



MANUFACTURING OF OPTICAL EQUIPMENT

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.
- 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%**.

MARKETS

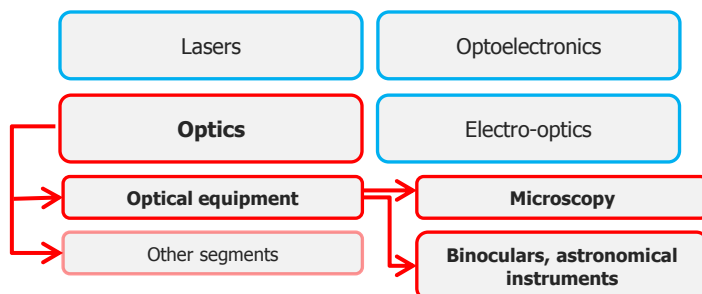
Customs Union market:

- 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**).

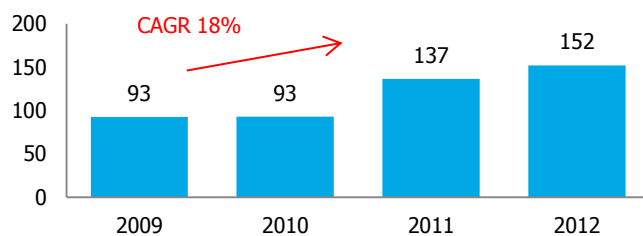
Internal market of Belarus:

- 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**).

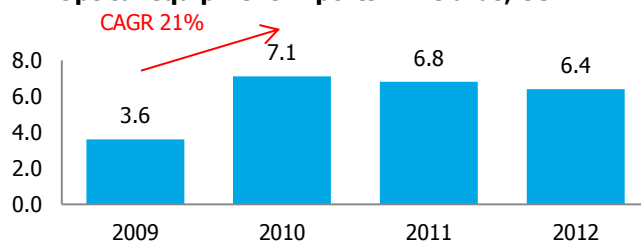
Key segments of photonics market



Optical equipment imports in Russia, USD mn



Optical equipment imports in Belarus, USD mn



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.

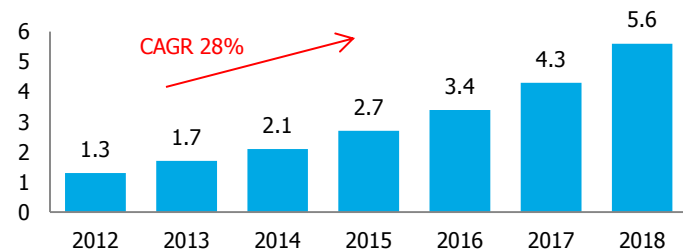
Local opportunities:

- 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



POTENTIAL INVESTORS

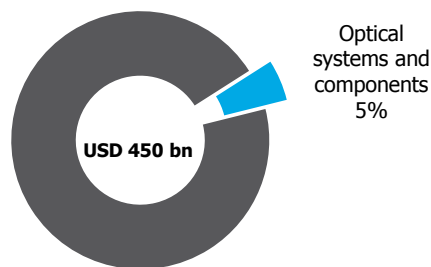
Major manufacturers of optical equipment from China, Europe.

Possibility of establishing a joint venture with one of the optics manufacturers from Belarus, reorienting military production toward consumer segment.

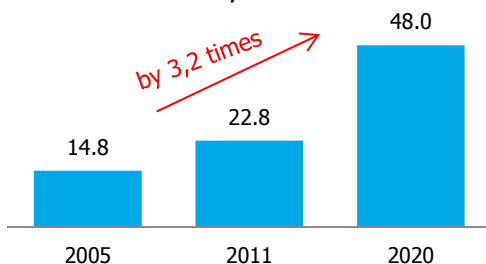
INVESTMENT OPPORTUNITIES

- 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%**.

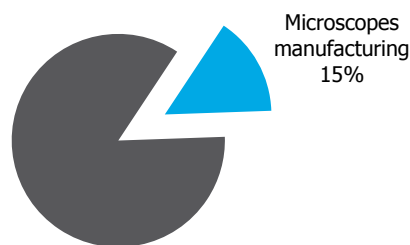
World photonics market



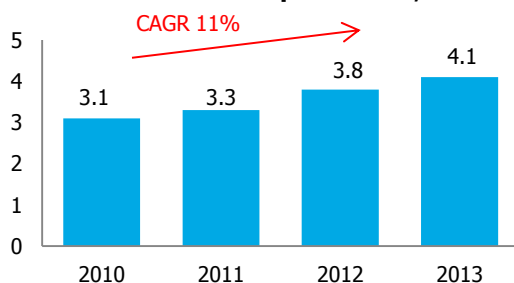
Optical systems and components market, USD mn



World optical equipment market



World microscopes market, USD bn



Number of outpatient care centers in Russia

