



## MANUFACTURING OF LASER EQUIPMENT FOR METAL PROCESSING

### 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, 2<sup>nd</sup> 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 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%**.

### 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%**.

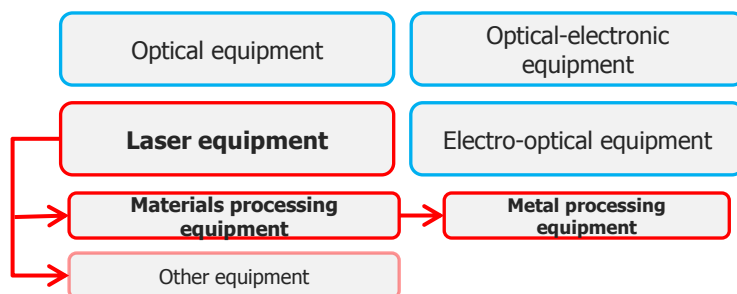
#### Internal market of Belarus:

- 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.

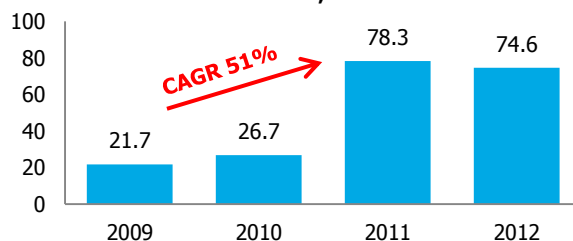
#### BRIC countries market:

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

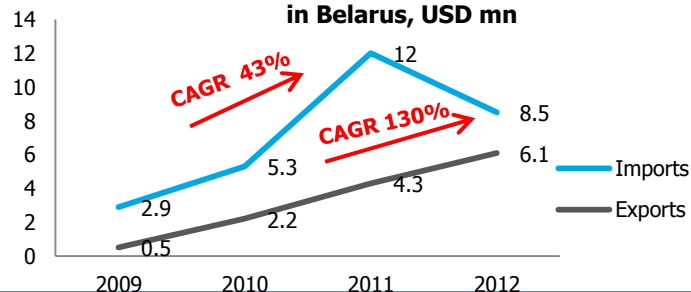
#### Major segments of photonics market



#### 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.

## POTENCIAL INVESTORS

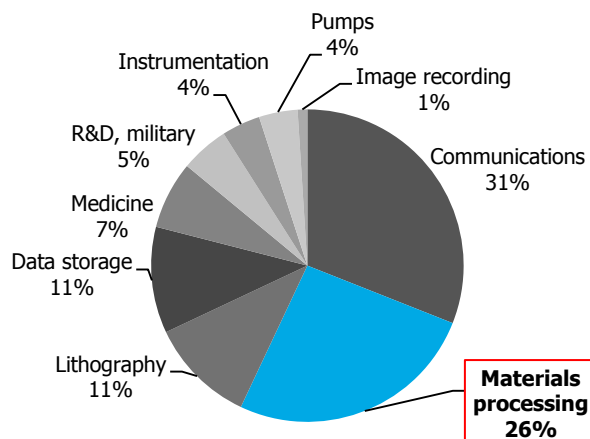
Special-purpose venture funds.

Branded manufacturers of laser equipment (Russia, USA, Europe, Japan, Taiwan).

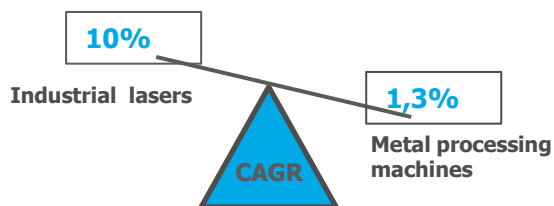
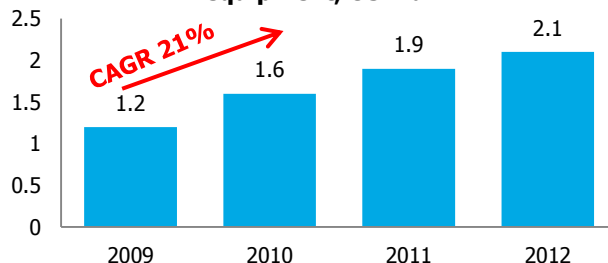
## INVESTMENT OPPORTUNITIES

- Capex for building laser equipment manufacturing plant on average totals **USD 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%**.

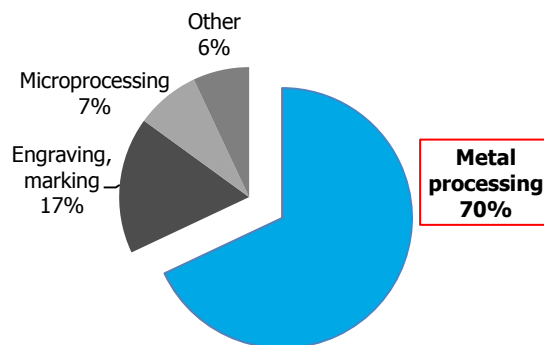
### Global laser market by application



### World market of laser equipment for materials processing, USD bn



### World market of laser equipment for materials processing, main segments



### Lasers for metal processing equipment

