

## Ferrobot SP Ltd

**Volume of investments required: \$ 75 thousand**

### Use of funds

R&D - 50%

Acquisition of fixed assets - 20%

Product upgrade - 20%

Marketing - 5%

Acquisition of current assets - 5%

### Company profile

1. Date of establishment – November 2003.
2. Size and source of investment to date – \$ 50 000, FASIE.
3. Production – magnetic-optical non-linear laser components, ferromagnetic memory on crystal silicon.
4. Target market – laser modules, light modulation systems, computer technologies, communication engineering, adaptive optics.
5. Sales 2004 – \$ 5 000.
6. Description and value of assets – \$ 250 000 – technology equipments, devices.
7. 8. Goodwill and intellectual property rights – patent on ferromagnetic material: Japanese patent #2000-261367, July 7, 2000; World patent (USA, 20 European countries) #PCT/JP01/07408, August 29, 2001. Inventors – scientists from Ioffe Physico-Technical Institute and Tokyo University A&T, registered proprietor – Japan Science and Technology Corporation. Patent novelty in Russia has been verified.
8. Signs of public recognition – Winner of the “Start” program, diploma for participation in the exhibition-congress (St. Petersburg, June 2004), Medal for participation in the week of “High technologies in St. Petersburg”; Semi-finalist in the BIT2003 contest, the prize of audience recognition. Discovery of the new ferromagnetic material – Award from the Magnetics Society of Japan in 2001; Outstanding Poster Award from the Materials Research Society of the USA in Fall 2000.

### Owners

Legal entity:	
Ioffe Physico-Technical Institute of Russian Academy of Sciences	25%
Individuals	75%
Share of government property	0%

### Products characteristics

The essence of innovation is in a final adjustment of plan targets by commercialization of the memory cells on silicon. The ferromagnetic substance layers will be employed for development of spin injectors on magnetic memory devices based on silicon technology. Ferromagnetic chips (FM chips) will have a capacity of some hundreds Giga Bytes with a processing speed exceeding the present types of magnetic memory as a flash memory. The size and energy consumption is many times as low as in existent hard drives, so they can displace the drives in computers.

### Markets & Competition

Ferromagnetic memory devices under R&D:

	Data	Products/services of exhibiting company	Alternative 1	Alternative 2
2005	Geographical Region – USA, Japan. Market size \$ 10.6 billion..			
	Company market share \$ th./%	0/0	7.53 bil. / 71% (5 leading companies)	3.07 bil. / 29%
2009	Geographical Region – USA, Europe, Japan. Market size \$ 25 billion			
	Company market share	65 mln. / 0.25%	17.75 bil. / 71% (5	7.25 bil. / 29%

	\$ th./%		leading companies)		
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Manufactured laser crystal products:

Products		Spatial Light Modulators	MO Optical Parametric Oscillator	Thin Films Modulators
2004	Company market share \$	0.005 mln.	0	0
2009	Company market share \$	1.1-1.2 mln.	0.1mln.	0.5 mln.