

Microbor LTD

Volume of investments required: **\$ 4 000 тыс.**

Intended use of investment required:

R&D	10%
Fixed assets acquisition	25%
Marketing	25%
Working capital	40%

Company profile:

1. Date of establishment - April 01, 2002
2. Stage of development - Start-Up
3. Size and source of investment to date - \$ 2,000 th. - own funds
4. Industry - high-performance metalwork (HPC)
5. Target market - machine building, construction, repair works, oil and gas branch.
6. Sales in 2003 - \$ 5 th.
7. Description and value of assets - \$ 265 th. production equipment
8. Intellectual property rights - License of Scientific and Research Institute of Physics of Solid Body (Minsk) over the production use of the catalyst synthesis of Cubic Boron Nitride (CBN)

Owners:

Microbor Technology Limited (UK)	100%
Share of government property	0%

Management and key personnel:

Timofeev, Alexander Ivanovich - The President, 33. Major in physics, additional education - legal. Obtains sufficiently miscellaneous qualification, specializes in management of investments, management of corporate finances, operative management. Has decent experience in management of large companies in the capacity of the general director and Board member. High professional competence in the field of solid body physics, author of several elaborations, sophisticated electronic complexes of sound working.

Tkatchenko, Valery Valeryevich - Director General, 39, higher technical education (MVIZRU), has copyright certification, is an author of several scientific articles and publications. Headed the staff over 50 persons, has successful experience in directing large scientific and technical commercial projects.

Products characteristics:

Microbor Company, basing on the fundamental technology of CBN power's synthesis, has elaborated the technology for the production of unique composite material (compact of CBN powder), the peculiarity of which, if compared with the competitors, is high solidity, heat resistance and impact resistance.

Totality of such features allowed Microbor company manufacture the cutting tool for the working of the vast range of metals by means of cutting, including those intractable. Such tool has high durability and performance together with the possibility of universal application within rough and semi-finishing metalworking.

Comparison with similar products:

Characteristics	Microbor	Hard alloy	Ceramics	usual CBN
Technical hardness impact resistance heat resistance	According to these parameters Microbor tool is sufficiently better than hard alloy, ceramics and usual CBN (cubic boron nitride – material for the production of tools).			

Operational resistance (parts) speed (m/min.) supply (mm/turn) cutting depth (mm) use of lubricating liquids number of runs	In comparison with the competitors it is a universal tool, capable to work vast range of materials. Moreover, total performance of MICROBOR tool is from two to ten times higher, in particular as per: resistance, 1,5 - 3 times; cutting speed: 2-3 times; supply: 2-5 times; cutting depth: twice; one of a few tool, capable of working without lubricating liquid allows working the part for 1 run (against 2 –3 of simple tools)
Price, \$	Relatively decreases the metal-working expenses. Saving constitutes from several hundreds of \$ ths. upon to tens of \$ mln. depending on the operation and scales of consuming plant (subject to individual calculation). At the same time the price on the tool (itself) will not change if comparing with the tool, used by the consumer earlier.

Cost-effectiveness of MICROBOR tool certified by the number of tests, performed at the leading machine building enterprises, is due to the application of new material, with improved physical characteristics. Such features allow MICROBOR tool achieving high level of technical parameters, suitable for the needs of high-performance processing (HPC). Microbor company keeps to the policy of sales of final PERFORMANCE, and not of number of tool's pieces. Upon completion of stages on implementation and selection of optimal cutting modes, we guarantee the customer the production of fixed number of parts for the fixed amount paid for the tool itself, in case of any actual number of MICROBOR tool used. The amount of expenses for the purchase of Microbor tool does not exceed the amount of expenses for the purchase of a usual tool, needed for the production of the same number of parts, with the great increase in performance of the working.

Markets/Competition:

	Characteristics	MICROBOR	Hard Alloy	Ceramics	usual CBN	Others
	Geography – World market volume \$ 5.7 bill.					
2004	Market share \$, ths./%	50 / 0,00...%	3 990 000 /70%	456 000 /8%	285 000 / 5%	969 000 / 17%
	Geography – World market volume \$ 6.3 bill.					
2008	Market share \$, ths./%	17 000 / 0,003%	4 118 000 / 65%	824 000 / 13%	634 000 / 10%	\$ 760 000 / 12%

At present, the most popular tool material is hard alloy, occupying more than 2/3 of market. However, according to the data of market report from Frost&Sullivan, the use of hard-alloy tool has greatly decreased (by 8%). The tool materials, the use of which has sufficiently increased, include cubic boron nitride (increase from 2 up to 50%). Actually the production of ceramics remained on the same level. Such growth (actually doubling) of hard and super hard tool materials' production is due to, no doubt, incoming sharp increase of the use of intractable materials in production, application of high-speed modes of metalworking. This also include the transfer of any machine building companies towards to use of new progressive technologies of metalworking, such as "hard turning", "dry processing" (without lubricating liquid) and

high-performance (HPC) of tempered and intractable materials. Such tendency, according to specialists, will remain in future up to 2009.