industry.
- Capital expenditures for the launching a polysilicon production plant start from USD 200 mn, payback period is 6-7 years.

COMMISSIONING OF SOLAR POWER STATIONS IN RUSSIA, MW



INTEGRATED CIRCUIT OUTPUT IN BELARUS, mn pieces



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- World polysilicon market totals 145 thou t (USD 5 bn), annual average growth rate over 2009-2013 – 20%.
- The main consuming industries are microelectronics and solar energetics (35% and 25% respectively).
- Global electronics industry is stably growing, having reached 10,5 mn sq in (USD 338 bn). With existing growth rates the market may double by 2017 compared to the current value.

- By 2015 demand of global electronics industry for polysilicon (EG) is estimated to increase to 47,2 thou t per year.
- Capacity of world solar plants totals more than 100 GW. Estimated annual average growth rate of solar battery installations is 22%.
- Demand of global solar energetics for polysilicon (SoG) is projected at the level of 100 thou t by 2015.

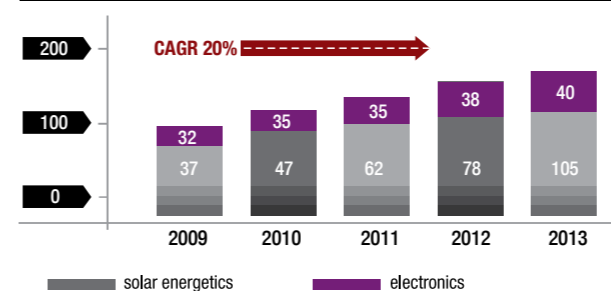
LOCAL OPPORTUNITIES:

- Share of imported silicon on the Russian market is about 30%. Silicon produced in Russia is of lower quality and can't be used in electronics industry.
- Russia: Alternative energy development program implying increase of its share in the country's energy balance up to 4,5% by 2020.
- Europe: The program 2020 (increase in share of renewable sources by 2020 up to 20%).
- Germany: "Green tariff" and "Replacement of nuclear energy by solar by 2020" programs.
- India: The program 20 solar GW by 2020.
- Italy, Japan, China: State programs on alternative energy.
- USA: USD 150 bn is allocated for 10 years to support alternative energy.
- Kuwait: By 2020 10% of energy is to be produced from renewable energy sources.

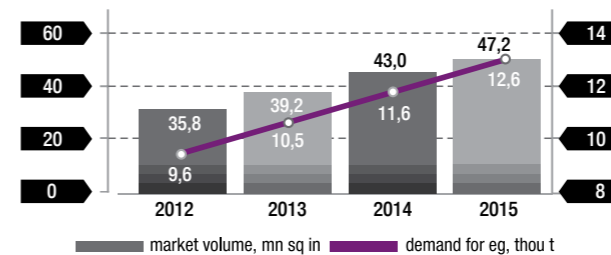
INVESTMENT OPPORTUNITIES

- Capital expenditures for the project implementation start from USD 200 mn.
- Payback period of the project is 6-7 years.
- IRR varies within 13-15 %.

POLYSILICON MARKET, thou t



PROJECTED DEMAND OF ELECTRONICS INDUSTRY FOR POLYSILICON



MONO-AND POLYSILICON \$ 300 BN

POLYSILICON \$ 5 BN

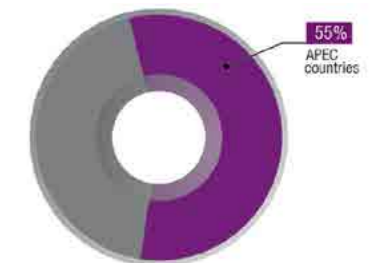
QUARTZ GLASS \$2 BN

HIGH-PURITY SiO2 \$ 0,5 BN

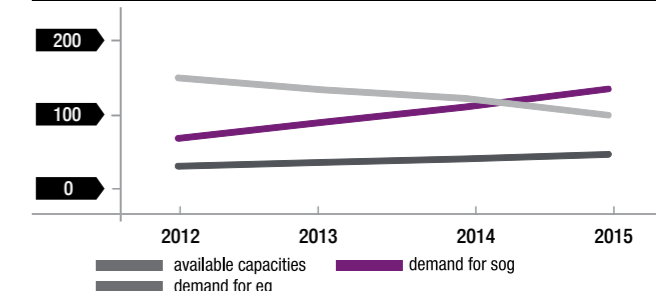
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in polysilicon production.
- Forward integration – world major players on microelectronics and solar energetics markets

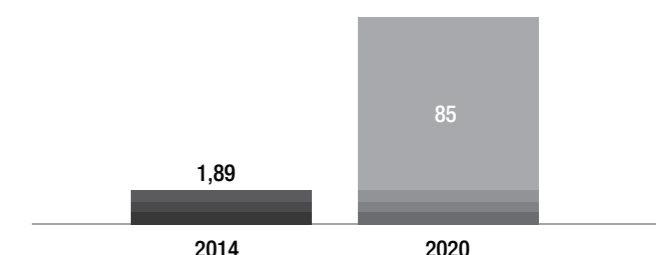
STRUCTURE OF WORLD MARKET FOR ELECTRONIC COMPONENTS



DEMAND OF SOLAR ENERGETICS FOR POLYSILICON, thou t



COMMISSIONING OF SOLAR PLANTS IN BELARUS, MW





PROJECT

There is provided a project on launching production of glass fiber composites.

This is a high opportunity project due to the following reasons:

- Imports of glass fiber and glass fiber products are growing annually by 36% on average to reach USD 172 mn in 2012.

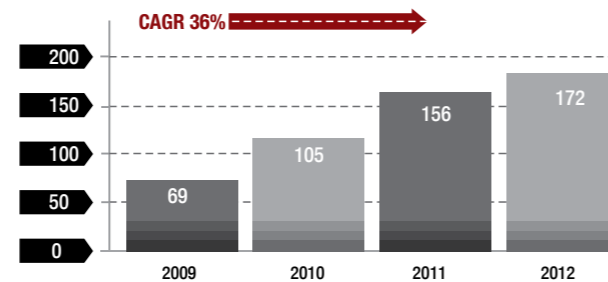
MARKETS

CUSTOMS UNION MARKET:

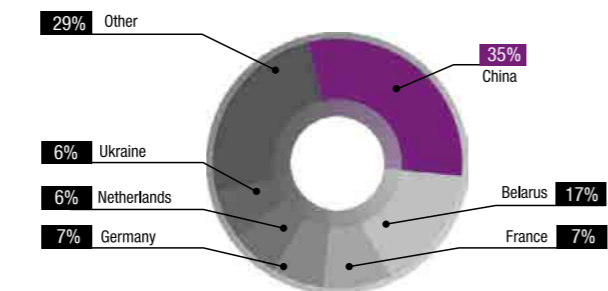
- In 2012 imports of glass fiber and glass fiber products in Russia totaled more than USD 170 mn. Annual average growth rate over 2009-2012 was 36%.
- China and Belarus account for 45% of imported by Russia glass fiber and glass fiber products.
- Fiber optics industry in Belarus is export-oriented. On average, the exports is 4 times as large as the imports.
- Russia accounts for 64% of the exported from Belarus glass fiber and glass fiber products.

- Growth of composites consumption in Russia – 13-18% per year; state promotion of composites consumption.
- Global composites market is estimated at app. USD 950 bn.
- Capital expenditures for the project are estimated at USD 20-50 mn, payback period is 5-6 years, IRR – 15-18%.

IMPORTS OF GLASS FIBER AND GLASS FIBER PRODUCTS* IN RUSSIA, USD mn



IMPORT STRUCTURE OF GLASS FIBER AND GLASS FIBER PRODUCTS IN RUSSIA, 2012



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global composites market totals USD 12 mn t (USD 950 bn).
- Global composite materials market growth is projected at 20-24% per year by 2020.

LOCAL OPPORTUNITIES:

- Glass fiber is the main reinforcing material, used in composite manufacturing in Russia.
- To meet growing demand for composite materials, composites output should grow by 10 times in the near 5-7 years.
- Development of composite materials manufacturing roadmap, aiming at discovering new mass markets, was approved in Russia in 2013.
- Appropriate regulatory and engineering requirements, which are necessary for the industry development, along with industrial and regional programs on composite materials application in the related sectors, inducing consumption, are expected to be developed and adopted by 2020.
- Growth rate of Russia's composites market over 2010-2012 was 13-18% a year. Roadmap adoption will trig growth rate of the market and help catch up with the global leaders.
- Glass fiber composites are widely applied in construction and almost all machine building industries.
- Pultruded composite is projected to be the most attractive segment of glass fiber composites – the growth rate is expected to be 1,7-2 times higher than the industry average rate.

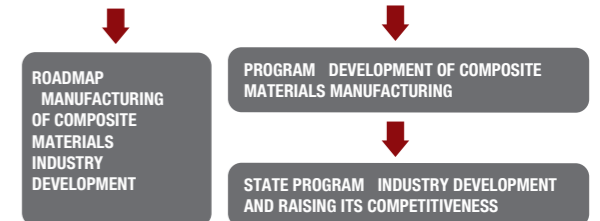
INVESTMENT OPPORTUNITIES

- Capex may total USD 20-50 mn.
- Payback period is about 5-6 years.
- IRR varies within 15-18%.

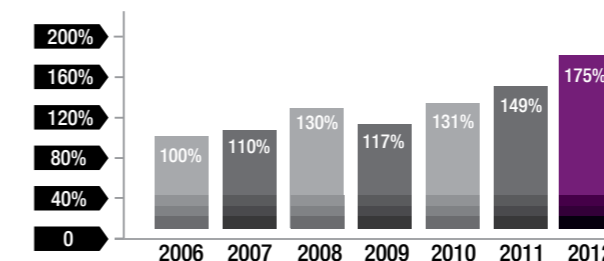
POTENTIAL INVESTOTS

- Strategic investors – global (Chinese, in particular) companies with appropriate technologies and experience in manufacturing of glass fiber composites.
- Forward integration – companies engaged in the industries – key composite consumers (construction, transport, etc.).

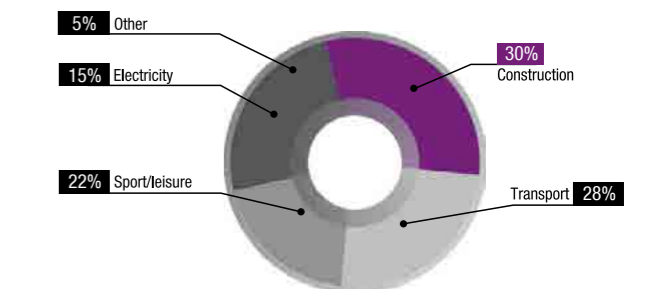
STATE PROMOTION OF COMPOSITES CONSUMPTION IN RUSSIA



GLASS FIBER COMPOSITES MARKET GROWTH IN RUSSIA, 2006-2012 (2006 = 100%)



GLASS FIBER COMPOSITES CONSUMPTION IN EUROPE BY INDUSTRIES





PROJECT

For implementation there is provided a project on **launching production of heat-insulating materials from flax**.

The projects is promising since:

- European and North American countries are characterized of **growing demand for natural raw materials**. Heat insulation accounts for 22% in application of ecologically-friendly materials in the world.
- Traditions of **flax cultivation** in Belarus (4th place in the worldwide flax production), scientific provision.
- State support of flax cultivation, experience in production of heat-insulating materials in Belarus and appropriate **workforce capacity**.

- Russia's heat-insulating materials market totals about **50 mn cu m**. Over the past 5 years the market doubled, growing on average by **24%** a year.
- Imports of heat-insulating materials In Russia totals **USD 235,4 mn**, CAGR since 2009 – **16%**. Belarus imports heat-insulating materials to the value of **USD 90 mn** with annual average growth rate over 2009-2012 by **27%**.
- Capital expenditures are estimated at **USD 15-25 mn**, payback period is **4-5 years**, IRR - **18-22%**.

- Wearout rate of more than **half** of housing facilities in Russia is **31-65%**.
- Since 2006 price growth in housing and public utilities sector in Russia totaled **241%**.
- Russia spends **2-3 times more** energy per unit of living area than European countries with similar climate.
- Consumption of heat-insulating materials per capita in Russia is **10 times** lower than in Finland and Norway and **3 times** lower than in European countries with more mild climate.
- Russia: **Energy efficiency law** implying attainment of a certain level of energy efficiency by 2020, new edition of construction norms and rules "Building heat insulation".
- By 2015 volume of housing construction in Belarus is projected to reach **9,5 mn sq m**, having increased as compared to 2013 by **79%**.
- Belarus: **Energy saving program** implying reduction in energy consumption by 2015 by **30%** compared to 2010.
- Since 2011 price growth in housing and public utilities sector in Belarus increased by more than **60%**.

MARKETS

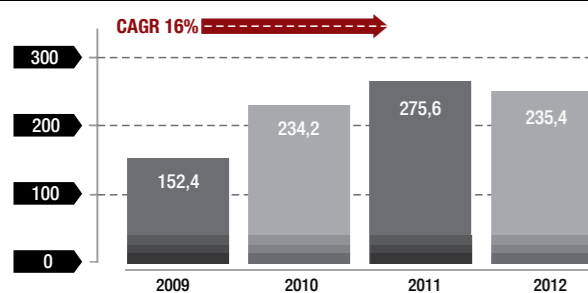
CUSTOMS UNION MARKET:

- Capacity of heat-insulating materials market in Russia totals **50 mn cu m**. Over the past 5 years the market doubled, growing on average by **24%** a year.
- In 2012 Russia imported heat-insulating materials to the value of **USD 235,4 mn**, annual average growth rate over 2009-2012 was **16%**.

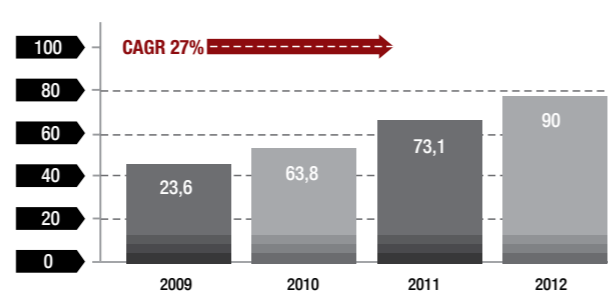
INTERNAL MARKET OF BELARUS:

- Since 2009 imports of heat-insulating materials in Belarus is growing on average by **27%**, the imports in 2012 totaled **USD 90 mn**.

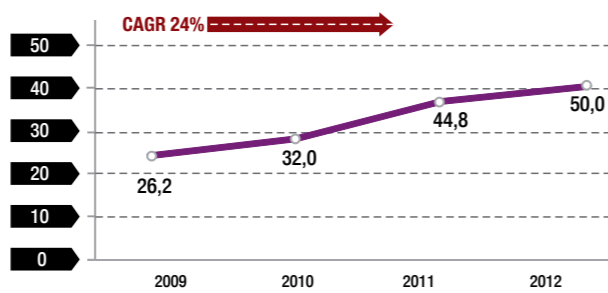
IMPORTS OF HEAT-INSULATING MATERIALS IN RUSSIA, USD mn



IMPORTS OF HEAT-INSULATING MATERIALS IN BELARUS, USD mn



HEAT-INSULATING MATERIALS MARKET IN RUSSIA, mn cu m



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Tendency of **growing demand for natural raw materials** in Europe and North America. Heat insulation accounts for **22%** in application of ecologically-friendly materials in the world.
- World heat-insulating materials market is estimated at about **USD 40 mn** and is projected to reach **USD 56,7 mn** by 2018, growing on average by **8,3%** a year.

- Share of fibre insulating materials in total volume of heat-insulating materials in the world amounts to **60-80%**.

LOCAL OPPORTUNITIES:

- Driver of heat-insulating materials market is housing construction. In 2013 in Russia there was commissioned **69,4 mn sq m** of housing, annual average growth rate over the last 4 years totaled **4%**.

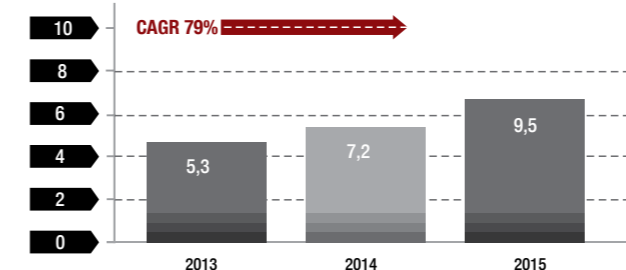
INVESTMENT OPPORTUNITIES

- Capital expenditures: **USD 15-25 mn**.
- IRR: **18-22 %**.
- Payback period: **4-5 лет**.

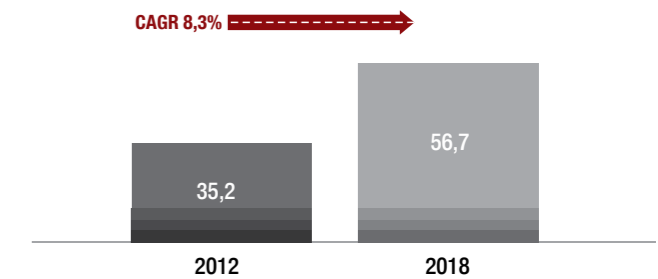
POTENTIAL INVESTORS

- Manufacturers of heat-insulating materials, focused on output expansion and consolidation of a stand at European and Easter European markets, in particular Russia, Ukraine and Belarus.

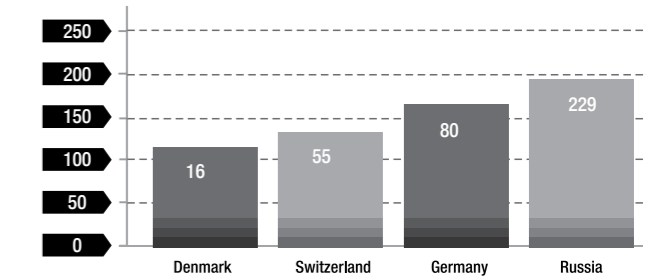
HOUSING CONSTRUCTION IN BELARUS, mn sq m



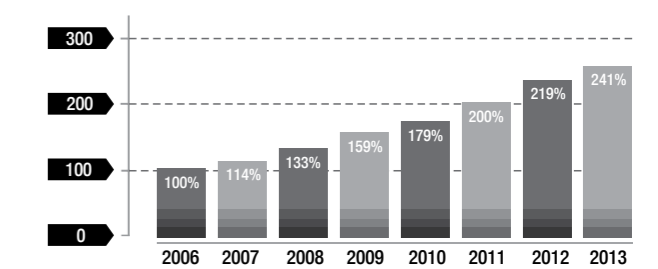
WORLD HEAT-INSULATING MATERIALS MARKET, USD bn



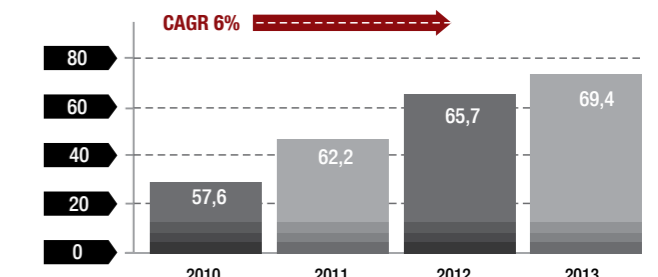
AVERAGE ENERGY CONSUMPTION OF HEATING FACILITIES, kW-hour/sq m



PRICE GROWTH IN HOUSING AND PUBLIC UTILITIES SECTOR IN RUSSIA



HOUSING CONSTRUCTION IN RUSSIA, mn sq m





**BIOTECHNOLOGY
AND PHARMACEUTICALS**



PROJECT

There is provided a project on building biopharmaceuticals (antisera, probiotics, etc.) producing plant.

Project attractiveness is preconditioned by the following factors:

- Imports of antisera in Russia in 2012 totaled more than USD 1,5 bn and annually grew by 22% on average over 2009-2012.
- Russia biopharmaceutical market is estimated at USD 2,2 bn.

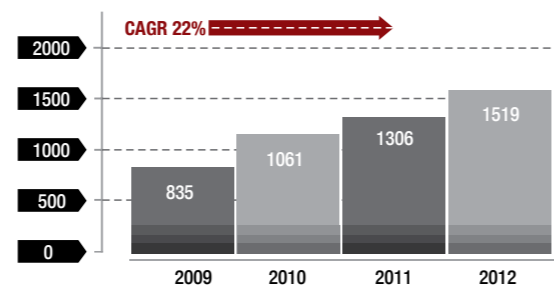
- There is no biopharmaceutical production in Belarus – biopharma is totally imported.
- It is planned to increase consumption and production of biotechnologies in Russia by 8,3 and 33 times respectively by 2020.
- Capital expenditures for the project are estimated at USD 30-100 mn, payback period – 4-7years.

MARKET

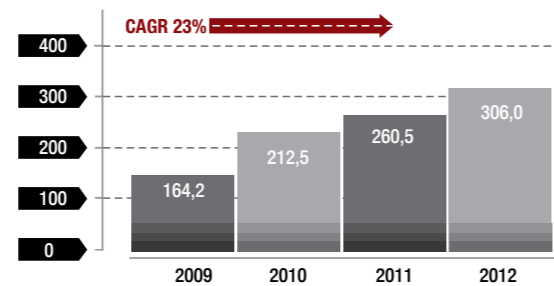
CUSTOMS UNION MARKET:

- CEA's (Common Economic Area) adoption of mutual recognition of marketing authorization (if there is a GMP certificate) is expected to be adopted in 2014.
- Russia is among top 15 antisera importers in the world (imports in 2012 – USD 1519 mn), lagging far behind world's top importers – Germany, USA, Great Britain.
- Annual average growth rate of antisera imports over 2009-2012 in Russia was around 22%.
- Aggregated imports of antisera in Belarus, Ukraine, Ukraine and Kazakhstan in 2012 totaled USD 306 mn.
- More than a half of Russian antisera imports is accounted for by three major world's exporters – Germany (26,1%), Switzerland (14,6%) and USA (14,2%).
- Imports of germ cultures in Russia in 2012 totaled USD 376 mn.
- Annual average growth rate of germ cultures import in Russia over 2009-2012 was 27%.

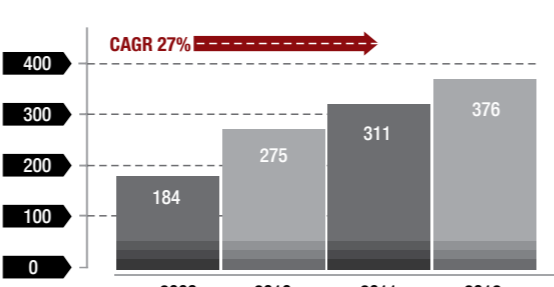
IMPORTS OF ANTISERA IN RUSSIA, USD mn



AGGREGATED IMPORTS OF ANTISERA IN BELARUS, KAZAKHSTAN AND UKRAINE, USD mn



IMPORTS OF GERM CULTURES IN RUSSIA, USD mn



MARKET OPPORTUNITIES

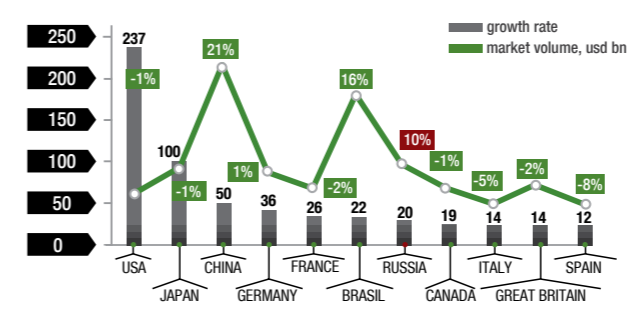
GLOBAL OPPORTUNITIES:

- There has been a "patent gap" during 2011-2015: patent protection for 35 pharmaceutical "blockbusters" (total sales USD 150 bn) expires.
- It is expected that by 2015 bioengineering market will exceed USD 320 bn, out of which more than a half (USD 167 bn) will be accounted for by biopharma market.
- Global bioengineering market is estimated to reach 2 trn, growth rates throughout different segments will vary from 5-7% to 30%. On average, annual growth of bioengineering market is expected at 9-10% - the industry is one of the fastest growing and high-opportunity.
- There are three key areas for innovation-based development of modern economy:
 - Information technologies
 - Nanotechnologies
 - Bioengineering
- Sales of monoclonal antibodies are expected to grow at the fastest rate – from USD 37 bn in 2010 to USD 60 bn in 2015.

LOCAL OPPORTUNITIES:

- Customs Union biopharma market totals USD 32 bn.
- Russia is the 3rd rapid growing and among top 7 largest pharmaceutical markets in the world.
- According to Bioengineering development program in Russia, consumption and output volumes are expected to increase by 8,3 and 33 times respectively by 2020.
- Biopharmaceutical market in Russia is estimated at USD 2,2 bn.
- Monoclonal antibodies account for 16% of biopharma market in Russia, however the share is expected to significantly grow and reach 20% by 2020.

TOP 10 FINISHED PHARMA PRODUCT MARKETS, 2012



INVESTMENT OPPORTUNITIES

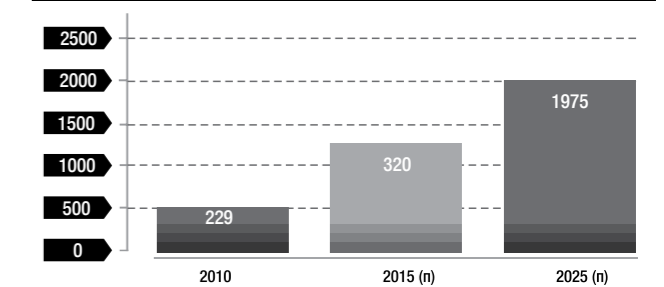
- Capex for the project totals USD 30-100 mn on average.
- IRR varies between 12-18%.
- Payback period is about 4-7 years.

POTENTIAL INVESTORS

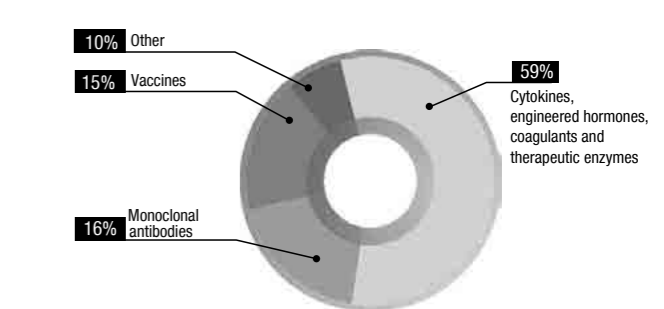
- Chinese and Indian biopharma and finished pharma product producers, aimed at locating their production on the Customs Union market.
- Original drug producers intending to enter generics market.
- Special purpose venture funds (in case of technologically difficult and innovative projects.)



GLOBAL BIOPHARMA MARKET, USD BN



BIOPHARMACEUTICAL MARKET STRUCTURE IN RUSSIA





PROJECT

There is provided a project on launching production of finished pharmaceutical products (FPP) generics based on imported substances.

Why generics:

- According to international company IHS, by 2016 expenditures for generics in developing countries are projected to increase from 57% to 65% of total expenditures for FPP.
- There has been a "patent gap" during 2011-2015: patent protection for 35 pharmaceutical "blockbusters" (total sales USD 150 bn) expires.

MARKETS

CUSTOMS UNION COUNTRIES:

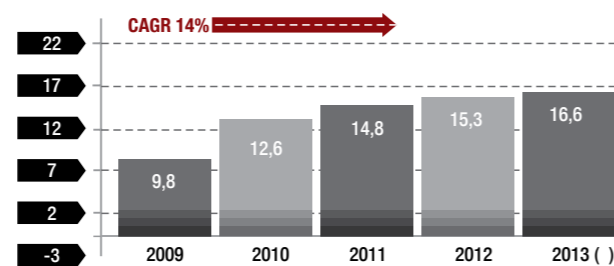
- Possibility of duty-free access to the USD 32 bn Customs Union market.
- CEA's (Common Economic Area) adoption of mutual recognition of marketing authorization (if there is a GMP certificate) is expected to be adopted in 2014.

INTERNAL MARKET OF BELARUS:

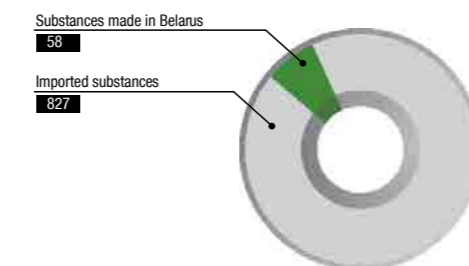
- Large share of import on pharma market in Belarus. Pharmaceuticals imports in 2012 totaled USD 0,64 bn, annual average growth rate is 12%. Share of imported pharmaceuticals on the domestic market is 70%.
- Consumption of pharmaceuticals per capita in Belarus (USD 85) is lower than in Russia (app. USD 150).
- Internal market size of Belarus in 2012 totaled USD 0,86 bn.

- Key market is the Customs Union market (Belarus, Russia, Kazakhstan) with a size of USD 32 bn. Russia is the 3rd rapid growing and among top 7 largest pharmaceutical markets in the world.
- Import share of FPP market in the Customs Union is 70%, annual average growth rate of FPP imports – 14%.
- There are more than 8000 qualified specialists employed in pharmaceutical industry in Belarus, labor cost is the lowest among the Customs Union members.
- Production of generics is most riskfree segment of pharma market, allowing to achieve up to 40% profitability with comparatively low investments (USD 10-120 mn).

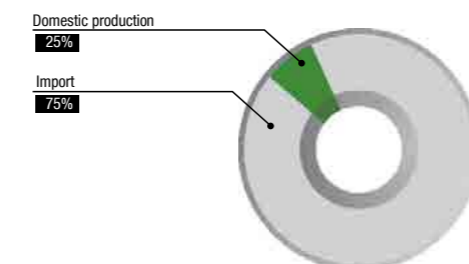
IMPORTS OF MAJOR FPP IN THE CUSTOMS UNION, USD bn



MARKET STRUCTURE OF PHARMACEUTICAL SUBSTANCES IN BELARUS



FPP MARKET STRUCTURE IN BELARUS AND RUSSIA (MONEY TERMS)



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- There has been a "patent gap" during 2011-2015: patent protection for 35 pharmaceutical "blockbusters" (total sales USD 150 bn) expires.
- Production of FPP-generics is more profitable than active pharmaceutical substances and less risky compared with production and development of original pharmaceuticals.

LOCAL OPPORTUNITIES:

- Russia is the 3rd rapid growing and among top 7 largest pharmaceutical markets in the world.
- Growing state expenditures for health-care system: share of hospital markets of Russia and Belarus in money terms reaches 25%, annual average growth rate is 12%.
- Share of households having discounts for pharmaceuticals purchase is 12%.
- Share of FPP to the value of more than USD 10 in the pharma sales structure in Belarus increased over the last 4 years from 21% to 28%.
- Government of the Customs Union countries is pursuing import substitution policy and national security protection in the pharma market, planning to increase domestic production of FPP from 25% to 50% by 2016.
- Russia intends to limit participation of foreign producers, except for Belarusian, in government purchases of pharmaceuticals in 2014.

ATTRACTIVE SEGMENTS:

- Antibacterial agents, accounting for 83% of total pharma import, are top selling pharmaceuticals on the Belarusian market.
- "Digestive tract and metabolism" segment, accounting for 20% of pharma import (USD 2,6 bn), is leading on Russian market.

INVESTMENT OPPORTUNITIES

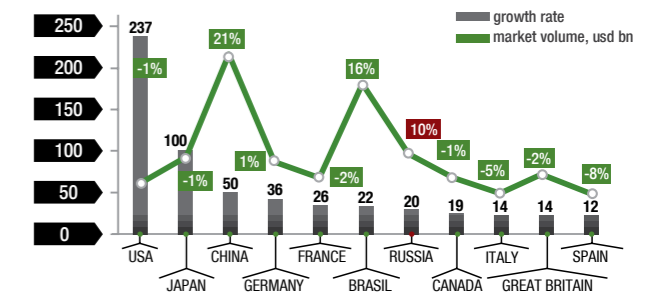
- Capex for the project implementation totals USD 10-120 mn on average.
- Profitability of generics production depends on the product's stand and totals 15-25% on average, reaching sometimes 40%.
- IRR of the projects on FPP production varies between 15-30%, depending on the product's success in the market.

POTENTIAL INVESTORS

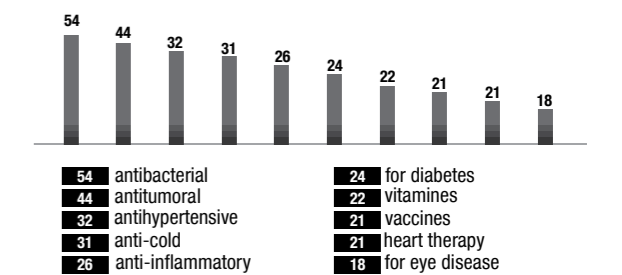
- Chinese and Indian substances and finished pharma product producers, aimed at locating their production on the Customs Union market.
- Original drug producers intending to enter generics market.
- Special purpose venture funds (in case of technologically difficult and innovative projects.)



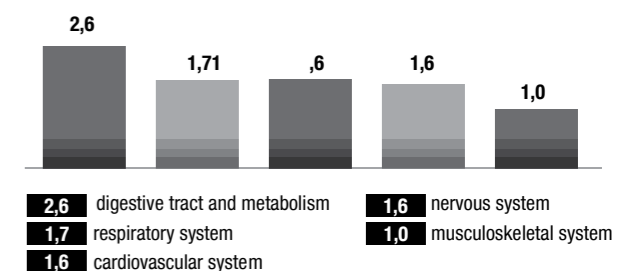
TOP 10 FINISHED PHARMA PRODUCT MARKETS, 2012



TOP 10 PHARMACEUTICAL PRODUCT GROUPS ON THE PHARMA MARKET IN BELARUS IN 2012, USD mn



TOP 5 SEGMENTS OF RUSSIAN PHARMA MARKET IN 2012, USD mn





PROJECT

There is provided a project on building a modern grain processing plant with lysine and gluten production.

The project is worth of implementation due to the following factors:

- World lysine market totals USD 3,9 bn and annually grows by 7% on average. World gluten market totals USD 1,8 bn with annual average growth rate of 4%. World starch imports are USD 3,4 bn.
- Demand for lysine in Russia totals USD 117,7 mn and grows by 15% per year on average.

MARKETS

INTERNAL MARKET OF BELARUS:

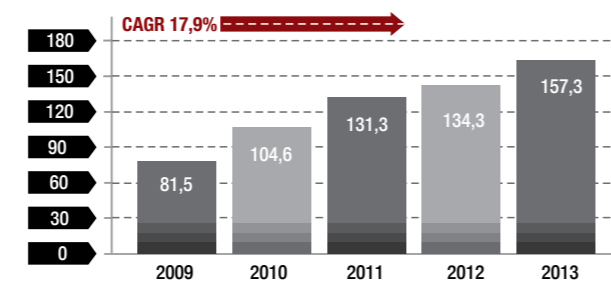
- Imports of lysine in Belarus in 2013 totaled about 7 thou t (USD 12,6 mn), gluten – 1 thou t (USD 1,6 mn), starch – 8,2 thou t (USD 5,2 mn).
- Demand for lysine is projected to reach 12 thou t by 2015.

CIS COUNTRIES:

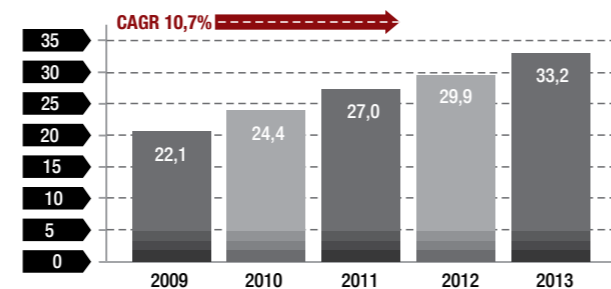
- Imports of lysine in Russia in 2013 totaled about 65 thou t (USD 117,7 mn), gluten – 1,85 thou t (USD 2,3 mn), starch – 42 thou t (USD 29,3 mn).
- Demand for lysine in Russia is projected to reach 70 thou t by 2015.
- Demand for lysine in Ukraine in 2012 totaled around 15 thou t (USD 27 mn), gluten – 1,1 thou t (USD 1,7 mn), starch – 10,2 thou t (USD 6,3 mn).
- Imports of lysine in Ukraine in 2013 totaled about 15 thou t (USD 27 mn), gluten – 1,1 thou t (USD 1,7 mn), starch – 10,2 thou t (USD 6,3 mn).
- Demand for lysine in Ukraine is projected to reach 18 thou t by 2015.

- Share of lysine in total basic amino acids consumption in the world amounts to 60-70%.
- Lysine is entirely imported by all former Soviet countries, thus building the plant will be import-substituting.
- Capital expenditures for the project may total around USD 175 mn with profitability of 17% and IRR app. 15%.

AGGREGATED LYSINE MARKET IN RUSSIA, UKRAINE AND BELARUS



GLUTEN MARKET IN RUSSIA, thou t



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global lysine market totaled USD 3,9 bn in 2013, gluten market – USD 1,8 bn.
- World's starch imports totaled app. USD 3,7 bn in 2013, annual average growth rate was 9,1%.
- Annual average growth rate of global lysine market is 7%, gluten market – 4%.
- World lysine market is projected to reach USD 5,9 bn by 2018 with annual average growth rate of 9,1%.
- World gluten market is projected to reach USD 2,1 bn by 2016 with annual average growth rate of 4%.
- World starch market is projected to reach USD 6,1 bn by 2017 with annual average growth rate of 12,4%.

LOCAL OPPORTUNITIES:

- Russian lysine market grows by 15% a year on average, gluten market – by 10,7%, starch market – by 12,1%.
- Wheat quality in Russia and Belarus is not sufficient enough, which preconditions high demand for gluten in these markets.
- Demand for lysine is formed basically by livestock farming.
- As of beginning of 2013, there were 1534 agricultural organizations and 2436 farms operating in Belarus.
- Livestock in 2013: about 4,5 thou head of cattle, 4,3 thou head of pigs, 43,5 mn head of paltry.

- Annual growth of agricultural industry in Belarus total app. 5-6% which is positively influences demand for lysine.
- In Belarus subsidy of agriculture accounts for 18% of total agricultural output. In 2013 state support totaled USD 3 bn.
- Share of agricultural output in GDP is app. 8,5%.
- In Belarus around 40 companies are engaged in mixed fodder production, output growth annually increases by 8-12%.

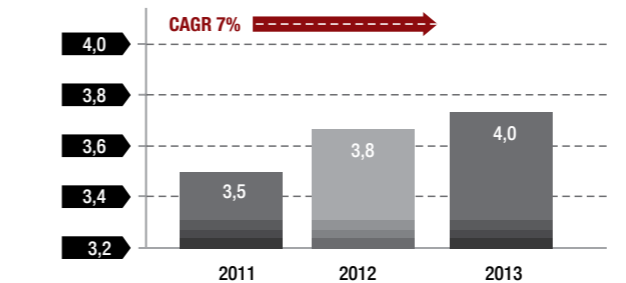
INVESTMENT OPPORTUNITIES

- Capex for the project may total around USD 175 mn.
- IRR проектов по производству лизина около 15%.
- Payback period is 6 years.

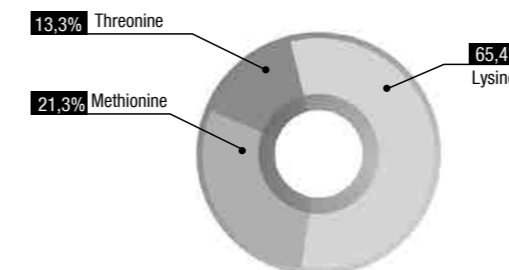
POTENTIAL INVESTORS

- Lysine producers, focused on output expansion and consolidation of a stand on European and Eastern European markets - Russia, Ukraine and Belarus, in particular.
- Lysine producers, focused on output expansion and consolidation of a stand on European and Eastern European markets - Russia, Ukraine and Belarus, in particular.
- Agricultural holdings, fodder mills and farms, focused on launching new capacities.

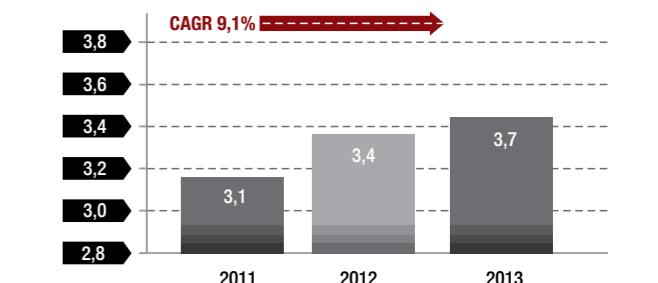
WORLD LYSINE MARKET, USD bn



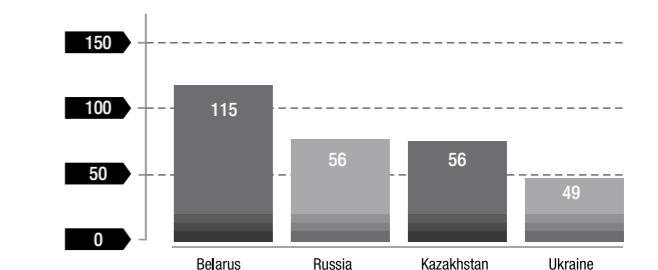
AMINO ACIDS GLOBAL CONSUMPTION STRUCTURE, 2013



WORLD STARCH MARKET, USD bn



MEAT PRODUCTION (CARCASS WEIGHT) PER CAPITA IN 2012, kg





PROJECT

For implementation there is provided a project on launching manufacturing of ecobio biomass-run (microalgae) mini heat power plants.

The project is worth of implementation due to the following factors:

- Biomass fuel conversion technology is energy efficient, resource saving and environmentally-friendly.
- Growing popularity of renewable energy sources all over the globe (in the EU countries, poorly provided with own energy sources, alternative energy sources account for 8% of the power balance).

- One of the main reasons of locating the production in Belarus is availability of highly skilled scientific and engineering personnel.
- Capital expenditures for the project are estimated at USD 25-30 mn, payback period – 4-5 years, IRR – 18-22%.

MARKETS

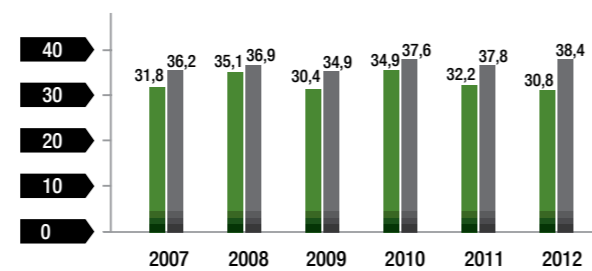
CUSTOMS UNION AND EUROPEAN UNION MARKETS:

- Usage of alternative energy sources by companies in the Customs Union is an incentive for maintaining cost of production and being independent from volatility in global oil prices.
- In Russia in order to reduce energy intensity of the national economy and save raw hydrocarbon deposits, the Government set as a strategic task to increase share of alternative energy sources in the country's power balance from current 1% to 4,5% by 2020.
- The EU is increasing usage of alternative energy sources (8% in the power balance).

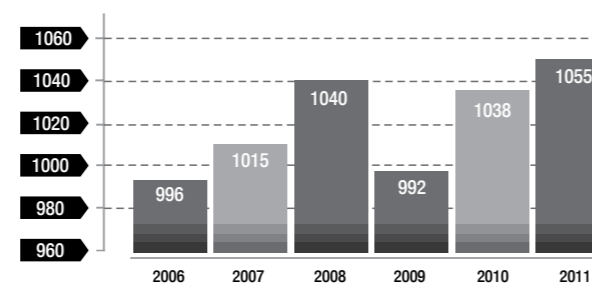
INTERNAL MARKET OF BELARUS:

- In 2012 Belarus imported 7,9 bn kWh of electric power, over 2007-2011 import of electric power in Belarus totaled on average 4 bn kWh.

PRODUCTION AND CONSUMPTION OF ELECTRIC POWER IN BELARUS, bn kWh



ELECTRIC POWER PRODUCTION IN RUSSIA, bn kWh



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- In 2011 alternative energy sources accounted for 4% in the world's electric power generation structure by fuel types, in 1973 – less than 1%.
- In spite of relatively low share of alternative energy sources nowadays, it is projected to increase to 1/3 by 2050.

LOCAL OPPORTUNITIES:

- There is a cross-subsidization of electricity in Belarus and Russia. Tariff for legal entities was 2,7 times higher than for population in Belarus in 2013. The government is planning to eliminate a cross-subsidization, but this process will be gradual.
- Despite the cross-subsidization, price for a kWh of energy in Belarus is one of the highest in Eastern Europe.
- Every year new production facilities are commissioned which are future electricity consumers and potential CHP plant buyers. By 2013 production facilities have increased by almost 2,4 times compared to 2005.
- In Belarus there is a multiplying ratio in respect of the owners of alternative energy sources – 1,3 for biomass.

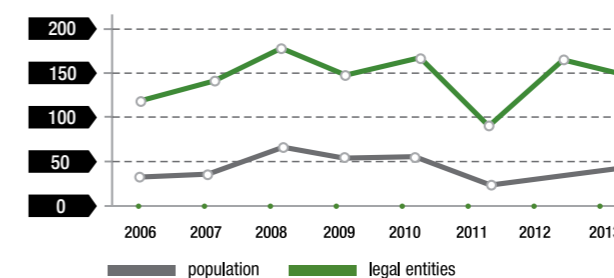
The approximate calculation of the effect from the construction of CHP plant compared to buying given the cross-subsidization:

- Electric power consumption – 1 MWh
- Working hours per year – 8000 hours
- Tariff when buying electric power – 0,15 USD/kWh
- Approximate electricity cost at own CHP plant – around 0,06 USD/kWh

$$\text{Saving} = (0,15 - 0,06) \times 1000 \times 8000 = 720\,000 \text{ USD/year}^*$$

*cost of heat which gives an additional effect is not included

ELECTRICITY TARIFFS IN BELARUS, USD per 1000 kWh



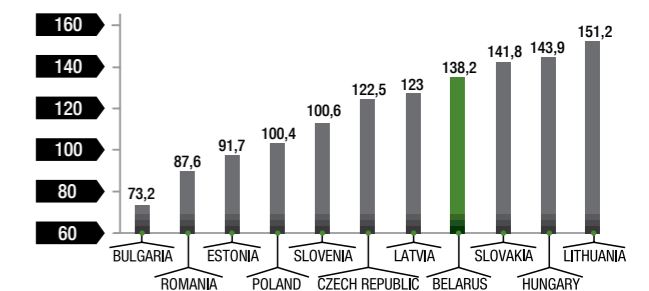
INVESTMENT OPPORTUNITIES

- Capex for the project is estimated at USD 25-30 mn.
- Payback period is 4-5 years.
- IRR varies between 18-22%.

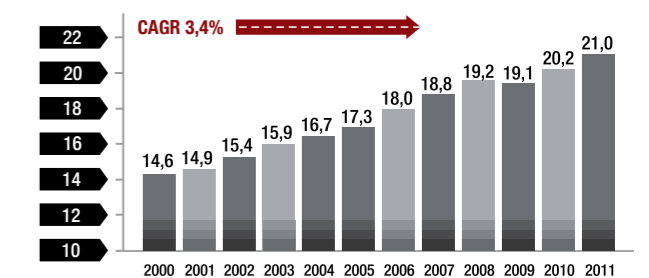
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in manufacturing of alternative energy sources.
- Forward integration – companies-energy consumers interested in getting independent of centralized energy sources.

ELECTRICITY TARIFFS IN EASTERN EUROPEAN COUNTRIES, USD per kWh



GLOBAL ELECTRICITY PRODUCTION IN 2000-2011, tln kWh





PROJECT

For implementation there is provided a project on building a pigment production plant.

This is a high-opportunity project due to the following prerequisites :

- By 2018 world pigment market is forecasted to reach 4,4 mn t (USD 14,7 bn) increasing on average by 4,5% per year.
- Belarus has a developed chemical industry, research and raw materials base, experienced personnel.

- Imports of pigments in Russia total USD 35 mn with CAGR of 17%. Belarus imports pigments to the value of USD 7 mn, annual average growth rate of the imports is 8%.
- An attractive segment is production of printing inks, which market is projected to reach USD 18,2 bn by 2017.
- Capital expenditures for launching a pigment production plant are estimated at USD 70-120 mn, IRR is 18-20%, payback period is 4-5 years.

- Since 2009 paint and coatings production in Belarus increased by almost 2 times to reach 248 thou t, annual average growth rate is 24%.
- Plastics output in Belarus totaled 468 thou t in 2012, having increased during 4 years by 11%.

ATTRACTIVE SEGMENTS:

- Due to the increase in global demand for printed packaging, a considerable growth is expected in the field of printing inks.
- Global printing inks market is projected to reach USD 18,2 bn by 2017.
- World market for printed packaging is expected to double – from USD 7,3 bn in 2013 to USD 15,3 bn in 2018.

INVESTMENT OPPORTUNITIES

Building a pigment production plant:

- Capital expenditures for the project implementation might total USD 70-120 mn
- Payback period is about 4-5 years.
- IRR of the project varies within 18-22%.

POTENTIAL INVESTORS

- Strategic investors – world chemicals producers with appropriate technologies and experience in pigment production.
- Vertical integration – major players on chemicals market (chemical concerns).

MARKETS

INTERNAL MARKET OF BELARUS:

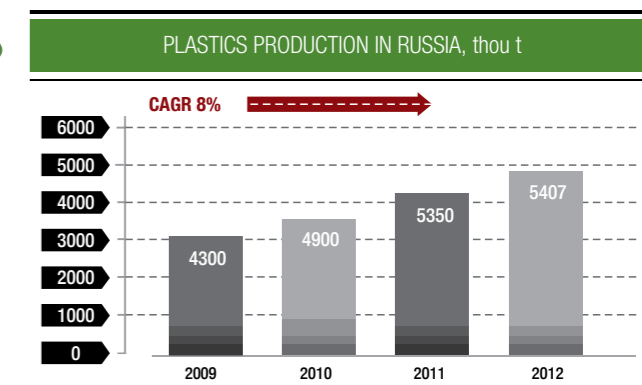
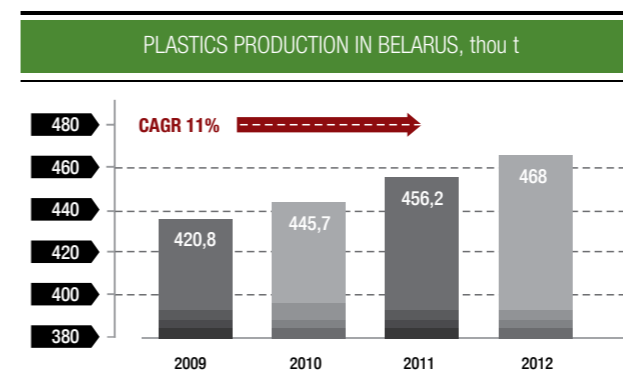
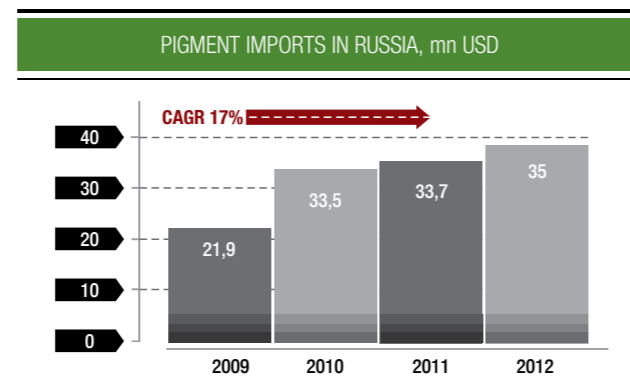
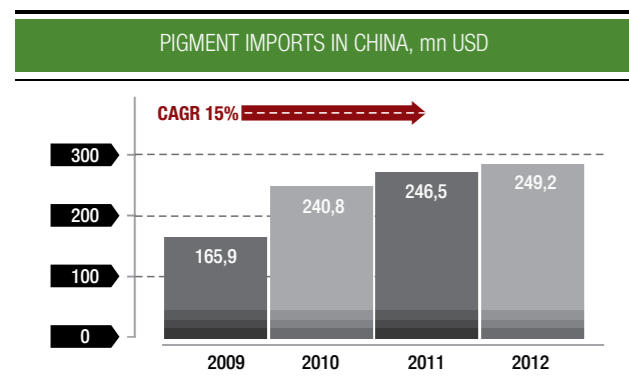
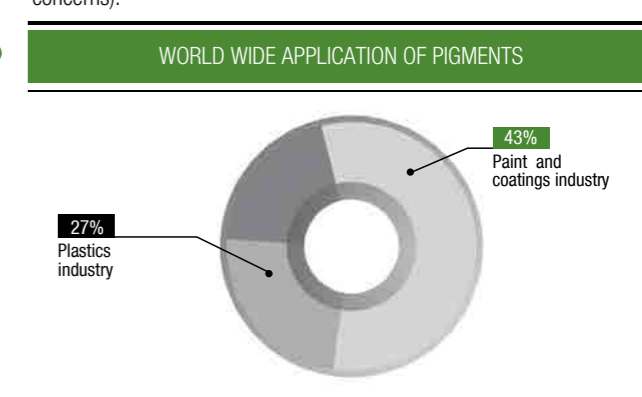
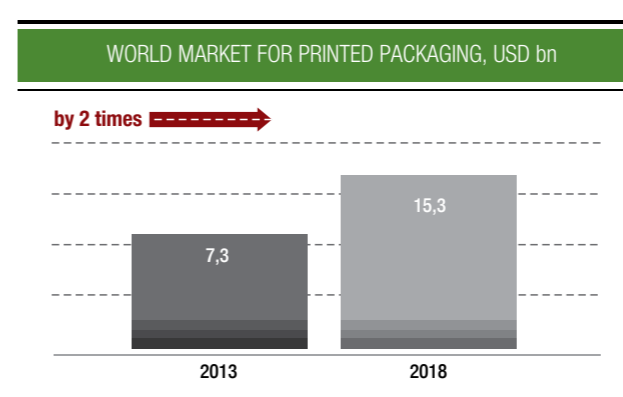
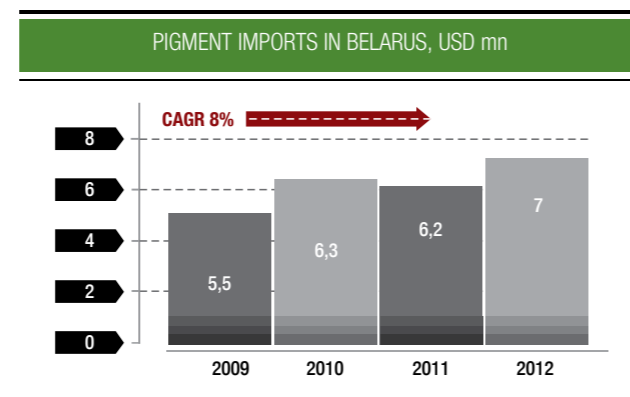
- In 2012 Belarus imported pigments to the value of USD 7 mn, annual average growth rate over 2009-2012 totals 8%.

CUSTOMS UNION MARKET:

- In 2012 Russia imported pigments to the value of USD 35 mn, imports annual average growth rate over 2009-2012 amounts to 17%.
- Import share on the Russian pigment market exceeds 80%.

ASIA PACIFIC MARKET:

- More than a half of global pigment consumption accounts for Asia-Pacific Region. China's imports of pigments totals almost USD 250 mn, CAGR is 15%.



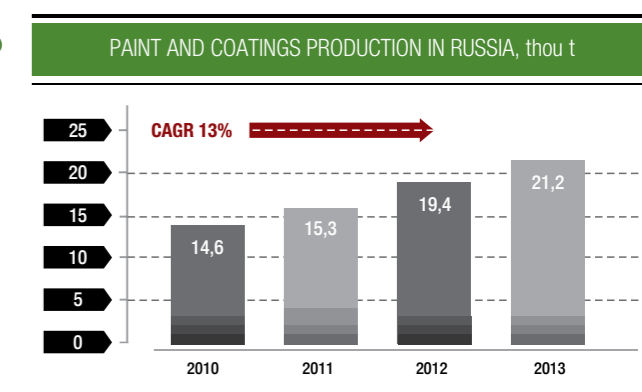
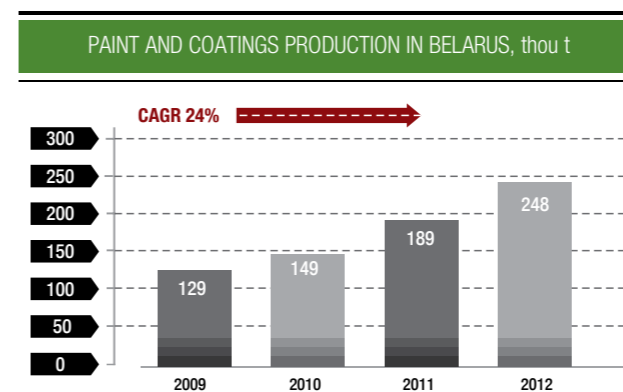
MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- By 2018 world pigment market is forecasted to reach 4,4 mn t (USD 14,7 bn) increasing on average by 4,5% per year.
- The key consumers of pigments are paint and coatings industry and plastics production, accounting respectively for 43% and 27% of global demand.

LOCAL OPPORTUNITIES:

- Annual average growth rate of paint and coatings industry in Russia over 2010-2013 is 13%, output increased by 1,5 times and totaled 21,2 thou t.
- Plastics production in Russia increased on average by 8% since 2009 and totaled 5407 thou t in 2012.





**MEDICAL EQUIPMENT
AND SUPPLIES**



PROJECT

Proposed project – production of medical needles and surgical instruments.

Feasibility of establishing this production is determined by the following factors:

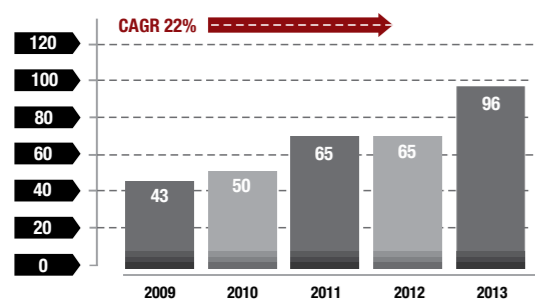
- Absence of domestic production of needles and lack of domestic production of surgical instruments in Belarus.
- High growth rate of needles and instruments imports both to Belarus and Russia (CAGR for medical instruments is +22% and +33% since 2009 respectively).

SALES MARKETS

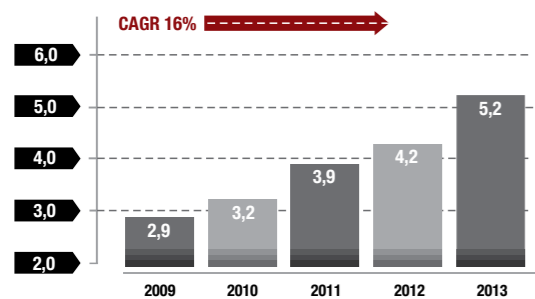
DOMESTIC MARKET OF BELARUS:

- Domestic production of general surgical instruments in Belarus only partially satisfies the internal needs, the rest of instruments is imported.
- Surgical instruments imports to Belarus amounted to 96 mn USD (CAGR +22% since 2009).
- There is no domestic production of medical needles for syringes, for catheters and for stitching in Belarus.
- Domestic demand for needles – about 200 million units – is fully covered by imports.

IMPORTS OF SURGICAL INSTRUMENTS TO BELARUS, mn USD



IMPORTS OF SURGICAL INSTRUMENTS TO RUSSIA, mn USD



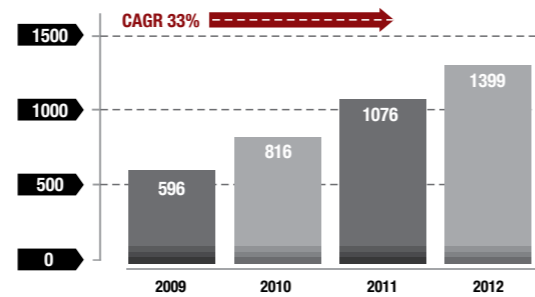
- Localization of production close to final consumers.
- The main markets are the domestic market of Belarus and the Customs Union market.
- Investment costs for the creation of the medical needles and instruments production are estimated at 10-30 mn USD, IRR – 15-20%.

Medical needles imports to Belarus in 2013 reached 5,2 mn USD, CAGR since 2009 – 16%.

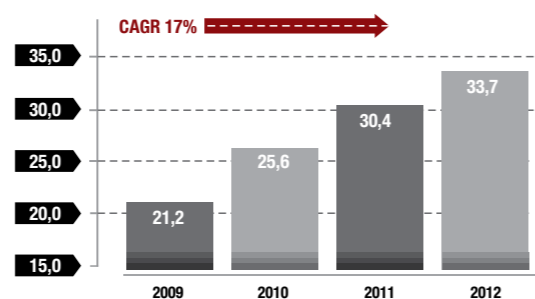
CUSTOMS UNION MARKET:

- Import of various medical instruments to Russia in 2012 amounted to 1,4 bn USD (CAGR +33% since 2009).
- The share of medical needles of domestic producers is small on the Russian market due to outdated production technologies.
- Imports of medical needles to Russia grows by on average 17% per year and exceeded 33 mn USD in 2012.
- Thus, the most promising sales markets are the Belarusian domestic market and the Customs Union market.

IMPORTS OF MEDICAL NEEDLES TO BELARUS, mn USD



IMPORTS OF MEDICAL NEEDLES TO RUSSIA, mn USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global surgical instruments market is forecasted to grow with CAGR 4,2% in 2012-2019 and to reach 11,2 bn USD in 2019.
- Global market of medical needles may reach 4 bn USD in 2017. CAGR is about 3%.
- Growing number of surgeries – the number of surgeries per year is estimated to have increased by 10-15% over the last 10 years.
- Needle drug administration is more preferred than oral one.

REGIONAL OPPORTUNITIES:

- Growth of disposable income in countries in transition. Real disposable income in Belarus have doubled since 2005.
- Life expectancy increase and ageing of population. According to forecasts the share of population over working age will reach nearly 30% by 2030 both in Russia and in Belarus.
- Production volume of disposable syringes in Belarus grows with CAGR 4% and is estimated to have amounted to more than 150 million units in 2013.
- Capacity utilization of the only Belarusian manufacturer of syringes is 75-80%.
- Domestically manufactured needles will be preferred for the syringes production under the program of import substitution.

- Potential market for finished syringes is Russia. Syringes imports to Russia in 2012 exceeded 90 mn USD.
- Belarusian syringes producer has all the necessary licenses to operation on the Customs Union market.
- Modernization of existing health organizations and commissioning of new ones. Russia commissions about 9 thou beds every year.

INVESTMENT OPPORTUNITIES

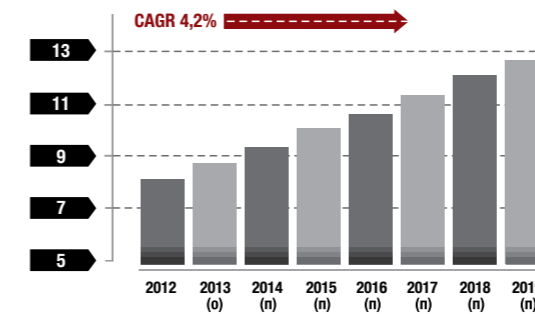
- Investment costs are estimated to vary from 10 to 30 mn USD.
- Profitability of the production is on average 17-25%.
- IRR – 15-20%.
- Project payback period may amount to 4-6 years.

POTENTIAL INVESTORS

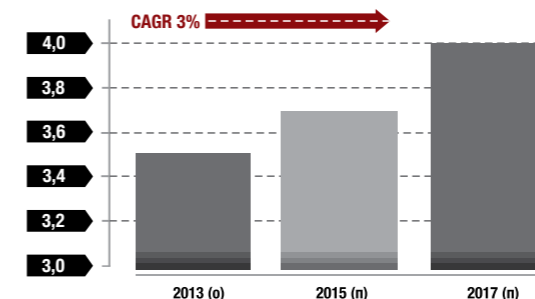
Strategic investors:

- Manufacturers of syringes and catheters which lack its own production of needles
- Manufacturers of syringes and catheters which lack its own production of needles

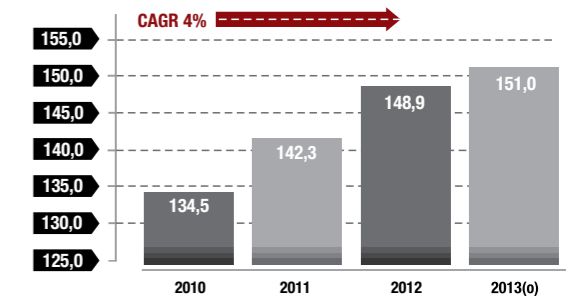
GLOBAL SURGICAL INSTRUMENTS MARKET FORECAST, bn USD



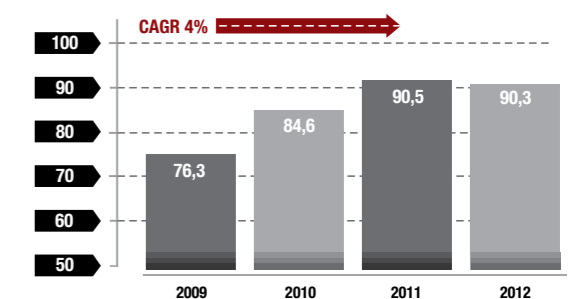
GLOBAL MEDICAL NEEDLES MARKET FORECAST, bn USD



DISPOSABLE SYRINGES PRODUCTION IN BELARUS, mn UNITS



SYRINGES IMPORTS TO RUSSIA, mn USD





PROJECT

Proposed project – production of high-tech medical furniture.

Feasibility of establishing a production of medical furniture is determined by the following factors:

- Traditionally strong position of Belarus in production of general purpose furniture, the experience of successful small enterprises producing medical furniture in Belarus.
- High growth rate of imports to Russia (CAGR +56% since 2009). In 2012 imports of medical furniture exceeded 170 mn USD.

- Localization of production close to final consumers (primarily Russia).
- The main markets are the market of Customs Union as well as the markets of developing countries.
- Investment costs are estimated at 20-30 mn USD, payback period – 5-7 years.

SALES MARKETS

CUSTOMS UNION MARKET:

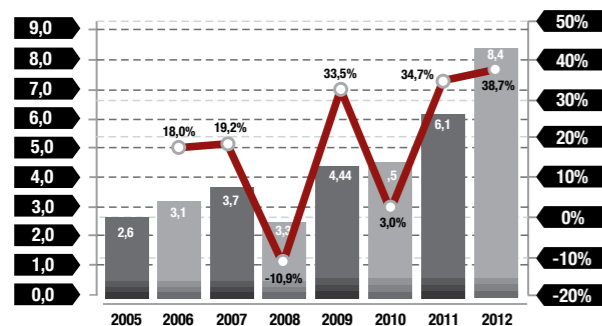
- The Russian market of medical equipment, products and furniture in 2012 reached 8,4 bn USD, long-term market growth rate amounts to 18,2% per year.
- The share of domestic production of medical equipment and furniture in Russia is only 18%, the rest is imported.
- Average annual growth rate of medical furniture imports to Russia in 2009–2012 amounted to +56%, imports exceeded 170 mn USD in 2012. According to various estimates the size of medical furniture market in Russia amounts to 250-300 mn USD.

DEVELOPING COUNTRIES MARKET:

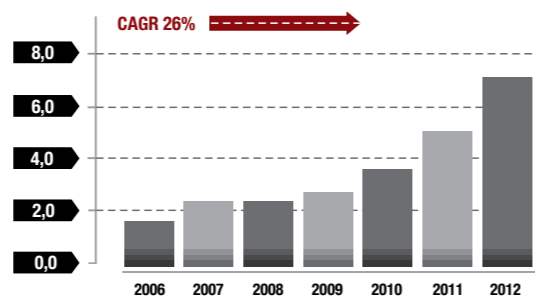
- Emerging markets (BRICS) for the last 5 years have shown a significant growth in consumption. Share of BRIC countries in global consumption of medical equipment and furniture exceeded 10% and amounted to 43 bn USD. In 2012 Chinese market became the 4th largest market, Russian - 8th.

Thus, the most promising market is the Customs Union market as well as the market of developing countries.

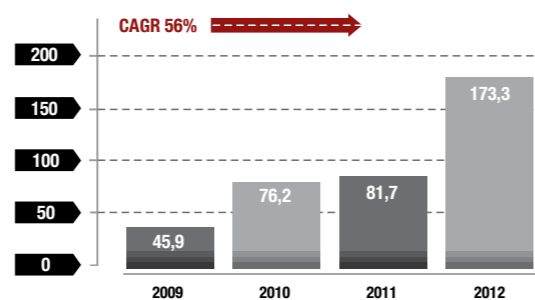
RUSSIAN MEDICAL PRODUCTS MARKET, 2005-2012



IMPORTS OF MEDICAL PRODUCTS TO RUSSIA, bn USD



IMPORTS OF MEDICAL FURNITURE TO RUSSIA, mn USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global market of medical equipment, products and furniture amounted to 359 bn USD in 2012. CAGR of the global market in 2005-2012 amounted to 4,9%.
- Global consumption growth in the 2012-2017 is forecasted to reach 6-7% per year. Acceleration of growth in global consumption is caused by rapid growth in emerging markets.

REGIONAL OPPORTUNITIES:

- Growth in consumption of medical equipment and furniture in emerging markets is conditioned by a significant growth in income.
- Trend of faster growth of medical equipment and furniture consumption in Russia and other BRICS countries is expected to continue in 2012-2018. Russian market of medical products may exceed 10-12 bn USD by 2018. Funding for this growth in Russia is provided by the state budget and special-purpose funds. Health development policy is a priority and long-term element of the state policy.
- Implementation of state programs for health care development in Russia has led to a sharp increase in investments to public health sector. In 2012, consumption of medical products in the public sector is estimated to reach 7,1 bn USD (+50%). In 2014-2017 the implementation of state programs in Russia will continue.
- Share of expenditures for health care in Russia amounted to only 5,4% of GDP in 2012 while in developed countries the share of such expenditures exceeds 7-10%.
- The majority of local productions of medical equipment and furniture in Russia are technologically outdated, there are no large enterprises.
- Given the critical state of health infrastructure in Russia and other CIS countries, plans and budgets for reconstruction of hospitals, the further increase in demand for medical furniture is expected.

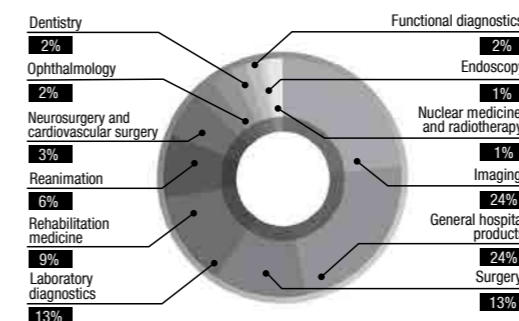
INVESTMENT OPPORTUNITIES

- Investment costs for the creation of facilities for medical furniture production are estimated at 20-30 mn USD.
- Expected payback period of the project may vary within 5-7 years.
- IRR for the project may exceed 20%.

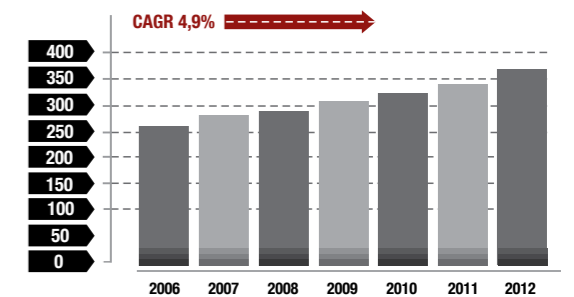
POTENTIAL INVESTORS



STRUCTURE OF MEDICAL PRODUCTS PRODUCTION IN RUSSIA, 2012



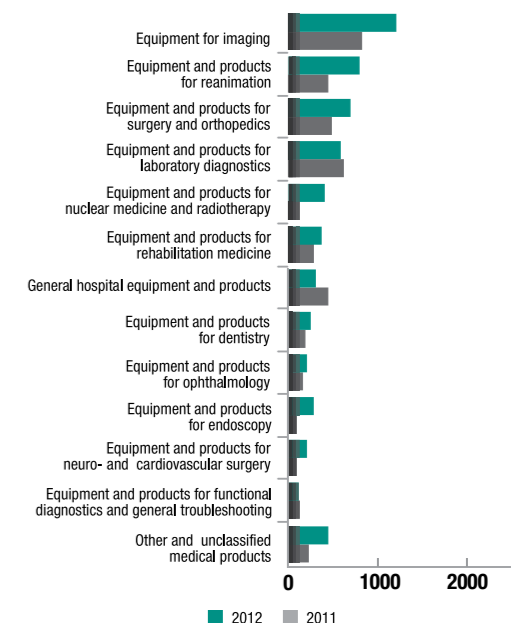
GLOBAL MEDICAL PRODUCTS MARKET, 2005-2012, bn USD



SIZE OF MEDICAL PRODUCTS MARKET IN RUSSIA

INDICATOR	2011, BN USD	2012, BN USD	GROWTH RATE, %
CONSUMPTION OF MEDICAL PRODUCTS IN PUBLIC SECTOR	4,72	7,10	50,3%
CONSUMPTION OF MEDICAL PRODUCTS IN PRIVATE SECTOR	1,36	1,23	-9,7%
DOMESTIC PRODUCTION IN RUSSIA	1,19	1,53	29,0%
EXPORTS FROM RUSSIA	0,15	0,16	8,2%
IMPORTS TO RUSSIA	5,04	6,95	37,9%
TOTAL CONSUMPTION OF MEDICAL PRODUCTS IN RUSSIA	6,08	8,33	36,9%

STRUCTURE OF MEDICAL PRODUCTS IMPORTS TO RUSSIA, mn USD





PROJECT

Proposed project – production of implants for osteosynthesis and endoprostheses for joints.

Feasibility of establishing a production of implants and endoprostheses is determined by the following factors:

- Availability of highly qualified specialists and successful experience in creating similar productions.
- High growth rate of imports to Russia (CAGR +24% since 2009). In 2012 imports of endoprostheses exceeded 260 mn USD. Source of financing is the state budget.

- Localization of production close to final consumers (primarily Russia).
- The main markets are the market of Customs Union and markets of developing countries (BRICS and others).
- Investment costs are estimated at 15-20 mn USD, payback period – 5 years.

SALES MARKETS

CUSTOMS UNION MARKET:

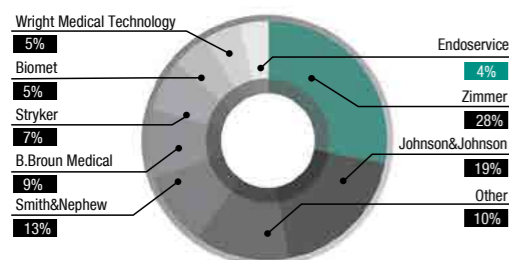
- Imported endoprostheses exceed 95% of the total Russian market of these medical products.
- There is only one large local company «Endoservice» on the Russian endoprosthetics market, which occupies 4% of the market.
- Major financing of the procurement of large joints endoprostheses (hip and knee) is effected from the federal budget. Foreign manufacturers dominate the Russian market in terms of procurement volumes.
- Average annual growth rate of endoprostheses imports to Russia in 2009-2012 amounted to +24%, imports exceeded 260 mn USD in 2012.
- Implants for osteosynthesis account for about half of the implants market (48%) in Russia.

DEVELOPING COUNTRIES MARKET:

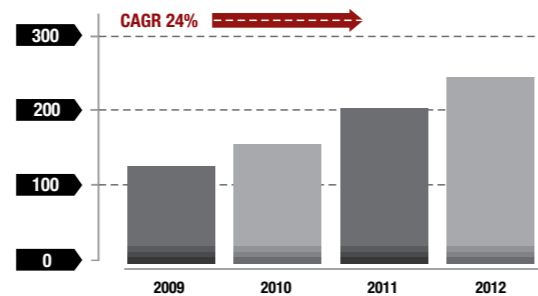
- Emerging markets (BRIC) for the last 5 years have shown a significant growth in consumption. Share of BRICS countries in global consumption of medical equipment and furniture exceeded 10% and amounted to 43 bn USD. In 2012 Chinese market became the 4th largest market, Russian – 8th.

Thus, the most promising market is the Customs Union market as well as the market of developing countries.

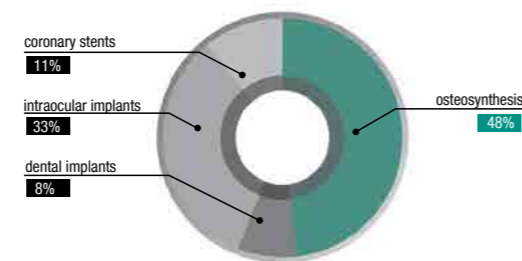
STRUCTURE OF RUSSIAN ENDOPROSTHETICS MARKET



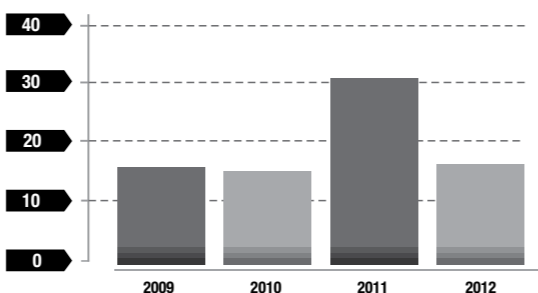
IMPORTS OF ENDOPROSTHESIS TO RUSSIA, mn USD



STRUCTURE OF IMPLANTS CONSUMPTION IN RUSSIA, 2012



IMPORTS OF ENDOPROSTHESIS TO BELARUS, mn USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global endoprosthesis market amounted to almost 15 bn USD in 2012. The average annual growth of the world market for the period 2007-2012 was 4,1% which is higher than the rate of global GDP growth during this period.
- Replacements of hip and knee joints account for more than 90% of the market.
- It is estimated that the global endoprosthesis market will exceed 23,5 bn USD dollars in 2017.
- An ageing of population and more widespread degenerative joints diseases.

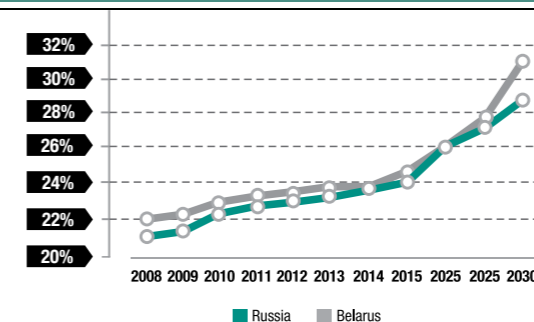
REGIONAL OPPORTUNITIES:

- Growth in consumption of medical equipment and furniture in emerging markets is conditioned by a significant growth in income.
- The total demand for endoprosthesis replacement operations in Russia amounts to about 300 thousand per year while only about 50 thousand operations is actually performed.
- There is a practice to allocate budgetary funds (quotas) for endoprosthesis replacement in Russia. The share of public competitive bidding in the segment endoprosthesis amounts to 80-90%. The cost of foreign implants which are almost entirely occupy the market is high. Thus, the majority of patients requiring endoprosthesis replacement, is waiting for subsidized medical care sometimes up to 1-2 years.
- Implementation of state programs will continue in 2014-2017. Russian market of medical products may exceed 10-12 bn USD by 2018. This is due to the fact that share of expenditures for health care in Russia amounted to only 5,4% of GDP in 2012 while in developed countries the share of such expenditures exceeds 7-10%.

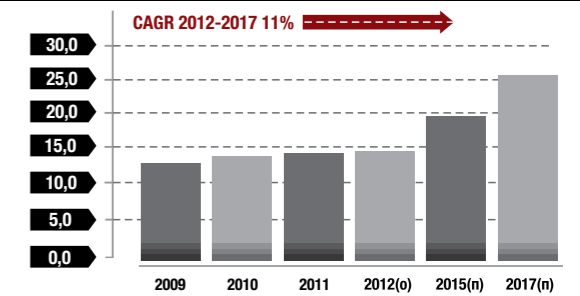
INVESTMENT OPPORTUNITIES

- Investment costs for the creation of facilities for implants and endoprostheses production are estimated at 15-20 mn USD.
- Expected payback period of the project may amount to 5 years.
- IRR for the project may reach around 18-20%.

POPULATION OVER WORKING AGE, %



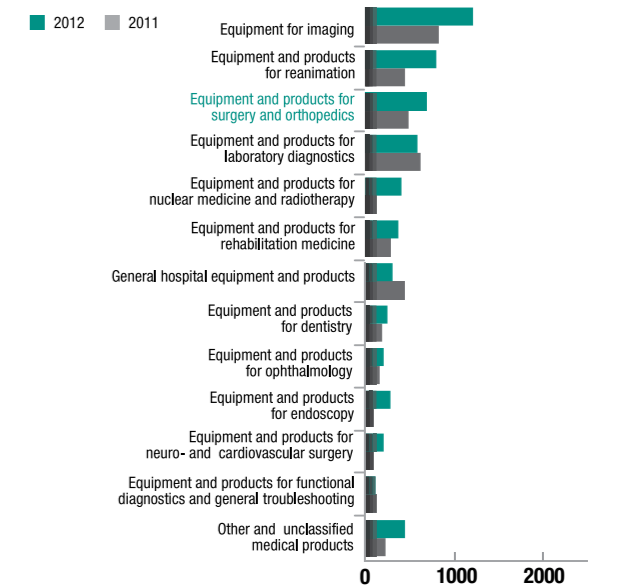
FORECAST OF GLOBAL ENDOPROSTHESIS MARKET, bn USD



SIZE OF MEDICAL PRODUCTS MARKET IN RUSSIA

INDICATOR	2011, BN USD	2012, BN USD	GROWTH RATE, %
CONSUMPTION OF MEDICAL PRODUCTS IN PUBLIC SECTOR	4,72	7,10	50,3%
CONSUMPTION OF MEDICAL PRODUCTS IN PRIVATE SECTOR	1,36	1,23	-9,7%
DOMESTIC PRODUCTION IN RUSSIA	1,19	1,53	29,0%
EXPORTS FROM RUSSIA	0,15	0,16	8,2%
IMPORTS TO RUSSIA	5,04	6,95	37,9%
TOTAL CONSUMPTION OF MEDICAL PRODUCTS IN RUSSIA	6,08	8,33	36,9%

STRUCTURE OF MEDICAL PRODUCTS IMPORTS TO RUSSIA, mn USD



POTENTIAL INVESTORS





PROJECT

Proposed project – production of high-tech equipment for laser surgery. Feasibility of establishing a production of equipment for laser surgery is determined by the following factors:

- Belarus is one of the world research centers for lasers and laser technologies, incl. for medical purposes. A number of successful projects to develop production on the basis of laser technologies was implemented.
- Availability of highly qualified specialists in the field of laser technology and medical equipment.

- Growing global demand for laser technology in surgery, cosmetology, endoscopy, dermatology and other fields.
- Replacement of traditional surgery for laser technology.
- The main markets are the market of Customs Union and markets of developing countries (BRIC and others).
- Investment costs are estimated at 20-30 mn USD, payback period – 5 years.

SALES MARKETS

CUSTOMS UNION MARKET:

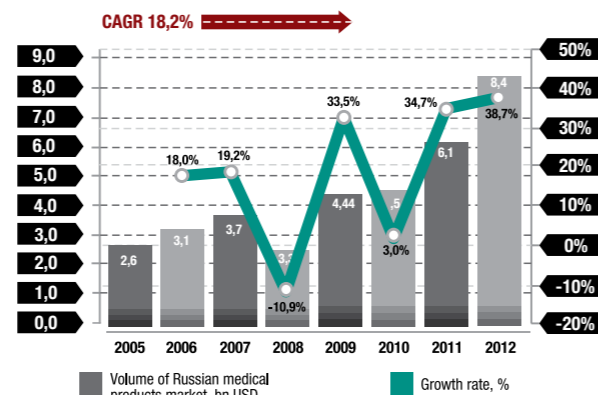
- The Russian market of medical equipment, products and furniture in 2012 reached 8,4 bn USD, long-term market growth rate amounts to 18,2% per year.
- The share of domestic production of medical equipment and furniture in Russia is only 18%, the rest is imported.
- Average annual growth rate of medical equipment imports to Russia in 2009 - 2012 amounted to +26%, imports reached 7 bn USD in 2012.

DEVELOPING COUNTRIES MARKET:

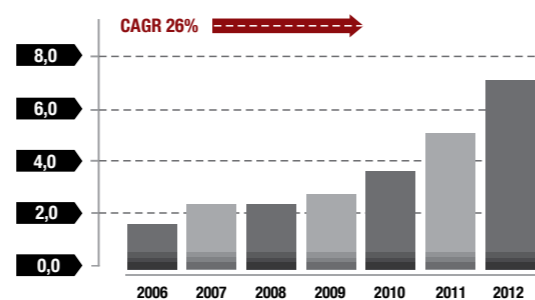
- Emerging markets (BRICS) for the last 5 years have shown a significant growth in consumption. Share of BRICS countries in global consumption of medical equipment and furniture exceeded 10% and amounted to 43 bn USD. In 2012 Chinese market became the 4th largest market, Russian - 8th.

Thus, the most promising market is the Customs Union market as well as the market of developing countries.

RUSSIAN MEDICAL PRODUCTS MARKET, 2005-2012



IMPORTS OF MEDICAL PRODUCTS TO RUSSIA, bn USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global laser market in 2012 exceeded 7,5 bn USD. CAGR of the global market in 2009-2012 was 14,3%.
- Laser equipment for medical purposes accounts for 7% of the global laser market. The global market of medical laser equipment is expected to exceed 1 bn USD in 2020.
- Replacement of traditional surgery for laser surgery («one day surgery»).

REGIONAL OPPORTUNITIES:

- Growth in consumption of medical equipment and furniture in emerging markets is conditioned by a significant growth in income.
- Trend of faster growth of medical equipment consumption, incl. for laser surgery, in Russia and other BRIC countries is expected to continue in 2012-2018. Russian market of medical products may exceed 10-12 bn USD by 2018.
- Funding for this growth in Russia (and other developing countries) is provided mostly (by more than 70%) by the state budget and special-purpose funds.
- Implementation of state programs for health care development in Russia has led to a sharp increase in investments to public health sector. In 2012, consumption of medical products in the public sector is estimated to have reached 7,1 bn USD (+50%). In 2014-2017 the implementation of state programs in Russia will continue.
- Share of expenditures for health care in Russia amounted to only 5,4% of GDP in 2012 while in developed countries the share of such expenditures exceeds 7-10%.
- The majority of local productions of medical equipment in Russia are technologically outdated which is proved by volume of exports (150 mn USD) and imports (6-7 bn USD) of medical equipment.
- In particular, despite the fact that local companies produce all known types of laser equipment, not more than 5-10% of all these models meet modern technical requirements.

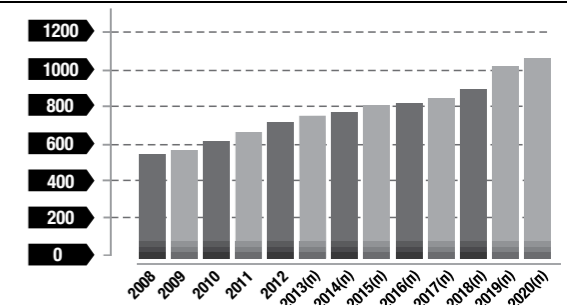
INVESTMENT OPPORTUNITIES

- Investment costs for the creation of facilities for medical laser equipment production are estimated at 20-30 mn USD.
- Expected payback period of the project may amount to 5 years.
- IRR for the project may reach around 20%.

POTENTIAL INVESTORS



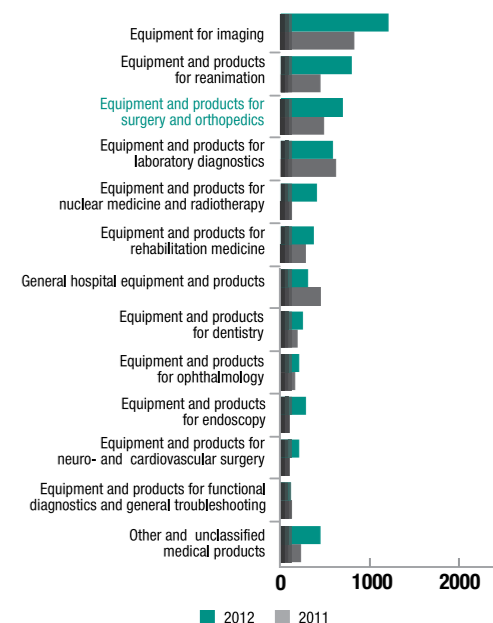
FORECAST OF GLOBAL MARKET OF MEDICAL LASER, mn USD



SIZE OF MEDICAL PRODUCTS MARKET IN RUSSIA

INDICATOR	2011, BN USD	2012, BN USD	GROWTH RATE, %
CONSUMPTION OF MEDICAL PRODUCTS IN PUBLIC SECTOR	4,72	7,10	50,3%
CONSUMPTION OF MEDICAL PRODUCTS IN PRIVATE SECTOR	1,36	1,23	-9,7%
DOMESTIC PRODUCTION IN RUSSIA	1,19	1,53	29,0%
EXPORTS FROM RUSSIA	0,15	0,16	8,2%
IMPORTS TO RUSSIA	5,04	6,95	37,9%
TOTAL CONSUMPTION OF MEDICAL PRODUCTS IN RUSSIA	6,08	8,33	36,9%

STRUCTURE OF MEDICAL PRODUCTS IMPORTS TO RUSSIA, mn USD





PROJECT

Proposed project – production of equipment for X-ray control.

Feasibility of establishing a production of X-ray equipment is determined by the following factors:

- Availability of highly qualified specialists and R&D in the field of X-ray equipment, successful experience in creating similar productions.
- Localization of production close to final consumers (primarily Russia).

SALES MARKETS

CUSTOMS UNION MARKET:

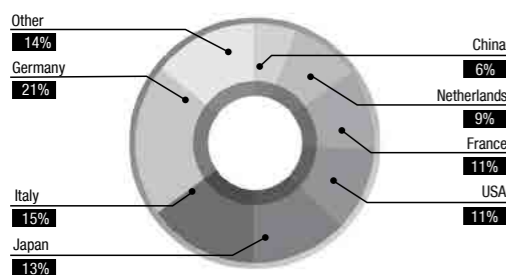
- The Russian market of medical equipment, products and furniture in 2012 reached 8,4 bn USD, long-term market growth rate amounts to 18,2% per year.
- X-ray equipment market in Russia exists and develops due to public procurement of equipment. The vast majority of equipment sold in Russia is imported (Philips, Siemens, General Electric, Toshiba, Shimadzu, etc.).
- There are also local producers (created on the basis of cooperation with foreign manufacturers) in Russia. Local players represent the middle price segment (Electron, Amico, Gelpik, SpektrAp, Medical Technologies, etc.).
- In 2012 imports of X-ray equipment exceeded 500 mn USD. Average annual growth in 2009-2012 amounted to +31%.

DEVELOPING COUNTRIES MARKET:

- Emerging markets (BRICS) for the last 5 years have shown a significant growth in consumption. Share of BRIC countries in global consumption of medical equipment and furniture exceeded 10% and amounted to 43 bn USD. In 2012 Chinese market became the 4th largest market, Russian - 8th.

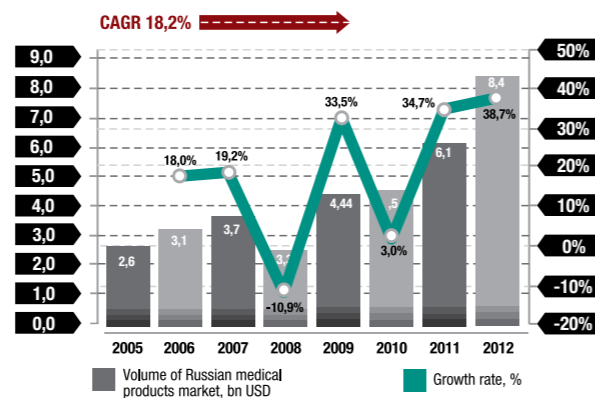
Thus, the most promising market is the Customs Union market as well as the market of developing countries.

STRUCTURE OF X-RAY EQUIPMENT IMPORTS TO RUSSIA

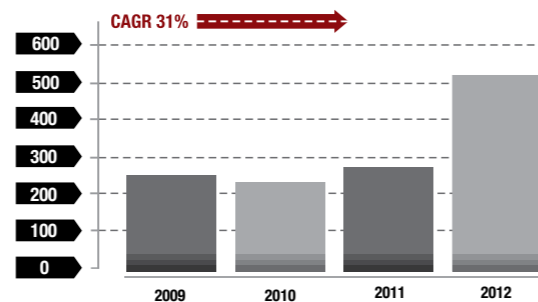


- High growth rate of imports to Russia (CAGR +31% since 2009). In 2012 imports of X-ray equipment exceeded 500 mn USD.
- The main markets are the market of Customs Union and markets of developing countries (BRICS and others).
- Investment costs are estimated at 30-50 mn USD, payback period – 6-7 years.

RUSSIAN MEDICAL PRODUCTS MARKET, 2005-2012



IMPORTS OF X-RAY EQUIPMENT TO RUSSIA, mn USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global diagnostic imaging market exceeded 30 bn USD in 2013. CAGR for 2010-2013 amounted to 13%.
- Global diagnostic imaging market is expected to reach 49 bn USD in 2020.
- X-ray equipment accounts for about a third (34%) of the global market for diagnostic imaging equipment.
- There is a constant ageing of population and expansion of application fields of diagnostic imaging equipment.

REGIONAL OPPORTUNITIES:

- There is a reorientation of the world producers from mature markets of North America and the EU to the more lucrative markets of developing countries.
- Developed countries account for two-thirds of the market, developing countries' share is 36%. But this share is forecasted to reach about 40% by 2017. Growth in consumption of medical equipment and furniture in emerging markets is conditioned by a significant growth in income.
- Russian market of medical products may exceed 10-12 bn USD by 2018.
- About 75% of equipment for medical diagnostics in Russia is over 15 years, i.e. equipment on the market is obsolete.
- There is a lack of X-ray equipment in Russia. X-ray equipment market in Russia is expected to grow in the next 5 years, incl. due to the development of private medicine.
- Diagnostic imaging equipment occupies the first place by the volume of imports of medical equipment to Russia (in 2012 imports increased by 50% compared to 2011).
- Market development will be determined not only by modernization of existing health care organizations, but also by the commissioning of new facilities. About 9 thou beds are commissioned annually in Russia.

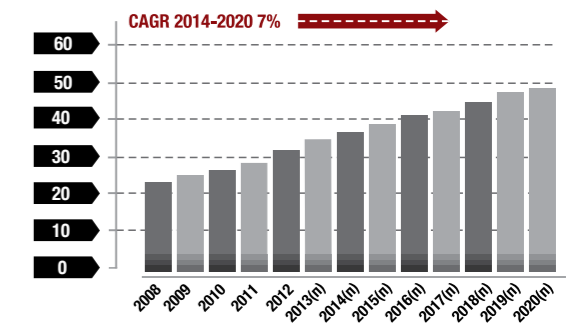
INVESTMENT OPPORTUNITIES

- Investment costs for the creation of facilities for X-ray equipment production are estimated at 30-50 mn USD.
- Expected payback period of the project may amount to 6-7 years.
- IRR for the project may reach around 15%.

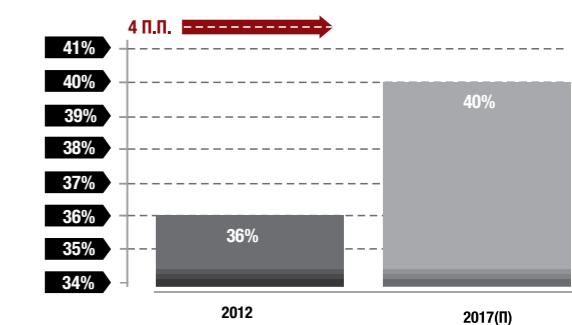
POTENTIAL INVESTORS

- Strategic investors
- Specialized venture capital funds
- Leading producers of X-ray equipment wishing to localize production

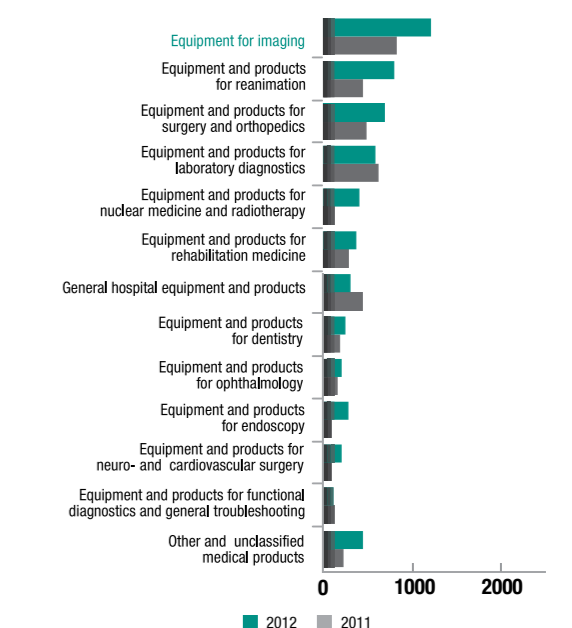
FORECAST OF GLOBAL IMAGING MARKET, bn USD



DEVELOPING COUNTRIES' SHARE ON THE IMAGING EQUIPMENT MARKET



STRUCTURE OF MEDICAL PRODUCTS IMPORTS TO RUSSIA, mn USD





PROJECT

- Proposed project – production of equipment for ultrasound investigation.
- Feasibility of establishing a production of equipment for ultrasound investigation is determined by the following factors:
 - Availability of highly qualified specialists and successful experience in creating similar productions.
 - Localization of production close to final consumers (primarily Russia).

- High growth rate of imports to Russia (CAGR +30% since 2009). In 2012 imports of medical equipment for ultrasound investigation amounted to around 470 mn USD.
- The main markets are the market of Customs Union and markets of developing countries (BRICS and others).
- Investment costs are estimated at 15-30 mn USD, payback period – 5 years.

SALES MARKETS

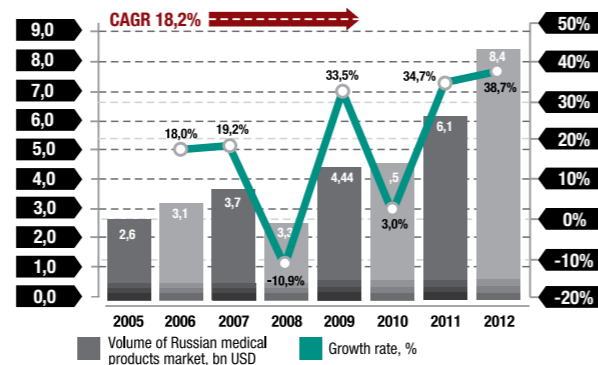
CUSTOMS UNION MARKET:

- The Russian market of medical equipment, products and furniture in 2012 reached 8,4 bn USD, long-term market growth rate amounts to 18,2% per year.
- There are local manufacturers of equipment for ultrasound investigation in Russia: RATEKS, Spectromed, etc. However, according to estimates, local producers account for not more than 5% of the ultrasound devices market, the rest is imported.
- In 2012 imports of equipment for ultrasound investigation amounted to 477 mn USD. Annual growth rate for ultrasound equipment imports to Russia in 2009-2012 was +30%.

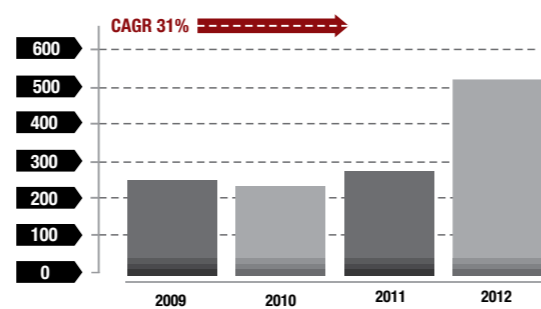
DEVELOPING COUNTRIES MARKET:

- Emerging markets (BRICS) for the last 5 years have shown a significant growth in consumption. Share of BRIC countries in global consumption of medical equipment and furniture exceeded 10% and amounted to 43 bn USD. In 2012 Chinese market became the 4th largest market, Russian - 8th.
- Thus, the most promising market is the Customs Union market as well as the market of developing countries.

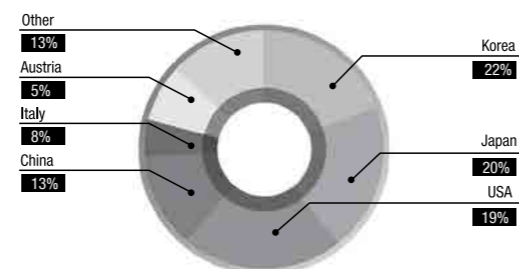
RUSSIAN MEDICAL PRODUCTS MARKET, 2005-2012



IMPORTS OF EQUIPMENT FOR ULTRASONOGRAPHY INVESTIGATION TO RUSSIA, mn USD



STRUCTURE OF ULTRASONOGRAPHY IMPORTS TO RUSSIA



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Global diagnostic imaging market exceeded 30 bn USD in 2013. CAGR for 2010-2013 amounted to 13%.
- Global diagnostic imaging market is expected to reach 49 bn USD in 2020.
- Equipment for ultrasound investigation accounts for about 20% of the global market for diagnostic imaging equipment.
- There is a constant ageing of population and expansion of application fields of diagnostic imaging equipment.

REGIONAL OPPORTUNITIES:

- There is a reorientation of the world producers from mature markets of North America and the EU to the more lucrative markets of developing countries.
- Developed countries account for two-thirds of the market, developing countries' share is 36%. But this share is forecasted to reach about 40% by 2017.
- Growth in consumption of medical equipment and furniture in emerging markets is conditioned by a significant growth in income.
- Trend of faster growth of medical equipment and furniture consumption in Russia and other BRIC countries is expected to continue in 2012-2018. Russian market of medical products may exceed 10-12 bn USD by 2018.
- About 75% of equipment for medical diagnostics in Russia is over 15 years, i.e. equipment on the market is obsolete.
- Diagnostic imaging equipment occupies the first place by the volume of imports of medical equipment to Russia (in 2012 imports increased by 50% compared to 2011).
- Market development will be determined not only by modernization of existing health care organizations, but also by the commissioning of new facilities. About 9 thou beds are commissioned annually in Russia.

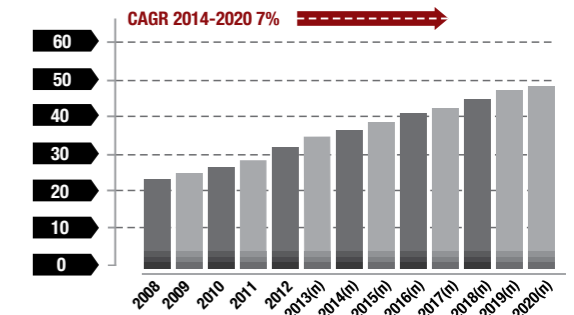
INVESTMENT OPPORTUNITIES

- Investment costs for the creation of facilities for ultrasound equipment production are estimated at 15-30 mn USD.
- Expected payback period of the project may amount to 5 years.
- IRR for the project may reach around 18-20%.

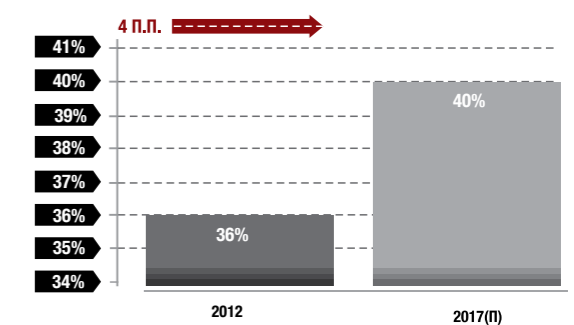
POTENTIAL INVESTORS



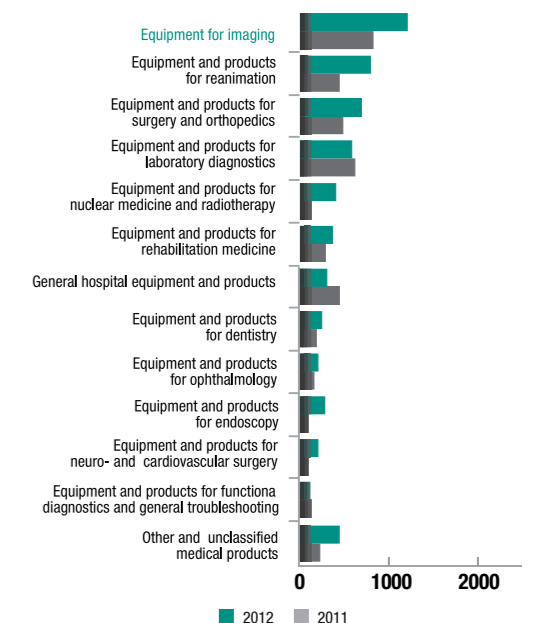
FORECAST OF GLOBAL IMAGING MARKET, bn USD



DEVELOPING COUNTRIES' SHARE ON THE IMAGING EQUIPMENT MARKET



STRUCTURE OF MEDICAL PRODUCTS IMPORTS TO RUSSIA, mn USD





OTHERS



PROJECT

There is provided a project on launching **production of child safety seats**.

Prerequisites for the project implementation:

- There has been a considerable birth rate growth in Russia over the last decade – annual average growth rate was **3,3%**.
- Russia is among **top 10** importers of child safety seats in the world, the imports in 2012 totaled more than **USD 73 mn**.

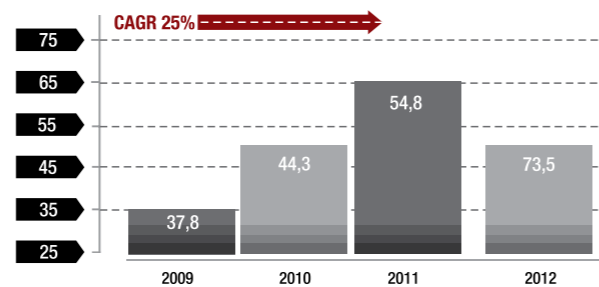
- App. **3 mn** people are annually born in the Customs Union countries and Ukraine.
- Russia's car fleet in 2012 totaled **38,7 mn** cars, growing over 2009-2012 by **5,4%** a year on average.
- Capital expenditures for the project may total **USD 5-10 mn**, payback period is about **4-5 years**, IRR – **18-22%**.

MARKETS

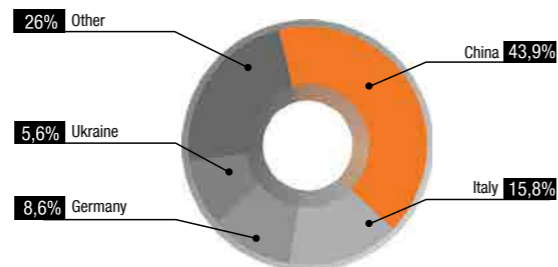
CUSTOMS UNION MARKET AND UKRAINE:

- Russia is among **top 10** importers of child safety seats in the world (the imports in 2012 totaled **USD 73,5 mn**), lagging far behind the USA (USD 734 mn) and many EU countries – Germany (USD 220 mn), France (USD 195 mn), Great Britain (USD 146 mn).
- Annual average growth rate of child safety seats imports in Russia over 2009-2012 totaled about **25%**.
- Aggregated imports of child safety seats in Belarus, Ukraine and Kazakhstan totaled more than **USD 12,5 mn** in 2012.
- China - world's largest exporter of child safety seats (exports in 2012 – more than **USD 880 mn**) – accounts for **43,9%** in the Russia's child safety seats import structure, being the major exporter.

IMPORTS OF CHILD SAFETY SEATS IN RUSSIA, USD mn



CHILD SAFETY SEATS IMPORT STRUCTURE IN RUSSIA



MARKET OPPORTUNITIES

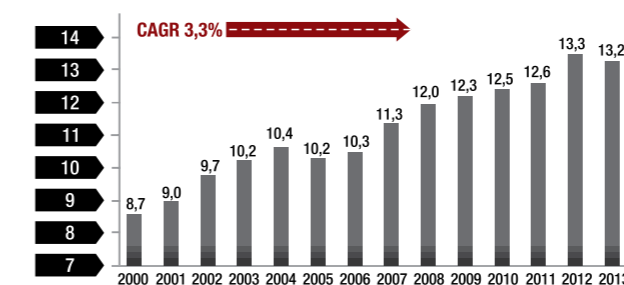
GLOBAL OPPORTUNITIES:

- Demand for higher level of car safety – mainstream on the global automobile market.

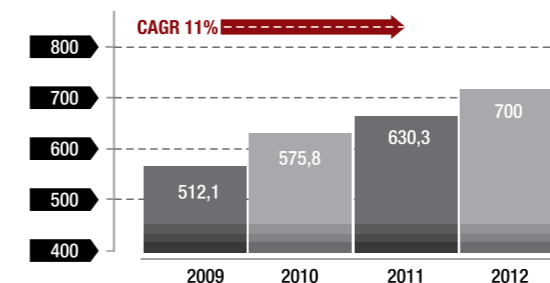
LOCAL OPPORTUNITIES:

- Weight average birth rate in the Customs Union countries and Ukraine totals **13,6** people per 1000, which means that annually about **3 mn** people are born in these countries, moreover during the past years this number is only increasing.
- In 2012 number of cars in Russia amounted to **38,7 mn**, annual average growth rate over 2009-2012 totaled **5,4%**.
- Increase in birth rate by 1% leads to about USD 10 mn inflow to the market, inc. due to growth of average expenses for children.
- According to Baby-goods industry association, potential capacity of baby-goods market in Russia is estimated at **USD 25-30 mn**, which is explained by change in consumer preferences.
- An important driver for growth of expenditures for baby-goods is per capita income – in 2012 it totaled **USD 700** in Russia, annual average growth rate of income over 2009-2012 was **11%**.
- Over the past 13 years there is a considerable increase in birth rate growth in Russia – from 8,7 people per 1000 in 2000 to **13,2** in 2013, annual average growth rate was **3,3%**.

NUMBER OF BIRTHS IN RUSSIA, PER 1000



PER CAPITA INCOME IN RUSSIA, USD



INVESTMENT OPPORTUNITIES

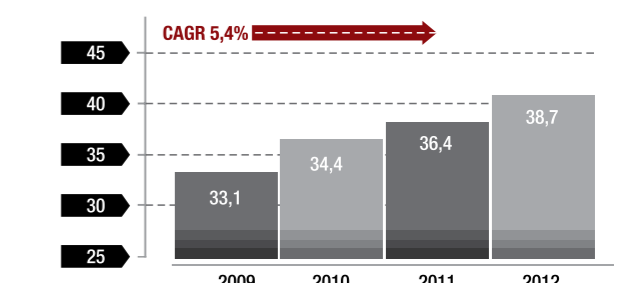
- Capex for the project may total **USD 5-10 mn**.
- Payback period is about **4-5 years**.
- IRR varies within **18-22%**.

POTENTIAL INVESTORS

- Strategic investors** – global companies (Chinese, in particular) with appropriate technologies and experience in manufacturing of child safety seats.
- Forward integration** – companies engaged in the industries which are key consumers of child safety seats – wholesale and retail baby-goods chains, as well as accessories for cars.

Country	Population, mn	Birth rate, per 1000	Increase, mn
Ukraine	45,6	11,4	0,520
Russia	143,5	13,3	1,909
Kazakhstan	16,8	22,7	0,381
Belarus	9,5	12,5	0,119
Total	215,4	13,6	2,929

NUMBER OF CARS IN RUSSIA, mn





PROJECT

For implementation there is provided a project on building a modern plant producing single-face laminate and corrugated board packaging.

The project is promising due to the following prerequisites:

- Growth in usage of paper packaging in the world from 35% to 40% during 2010-2012.
- In 2012 Russia imported paper packaging to the value of USD 405 mn with imports growing over the last 4 years by 12% a year on average

MARKETS

CUSTOMS UNION MARKET:

- Imports (in money terms) of paper packaging in Russia over 2009-2012 grew by 12% on average.
- The highest growth rates of corrugated board and paper packaging are characteristic of food industry, household chemistry and construction materials production.

INTERNAL MARKET OF BELARUS:

- The project on building sulphate pulp producing plant, being implemented at the present time, will create the necessary raw materials base for producing high-quality corrugated board and corrugated packaging. It is planned that by 2015 the capacity of the plant will reach 400 thou t of sulphate bleached pulp a year.
- Belarus is one the major foods exporters in the world – its exports totals about USD 3-4 bn (more than a half – to Russia).

- Corrugated packaging market in Russia is estimated at app. USD 1,9 mn.
- Growth of demand for corrugated packaging is expected to exceed world GDP growth by 1%-1,5% in the near 3 years.
- Capital expenditures for the project may total USD 6-8 mn, IRR - 25-28%.

INVESTMENT OPPORTUNITIES

Launching production of high-quality corrugated board, corrugated board packaging and single-face laminate:

- Capex for the project may total USD 50-70 mn.
- Payback period is about 5-7 years.
- IRR varies within 17-20%.

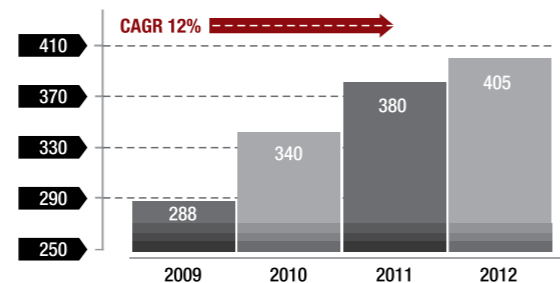
Launching production of corrugated board packaging with flexographic and offset printing:

- Capex may total USD 6-8 mn.
- Payback period is about 2-3 years.
- IRR varies within 25-28%.

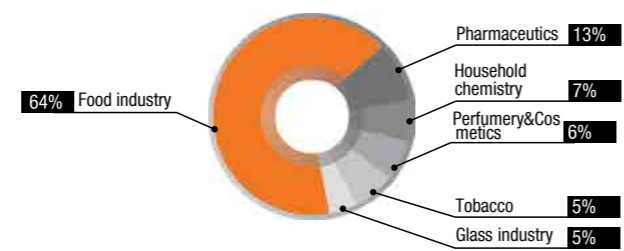
POTENTIAL INVESTORS

- World top corrugated board producers.
- Expansion of production of Russian corrugated board producers.

IMPORTS OF PAPER PACKAGING IN RUSSIA, USD mn



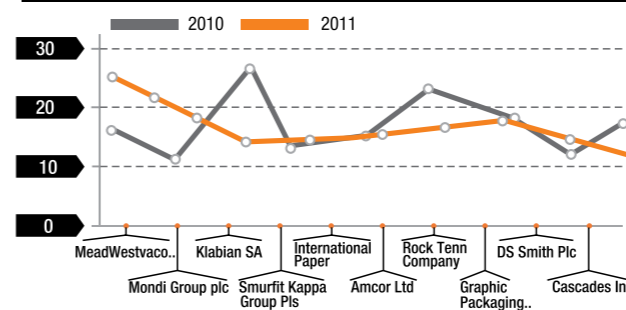
CONSUMPTION OF CORRUGATED PRODUCTS IN RUSSIA BY INDUSTRIES, 2012



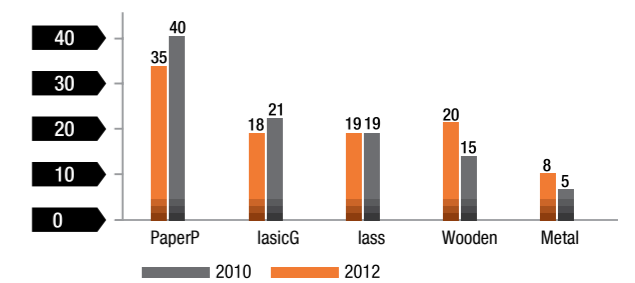
RAW MATERIAL AND LABOR RESOURCES

- Forest resources 12-14 mn cu m per year
- Waste paper 220-240 thou t annually
- Labor resources More than 5000 people employed in the industry
- Project on building sulphate bleached pulp producing plant 400 thou t (by 2015 r)

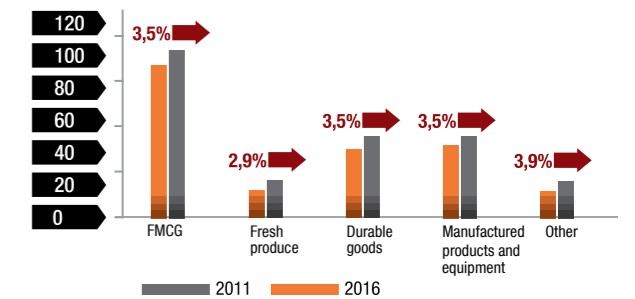
EBITDA OF WORLD MAJOR CORRUGATED BOARD AND CORRUGATED BOARD PACKAGING PRODUCERS, % OF SALES



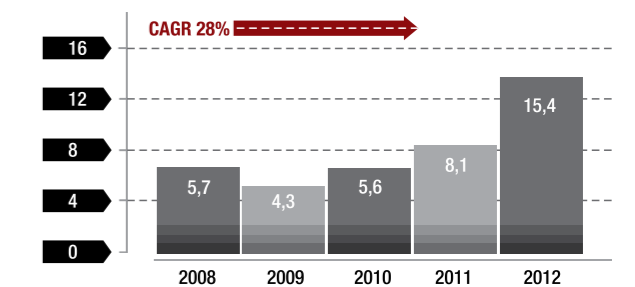
MAJOR TYPES OF PACKAGING APPLICATION STRUCTURE, %



PROJECTED GROWTH RATES OF WORLD DEMAND FOR CORRUGATED BOARD PRODUCTS FROM END CONSUMERS, 2016



IMPORTS OF CORRUGATED BOARD IN RUSSIA, thou t



MARKET OPPORTUNITIES

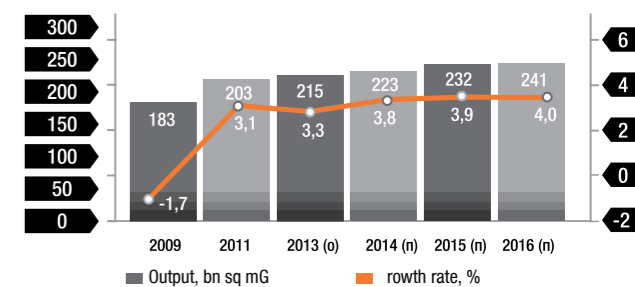
GLOBAL OPPORTUNITIES:

- Share of wooden and metal packaging, as more heavy, is falling (from 20% to 15% and from 8% to 5% respectively), since its usage considerably increases transportation costs.
- There is a trend of increase in the market share of paper packaging (from 35% to 40%) and plastic (from 18% to 21%).
- Single-face laminate segment is expected to grow at the fastest rates and to significantly force out usage of regular corrugated board and paper packaging.

LOCAL OPPORTUNITIES:

- In spite of large production capacities in Russia, in the recent years there is a trend of considerable import growth (on average 28% a year).
- There is growth in the industries related to paper packaging, in the first place, more than 10% growth of retail sales in Belarus.
- Due to absence of commercial cellulose production in Ukraine, companies of packaging industry have a limited product range.

WORLD CORRUGATED BOARD PRODUCTION, FORECAST





PROJECT

Proposed project – production of plastic toys.

Feasibility of establishing a production of plastic toys is determined by the following factors:

- Unsaturated market of plastic toys in Belarus and Russia, and the availability of niches not occupied by local players.
- High growth rate of imports both to Russia (CAGR +41% since 2009) and to Belarus (CAGR +21% since 2009) and lack of sufficient domestic production to meet market needs.

SALES MARKETS

CUSTOMS UNION MARKET:

- By estimates the capacity of Russian toy market is increasing by 20-25% per year. It is estimated to have reached 2 bn USD in 2012. The market is not saturated yet.
- Despite the presence of local toy producers in Russia (Nordplast, Stellar, Zvezda, etc.), the share of domestic production is only about 12%.
- Toy imports to Russia in 2009-2012 was increasing by on average 41% per year and exceeded 1,7 bn USD in 2012. The main importer of toys to Russia is China (77%).
- The share of Chinese toys is gradually reducing and the share of products produced in Europe is increasing. This shows that consumers are switching from cheap Chinese products to more expensive and of higher quality products from developed countries.

- Localization of production close to final consumers (growth in demand for in Belarus and Russia).
- The main markets are the market of Customs Union as well as the domestic market of Belarus.
- Investment costs are estimated at 5-30 mn USD, payback period – 4-5 years.

DOMESTIC MARKET:

- Domestic toy market in Belarus grows by 20-25% per year. In 2012 the market size amounted to about 100 mn USD.
- In Belarus, there are several large toy producers: Polesie (plastic toys), Dream Makers (brand Fancy, stuffed toys).
- However, the share of imported toys in total sales in 2012 amounted to 41%.
- CAGR of toys imports in 2009-2012 exceeds +21%. In 2012 Belarus imported about 42 mn USD of toys. 63% of toys imports to Belarus comes from China.

The competition on the markets of developed countries is very high. Therefore, the most promising markets are the Customs Union market and the domestic market of Belarus.

MARKET OPPORTUNITIES

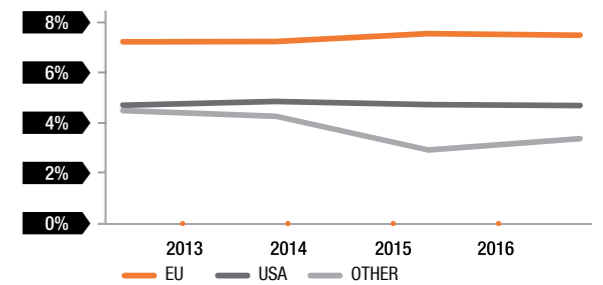
GLOBAL OPPORTUNITIES:

- The global toy market is continuously growing. In 2012, the global market size amounted to over 84 bn USD. It is forecasted to reach 95 bn USD by 2016 (+13% compared to 2012).
- The main growth will be provided by developing countries. Market growth in developing countries is estimated to amount to on average 7-8% per year.

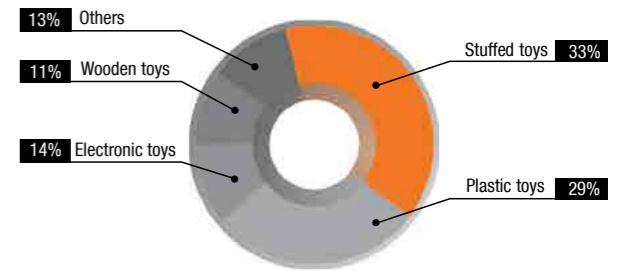
REGIONAL OPPORTUNITIES:

- Plastic and stuffed toys account for nearly two-thirds of the Russian market. At the same time plastic toys market is considered as the most promising. It can be divided into two segments: cheap toys of low quality (mostly Chinese) and more expensive and of high quality (mostly manufactured in Europe). Share of cheap Chinese toys is reducing due to increased welfare. Thus, the segment of toys of high quality shows the greatest growth.
- Demand for toys depends on the population structure. Both in Russia and in Belarus population below working age (0-15 years) is constantly increasing, and this trend is expected to continue. Population under 16 years is increasing both in absolute and in relative terms. The share of children under 16 years in total population is expected to increase from 16,5% in 2013 to 18% in 2025 both in Russia and in Belarus.
- Spending on toys per child also demonstrates the prospects of the market. Russia possesses the highest spending on toys per child among the CIS countries. According to forecasts, the spending will grow by 2% annually.

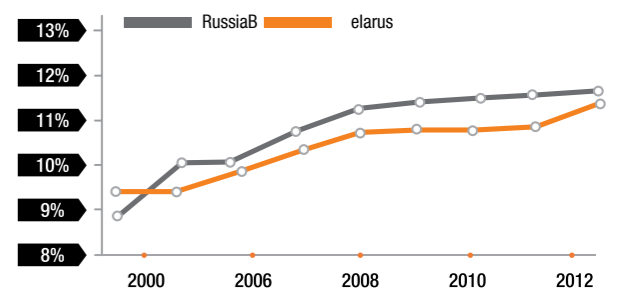
FORECAST OF TOYS MARKET GROWTH IN 2013-2016



TOYS MARKET STRUCTURE IN RUSSIA



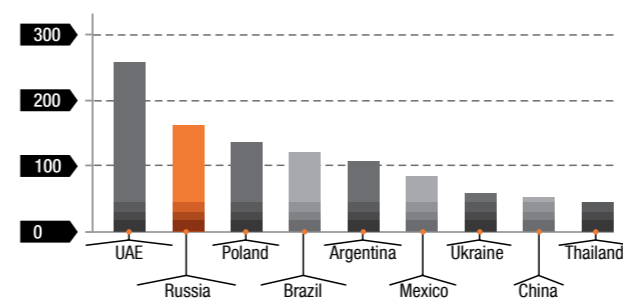
BIRTH RATES IN BELARUS AND RUSSIA



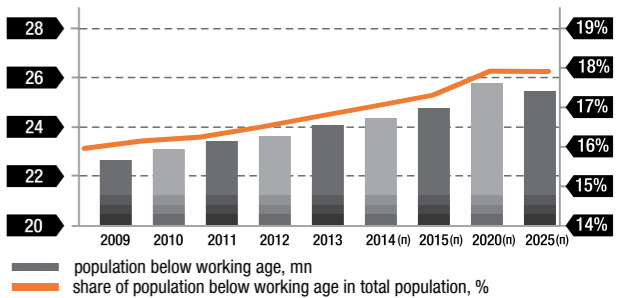
INVESTMENT OPPORTUNITIES

- Investment costs for the creation of facilities for plastic toys production are estimated at 5-30 mn USD.
- Profitability of plastic toys production amounts to on average 15-20%.
- Payback period of the project may vary within 4-5 years.

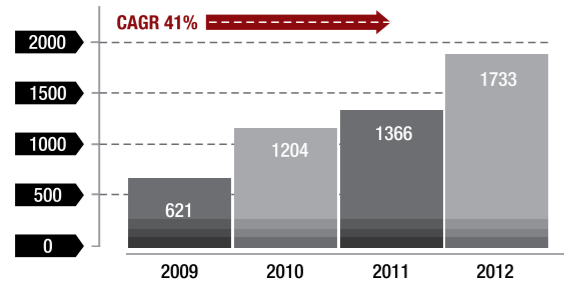
SPENDING ON TOYS PER CHILD IN SOME DEVELOPING COUNTRIES, USD



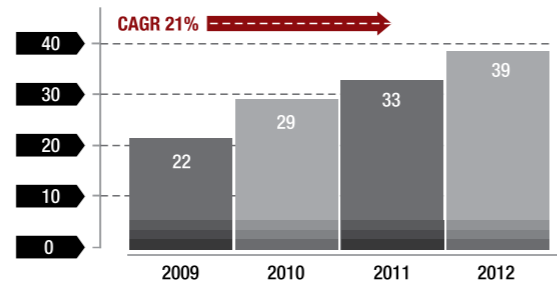
POPULATION BELOW WORKING AGE IN RUSSIA



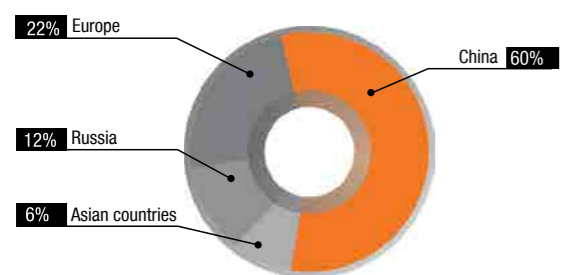
TOYS IMPORTS TO RUSSIA, mn USD



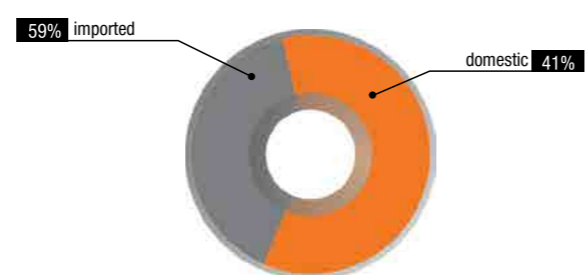
TOYS IMPORTS TO BELARUS, mn USD



STRUCTURE OF RUSSIAN TOY MARKET BY COUNTRY OF ORIGIN



STRUCTURE OF BELARUSIAN TOY MARKET BY COUNTRY OF ORIGIN





PROJECT

There is provided a project on **building a stroller manufacturing plant**.

Prerequisites for the project implementation:

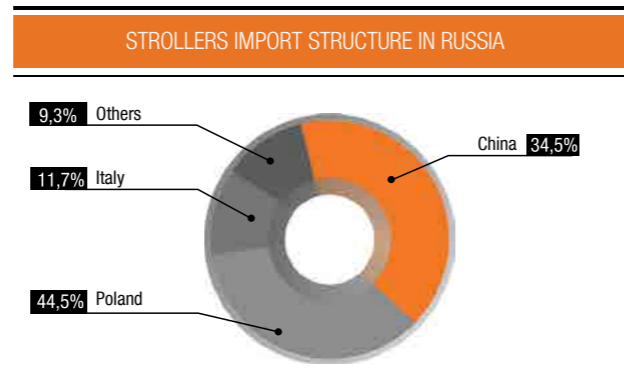
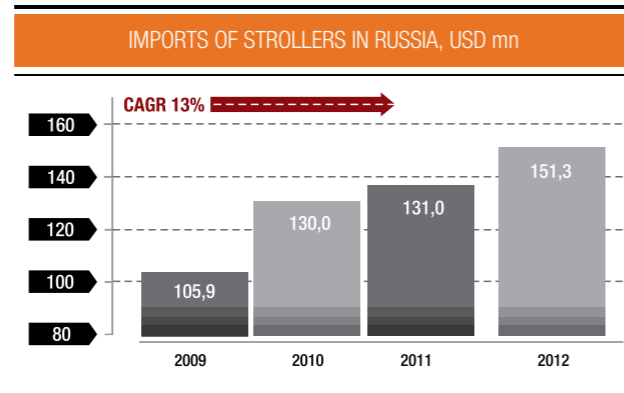
- There has been a considerable birth rate growth in Russia over the last decade – annual average growth rate was **3,3%**.
- Russia is the **3rd** importer of strollers in the world, the imports in 2012 totaled **USD 151,3 mn**.

- App. **3 mn** people are annually born in the Customs Union countries and Ukraine.
- Potential capacity of baby-goods market in Russia is estimated at **USD 25-30 mn**, which is explained by change in consumer preferences.
- Capital expenditures for the project may total **USD 5-10 mn**, payback period is about **4-5 years**, IRR – **18-22%**.

MARKETS

CUSTOMS UNION MARKET AND UKRAINE:

- Russia is the 3rd importer of strollers in the world (the imports in 2012 totaled **USD 151,3 mn**), being inferior only to the USA (**USD 303 mn**) and Great Britain (**USD 174 mn**).
- Annual average growth rate of strollers imports in Russia over 2009-2012 totaled about **13%**.
- Aggregated imports of strollers in Belarus, Ukraine and Kazakhstan totaled more than **USD 30 mn** in 2012.
- China - world's largest exporter of strollers (exports in 2012 – more than **USD 1 bn**) – accounts for just **34,5%** in the Russia's strollers import structure, being inferior only to Poland (**44,5%**).



MARKET OPPORTUNITIES

REGIONAL OPPORTUNITIES:

- Weight average birth rate in the Customs Union countries and Ukraine totals **13,6** people per 1000, which means that annually about **3 mn** people are born in these countries, moreover during the past years this number is only increasing.
- Baby-goods market in Russia is estimated to have grown by **9%** to **USD 14 bn** in 2013.
- Increase in birth rate by 1% leads to about **USD 10 mn** inflow to the market, inc. due to growth of average expenses for children.
- According to Baby-goods industry association, potential capacity of baby-goods market in Russia is estimated at **USD 25-30 mn**, which is explained by change in consumer preferences.
- An important driver for growth of expenditures for baby-goods is per capita income – in 2012 it totaled **USD 700** in Russia, annual average growth rate of income over 2009-2012 was **11%**.
- Over the past 13 years there is a considerable increase in birth rate growth in Russia – from **8,7** people per 1000 in 2000 to **13,2** in 2013, annual average growth rate was **3,3%**.
- According to research data, parents don't tend to pay attention to the brand of the products for children in 0-4 years old group.

INVESTMENT OPPORTUNITIES

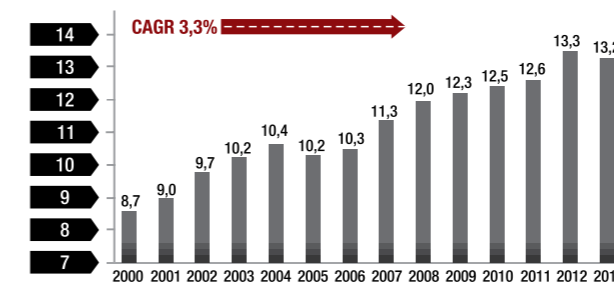
- Capex for the project may total **USD 5-10 mn**.
- Payback period is about **4-5 years**.
- IRR varies within **18-22%**.

POTENTIAL INVESTORS

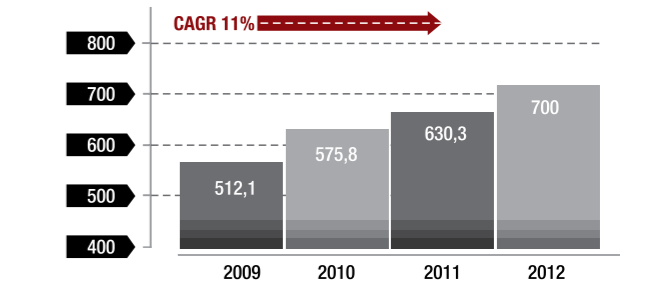
- Strategic investors** – global companies (Chinese, Polish, in particular) with appropriate technologies and experience in manufacturing of strollers.
- Forward integration** – companies engaged in the industries which are key consumers of strollers – wholesale and retail baby-goods chains.

Country	Population, mn	Birth rate, per 1000	Increase, mn
Ukraine	45,6	11,4	0,520
Russia	143,5	13,3	1,909
Kazakhstan	16,8	22,7	0,381
Belarus	9,5	12,5	0,119
Total	215,4	13,6	2,929

NUMBER OF BIRTHS IN RUSSIA, PER 1000



PER CAPITA INCOME IN RUSSIA, USD





PROJECT

There is provided a project on **building a modern plant producing plastic and polymer packaging.**

The project is high-opportunity due to the following reasons:

- Growth in usage of plastic packaging in the world **from 18% to 21%** during 2010-2012.
- Growth of demand for plastic packaging is expected to exceed world GDP growth **by 2%-2,5%** in the near 3 years and to be the fastest growing packaging segment.

MARKETS

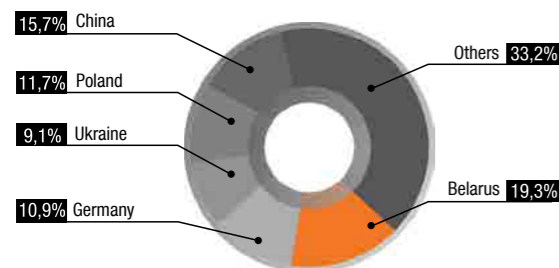
CUSTOMS UNION MARKET:

- Imports (in money terms) of plastic packaging in Russia over 2009-2012 grew by **16%** on average.
- Owing to its distinctive features, plastic packaging is forcing other packaging types out of food, perfumery and pharmaceuticals sectors, since these sectors require adherence to specified hygienic rules.
- In 2012 Russia's imports of plastic packaging from Belarus totaled **USD 110 mn** – thus the latter was the largest importers with share of almost 20%.

INTERNAL MARKET OF BELARUS:

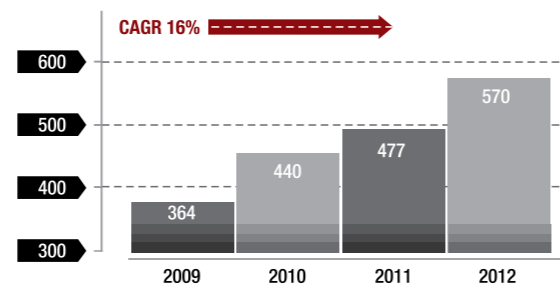
- Belarus is one the major foods exporters in the world – its exports total about **USD 3-4 bn** (more than a half – to Russia).

IMPORTS STRUCTURE OF PLASTIC PACKAGING IN RUSSIA, 2012



- Global consumption of flexible plastic packaging in the segment of meat products is projected to increase by **46,5%** by 2016 (as compared to 2011), in food industry on the whole – by **24,7%**.
- 2012 Russia imported plastic packaging to the value of **USD 570 mn** with imports growing over the last 4 years by **16%** a year on average.
- Plastic packaging market in Russia is estimated at app. **USD 2,2-2,7 mn**.
- Capital expenditures are expected at the level of **USD 10-15 mn** with payback period of **3-4 years** and IRR **17-20%**.

IMPORTS OF PLASTIC PACKAGING IN RUSSIA, USD mn



MARKET OPPORTUNITIES

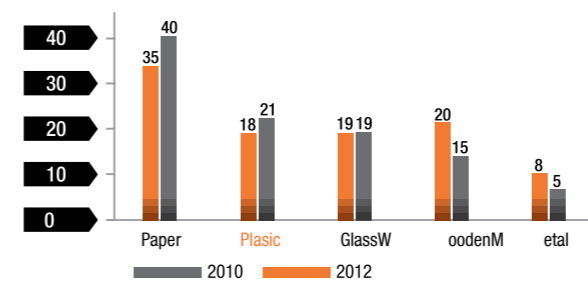
GLOBAL OPPORTUNITIES:

- Share of wooden and metal packaging, as more heavy, is falling (from 20% to 15% and from 8% to 5% respectively), since its usage considerably increases transportation costs.
- There is a trend of increase in the market share of paper packaging (from 35% to 40%) and plastic (from 18% to 21%).
- Demand for the "ready for shelf" packaging is expected to grow by **40%** by 2016, and the bulk of the growth - to be account for by plastic packaging.
- As projected by Pira International, by 2016 the fastest growth in consumption of flexible plastic packaging will be shown in the following segments – **meat products (46,6%), refrigerated foods (36,2%) и fruit and vegetables (34%)**.

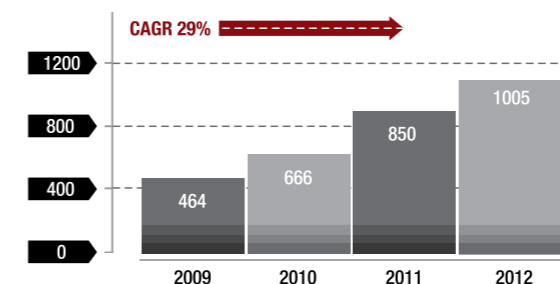
LOCAL OPPORTUNITIES:

- According to Russia's Strategy in food and processing industries, by 2020 foods production will grow by **1,4 times** (compared to 2010), or **3-5%** a year. Major plastic packaging consumers – meat and meat foods production industries – are projected to have higher growth rates.
- In 2012 exports of meat products in Belarus exceeded **USD 1 bn**, annual average growth rate of export over the past 4 years amounted to **29%**.
- In 2012 exports of dairy products in Belarus totaled almost **USD 1,9 bn**, annual average growth rate of export over the past 4 years amounted to **22%**.
- Per capita food products consumption in Russia is **170 kg** which is far less than in many European countries, where this indicator exceeds **250 kg**.

MAJOR TYPES OF PACKAGING APPLICATION STRUCTURE, %



EXPORTS OF MEAT PRODUCTS IN BELARUS, USD mn



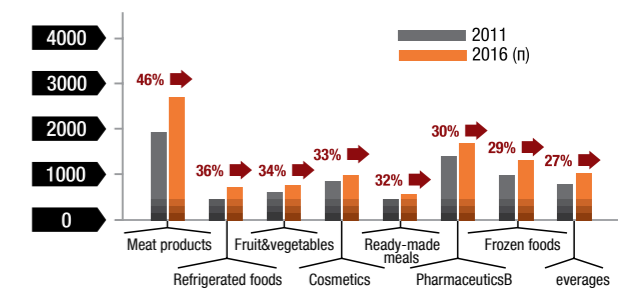
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in plastic packaging production, focused on production localization and entering promising Customs Union market.
- Forward integration – companies engaged in industries-main consumers of plastic packaging (foods, chemistry, pharmaceuticals, perfumery, etc.).
- Backward integration – companies engaged in the industries – key suppliers of raw materials for plastic packaging production (petrochemistry).

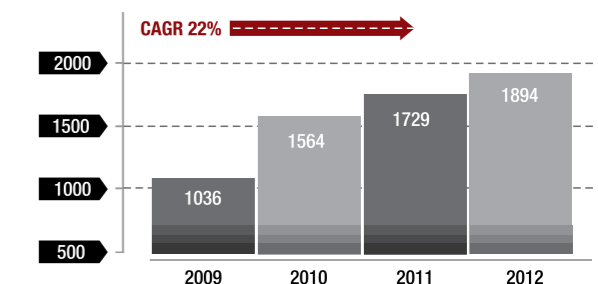
INVESTMENT OPPORTUNITIES

- Capex for the project may total **USD 10-15 mn**.
- Payback period is about **3-4 years**.
- IRR varies within **17-20%**.

GLOBAL FLEXIBLE PLASTIC PACKAGING CONSUMPTION BY INDUSTRIES



EXPORTS OF DAIRY PRODUCTS IN BELARUS, USD mn





PROJECT

For implementation there is provided a project on manufacturing of plastic fittings.

The project is considered promising due to the following reasons:

- Plastic fittings imports in Russia in 2012 totaled USD 350 million, growing by 23% per year on average since 2009 for 2012.

- Plastic sanitary wares (62%) dominate Russian import structure.
- Russian sanitary market growth rate is about 25-28%.
- It is expected that Russian DIY-market will reach 116 billion USD by 2015.
- Capital expenditures for the project may total USD 5-7 mn, IRR – 20-23%.

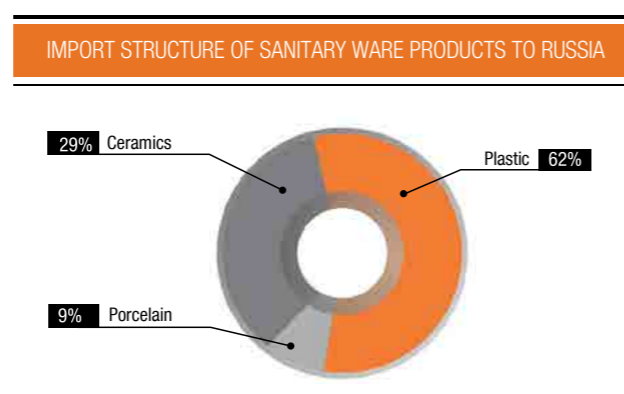
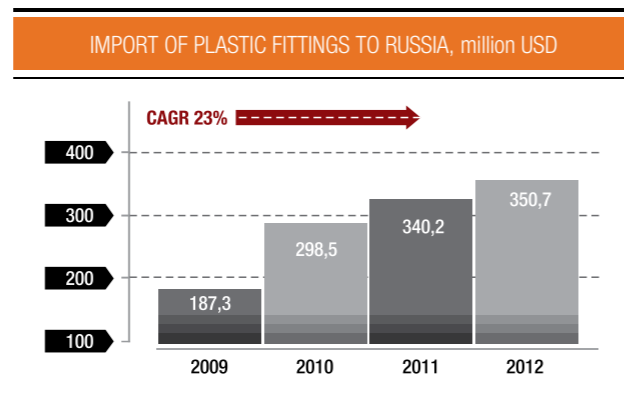
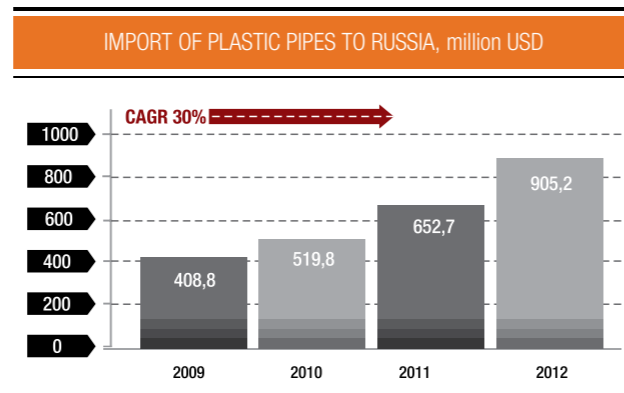
MARKETS

BELARUSIAN MARKET:

- Plastic fittings imports in Belarus in 2012 totaled USD 21 million, growing by 3% per year on average since 2009 for 2012.

CUSTOM UNION MARKET:

- Plastic fittings imports in Russia in 2012 totaled USD 350 million, growing by 23% per year on average since 2009 for 2012.
- About 80% is a share of sanitary wares import in total consumption. It is expected that the share of domestic production in Custom Union will reach 33%.
- Plastic sanitary wares (62%) dominate Russian import structure.



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Further use of steel pipes for heating-, gas- and water-supply systems is not cost-effectively.
- The share of steel pipes will significantly reduce in near future. Pipes from polypropylene and metal-plastic will dominate the market.

REGIONAL OPPORTUNITIES:

- 25.8 billion USD was a volume of DIY-segment turnover in 2012, growing by 19% per year on average since 2009 for 2012.
- It is expected that Russian DIY-market will reach 116 billion USD by 2015. It is expected that investments into equity in Russia will reach 562 billion USD by 2015.
- Russian sanitary market growth rate is about 25-28%.
- Economy and middle segments dominate Russian sanitary ware market (97%).
- Moscow and Moscow region are the largest consumers of sanitary ware (45%).
- 63.3 thousand new apartments were constructed in Belarus in 2013 (10% growth).

INVESTMENT OPPORTUNITIES

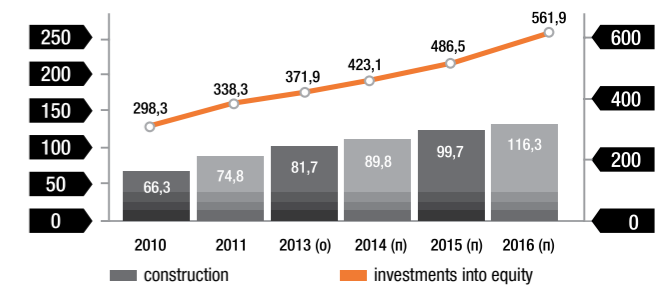
Launching plastic fittings manufacturing:

- Capex may total USD 5-7 mn.
- Payback period is 2-3 years.
- IRR varies between 20-23%.

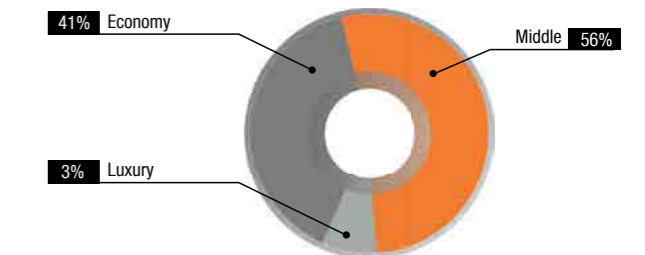
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in plastic fittings, aimed at local content.
- Vertical integration – companies, engaged in the fields applying plastic fittings (construction, pipeline industry, sanitary ware market etc.) and raw materials suppliers (petrochemical industry).

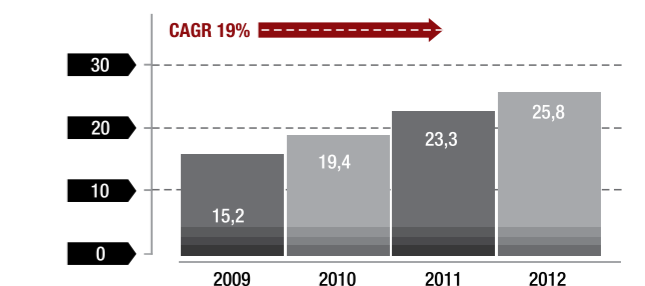
FORECAST OF CONSTRUCTION SECTOR, billion USD



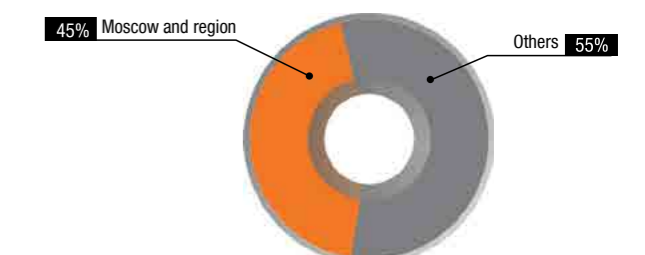
SEGMENTS OF RUSSIAN OF SANITARY WARE MARKET



TURNOVER OF DIY SEGMENT IN RUSSIA, billion USD



RUSSIAN SANITARY WARE MARKET REGIONAL STRUCTURE





PROJECT

For implementation there is provided a project on manufacturing of LEDs and LED lightning devices.

- Production of LEDs and LED lightning devices is oriented on the Custom Union market. Total import volume of LEDs and lightning devices to Custom Union is more than 500 million USD).
- 29 billion USD is a volume of global LEDs market in 2013. Since 2009 for 2013 world market of LEDs has annually doubled.

- Now LEDs penetration level is about 20-30% in different sectors. By 2020 LEDs penetration will reach 80%.
- Russian LEDs market increased by more than 50% in 2012. Russia's share in the global LEDs market is less than 1%.
- Russian market share will increase up to 5% of the global market in the near future.
- Capex varies between USD 20-50 mn, IRR 20-30%.

MARKETS

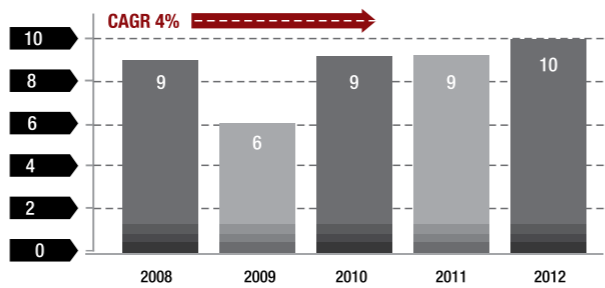
BELARUSIAN MARKET:

- Import of LEDs and portable lamps to Belarus at the end of 2012 amounted 10 million USD.

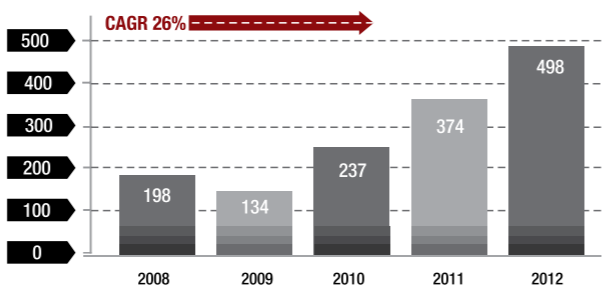
MARKET OF CUSTOM UNION:

- 498 million USD is an import of LEDs and portable lamps to Russian Federation in 2012 (CAGR=26%).
- China, Japan, Germany and South Korea are the main exporters of LEDs to Custom Union.

IMPORT OF LEDs AND PORTABLE LAMPS TO BELARUS, million USD



IMPORT OF LEDs AND PORTABLE LAMPS TO RUSSIA, million USD



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- 29 billion USD is a volume of global LEDs market in 2013.
- CAGR of LEDs market in 2009-2013 was 102%.
- 19% of electricity is spent on lighting. LED lamps can achieve 50-80% energy savings.
- Now LEDs penetration level is about 20-30% in different sectors.
- Consumer expenses growth is the main demand driver for consumer electronics and home appliances. 8.5 trillion USD was middle class consumer expenses in 2012.

REGIONAL OPPORTUNITIES:

- Russian LEDs market increased by more than 50% in 2012. Russia's share in the global LEDs market is less than 1%.
- Russian market share will increase up to 5% of the global market in the near future.
- 28-48% per year will be an annual growth of Russian LEDs market till 2030.
- By 2015, Russian LEDs market could reach 1 billion USD.
- LEDs will expected to account for 13% of Russian light sources market by 2015. LEDs share in the market is expected to increase up to 90% by 2030.
- 500 million pieces per year is a total production capacity of LEDs in Russia now.
- According to the energy efficiency program Russia plans to reduce energy intensity by 40% by 2020.

ATTRACTIVE SEGMENTS:

- LEDs for lighting, for cars, and for displays are the most promising segments.
- Large LEDs producers are increasing their investments in superpower LEDs and frameless crystals.

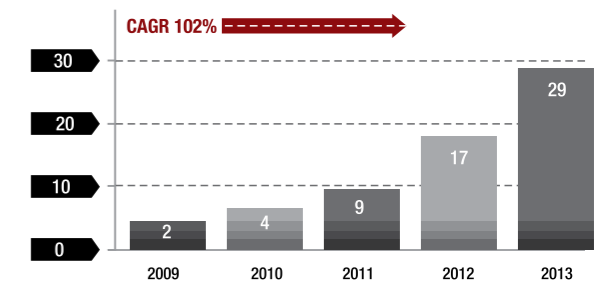
POTENTIAL INVESTORS

- Large LEDs producers from China, Japan, South Korea and Europe.

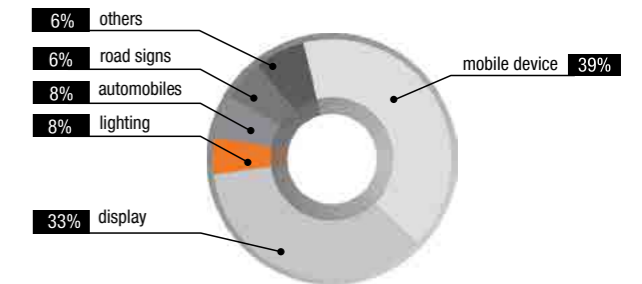
INVESTMENT OPPORTUNITIES



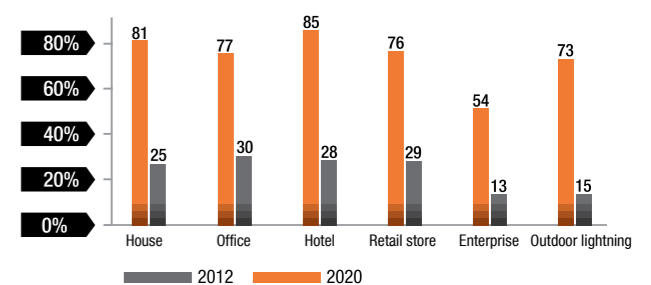
GLOBAL LEDS MARKET, billion USD



LEDs USAGE BY SPHERES, %



LEDs PENETRATION LEVEL





PROJECT

There is provided a project on **building a modern plant manufacturing power cables**.

The project is worthy of implementation due to the following:

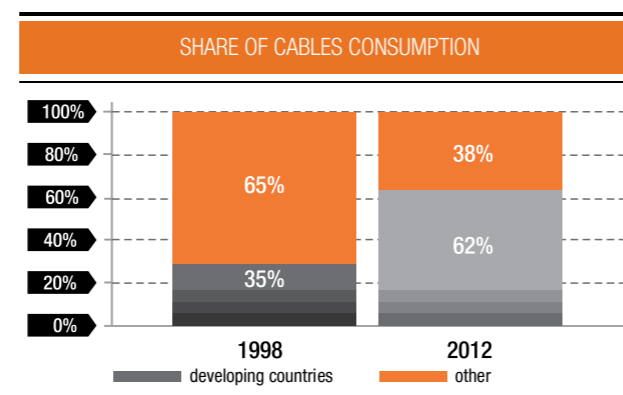
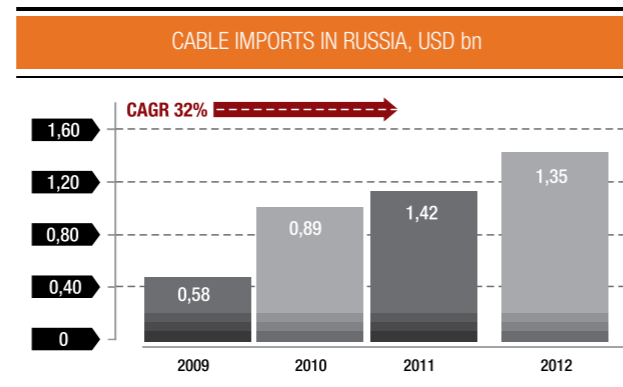
- In 2012 Russia imported cables to the value of more than **USD 1,3 bn**, over the past 4 years the imports grew by **32%** on average annually.
- Russian cable market is estimated at more than **USD 8 bn**.

- Russian market is characterized of a deferred demand, as its infrastructure requires renewal – wearout rate of fixed assets as of the end of 2012 was **47,7%** (as compared to 2000 – **39,3%**).
- Hosting World Football Championship in 2018 implies investing **USD 15 bn** in infrastructure development and building of stadiums.
- Capital expenditures for the project may total **USD 40-50 mn**, IRR – **10-12%**.

MARKETS

CUSTOMS UNION MARKET:

- About **90%** of cables on the territory of former USSR is manufactured by the companies – members of “Electric cable” association: 56 – from Russia, 6 – from Belarus, 7 – from Ukraine.
- Developing countries are becoming top cable consumers (**62%** in 2012 opposed to **35%** in 1998). Taking into account the fact that in 2012 Russia imported cables to the value of more than **USD 1,3 bn**, Russian market is fairly high-opportunity.



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- By 2040 bulk of the increase in global energy production (**84%**) is generated by developing countries.
- According to Economist Intelligence Unit, price for nonferrous metals – raw material for cable manufacturing – won't significantly increase in the mid-run:
 - Aluminium prices are projected at a stable level – annual average growth rate is not expected to exceed **3,3%** up to 2018.
 - Copper prices are projected at the level of 2014, with gradual decrease by **8%** by 2017 and reaching level of 2014 in 2018.

LOCAL OPPORTUNITIES:

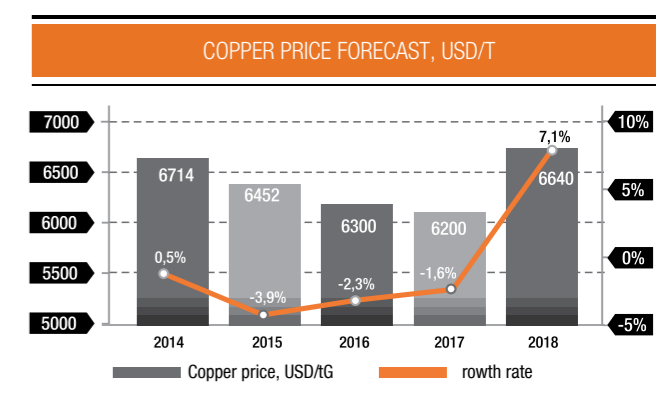
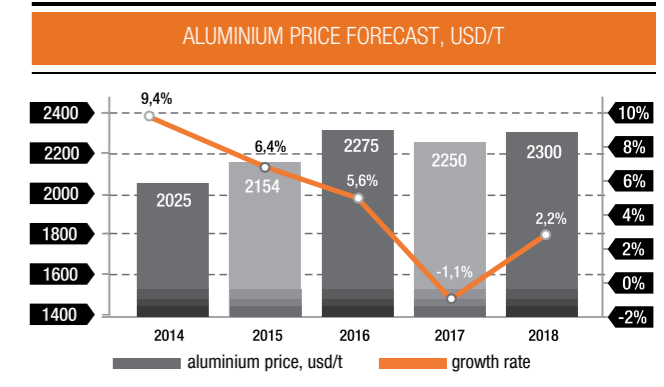
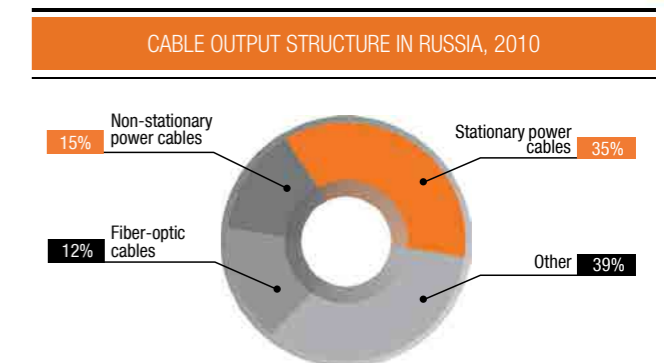
- Russia is the **4th** energy producing country in the world (which is more than **5%** of world volume) – at the same time more than **26%** of power transmission lines are in a critical condition (with lifetime exceeding 40 years).
- Federal Grid Company's investment program for 2014-2019 in the amount of about **USD 20 bn** – within the framework of baseline scenario it is planned to commission **20442 km** of lines.
- Infrastructure in Russia requires considerable investments for renewal – wearout rate of fixed assets countrywide exceeds **47%**.
- Hosting World Football Championship in 2018 implies investing **USD 15 bn** in infrastructure development and building of stadiums.

INVESTMENT OPPORTUNITIES

- Capital expenditures for the project may total **USD 40-50 mn**.
- Payback period is about **6-7 years**.
- IRR varies between **10-12%**.

POTENTIAL INVESTORS

- **Strategic investors** – companies with appropriate technologies and experience in power cable manufacturing, focused on local content in production.
- **Vertical integration** – companies, engaged in the fields applying power cables (energetics, machine building, construction, etc.).





PROJECT

There is provided a project on **launching production of exercise machines**.

The project is promising due to the following reasons:

- Russia is among world's top 10 importers of exercise machines, imports in 2012 - more than **USD 190 mn**.
- Growth rate of fitness industry in the world is only outraced by the ones of nanotechnologies.

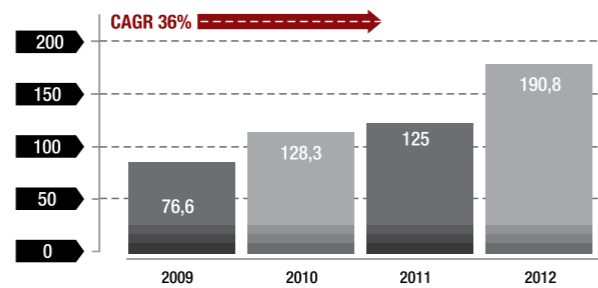
- Fitness services market in Russia has a huge potential for growth (potential capacity is **USD 2 bn**) – only **3%** of Russian population is engaged in fitness activities (as compared with the Netherlands – **16%**).
- Most popular fitness-service in Russia is gym going (**59%**).
- Capital expenditures for the project may total **USD 10-15 mn**, payback period – **4-5 years**, IRR - **18-22%**.

MARKETS

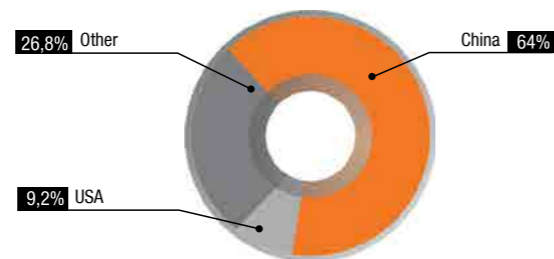
CUSTOMS UNION MARKET AND UKRAINE:

- Russia is among **top 10** world importers of exercise machines (imports in 2012 – **USD 190,8 mn**).
- Annual average growth rate of exercise machines import in Russia over 2009-2012 totaled about **36%**.
- Aggregate exercise machines imports in Belarus, Ukraine and Kazakhstan in 2012 totaled almost **USD 40 mn**.
- China – world's largest exporter of exercise machines (exports in 2012 – almost **USD 4 bn**) – accounts for **64%** in the total exercise machines import structure of Russia.

IMPORTS OF EXERCISE MACHINES IN RUSSIA, USD mn



СТРУКТУРА ИМПОРТА ТРЕНАЖЕРОВ РОССИИ



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Growth rate of fitness industry in the world is only outraced by the ones of nanotechnologies.

LOCAL OPPORTUNITIES:

- In Russia **29,4 mn** of people do sports. By 2020 number of people engaged in sports activities is expected to double.
- Fitness services market in Russia has a huge potential for growth – only **3%** of Russian population do sports, while in Great Britain – **6%**, USA – **14%**.
- An important driver for growth of expenditures for sports goods and going for sports is per capita income – in 2012 it totaled **USD 700**, annual average growth rate over 2009-2012 was **11%**.
- Fitness services market in Russia is projected to reach **USD 1 bn** with annual average growth rate of **20%**.
- According to «Deloitte & Touche», potential capacity of Russian market is **USD 2 bn** a year.
- Level of market saturation in “Premium” and “Luxury” segments is about **70%**, in “Middle class” and “Economy” segments – only **40%**.
- Key market drivers (as well as demand for exercise machines) are growth of population's purchasing capacity, popularization and prestige of sports activities, drawing attention to healthy lifestyle.

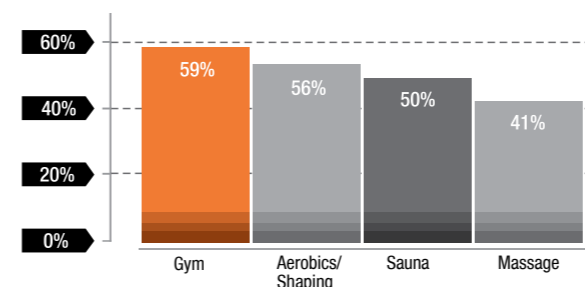
INVESTMENT OPPORTUNITIES

- Capex for the project may total **USD 10-15mn**.
- Payback period is about **4-5 years**.
- IRR varies within **18-22%**.

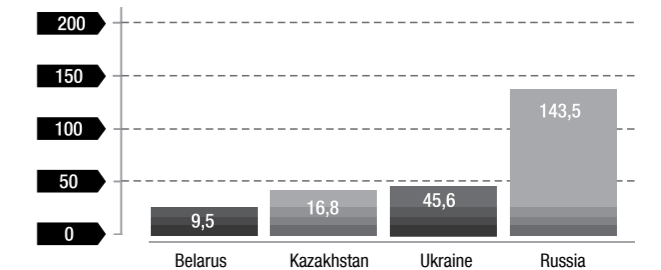
POTENTIAL INVESTORS

- **Strategic investors** – global companies (Chinese in particular) with appropriate technologies and experience in manufacturing of exercise machines.
- **Forward integration** – companies engaged in the industries - key consumers of exercise machines – wholesale and retail sports goods chains, gyms, etc.

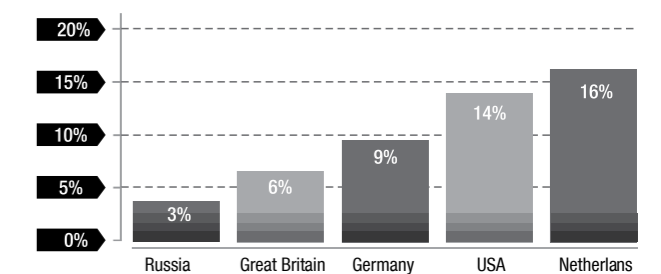
MOST POPULAR SERVICES IN FITNESS CLUBS



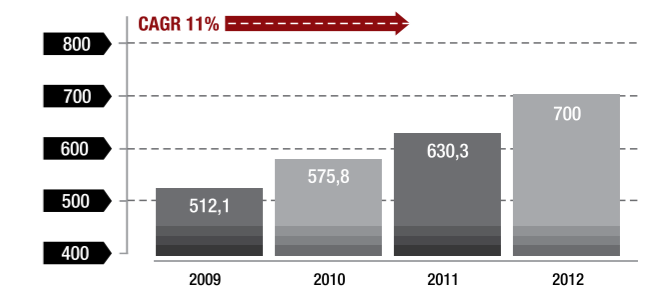
POPULATION, mn people



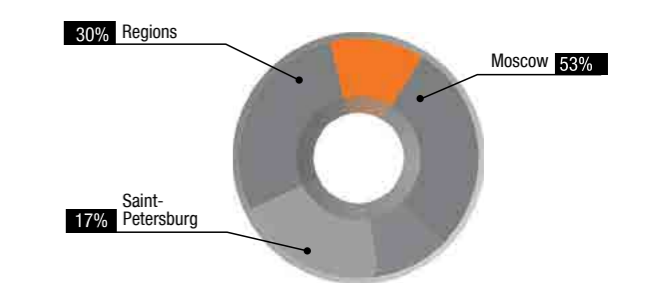
PERCENTAGE OF POPULATION GOING TO FITNESS CLUBS



PER CAPITA INCOME IN RUSSIA, USD



STRUCTURE OF FITNESS SERVICES IN RUSSIA IN MONEY TERMS





PROJECT

For implementation there is provided a project on manufacturing of plastic and metal-plastic pipes.

The project is considered promising due to the following reasons:

- Russia has second largest length of pipelines in the world. Major part of them are heavy worn-out.
- 58% is a worn-out rate of water supply system in Russia. 3 billion USD is a loss of water in Russia per year

- 900 million USD was a volume of plastic pipes import to Russia in 2012. 30% is CAGR for last 5 years. □
- It is expected that 1.6 million kilometers of metal-plastic pipes will be used in Russia by 2020.
- Capital expenditures for the project may total USD 10-50 mn, IRR – 15-18%.

MARKETS

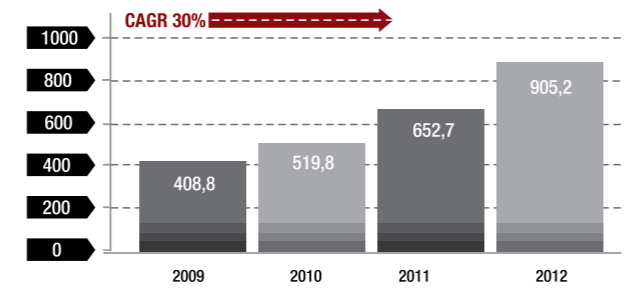
BELARUSIAN MARKET:

- 108 million USD was a volume of plastic pipes import to Belarus in 2012.

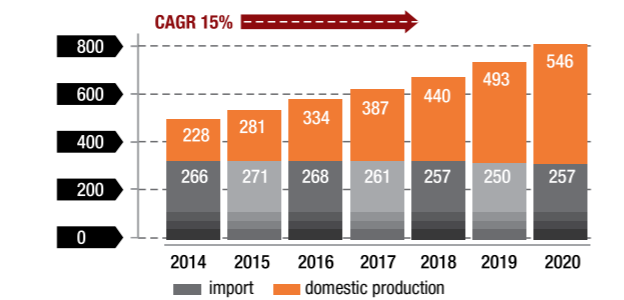
MARKET OF CUSTOM UNION:

- In 2009 in Russia there were only few producers of metal-plastic pipes. New producers of metal-plastic pipes appeared increased the domestic production. But still the demand is covered by import by more than 50%. 900 million USD was a volume of plastic pipes import to Russia in 2012.
- It is expected that domestic metal-plastic pipes production (including Custom Union) will doubled by 2020 (CAGR=15%). The share of import in consumption will reduce from 54% to 32% by 2020.
- 40% is a share of steel pipes in water supply system. Major part of them are heavy worn-out. They need reconstruction.

PLASTIC PIPES IMPORT TO RUSSIA, million USD



FORECAST OF RUSSIAN METAL-PLASTIC PIPES MARKET, thousand kilometers



MARKET OPPORTUNITIES

GLOBAL OPPORTUNITIES:

- Further use of steel pipes for heating-, gas- and water-supply systems is not cost-effectively.
- The share of steel pipes will significantly reduce in near future. Pipes from polypropylene and metal-plastic will dominate the market.

REGIONAL OPPORTUNITIES:

- Russia has second largest length of pipelines in the world. Major part of them are heavy worn-out.
- Currently, there are more than 3 million km of external pipelines and more than 18 million kilometers of internal pipelines in Russia.
- Russia uses metal-plastic pipes for gas-supply system. Germany and the Netherlands also use metal-plastic pipes for gas-supply system.
- 900 thousand kilometers of metal-plastic pipes for heating and water-supply system and 700 thousand kilometers of metal-plastic pipes for gas-supply system will be constructed by 2020.

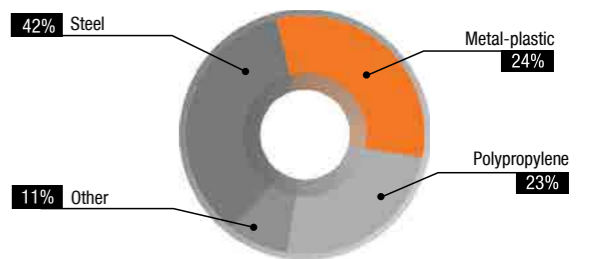
INVESTMENT OPPORTUNITIES

- Capital expenditures for the project may total USD 10-15 mn.
- Payback period is about 3-4 years.
- IRR varies between 15-18%.

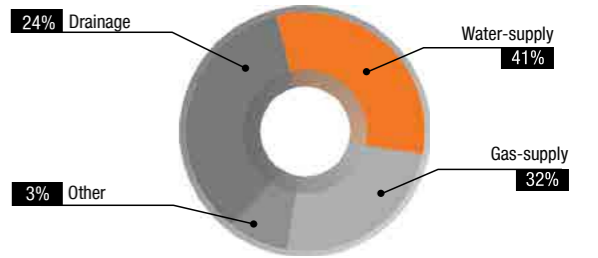
POTENTIAL INVESTORS

- Strategic investors – companies with appropriate technologies and experience in pipes manufacturing, focused on local content in production.
- Vertical integration – companies, engaged in the fields applying metal-plastic pipes (construction, pipeline industry, etc.) and raw materials suppliers (petrochemical industry).

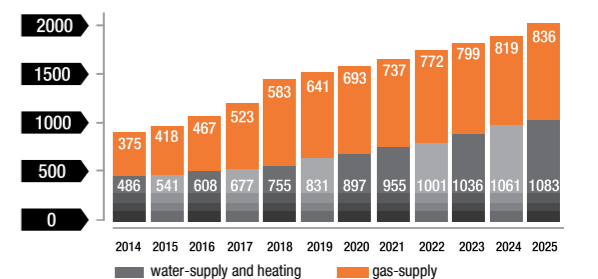
RUSSIAN HEATING AND WATER SUPPLY SYSTEM, STRUCTURE OF PIPES



CONSUMPTION OF METAL-PLASTIC PIPES IN RUSSIA



FORECAST OF PIPES CONSUMPTION IN RUSSIA, thousand kilometers





www.industrialpark.by

Minsk, Belarus

Tel.: +375 17 240 86 31

Fax.: +375 17 240 86 27

E-mail: welcome@industrialpark.by

Catalogue is based on the research conducted by CJSC «Investment company UNITER»

UNITER 

 Branding Company, "Public Group"
www.pgr.by