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The Next Big Thing Is Really Small

Nanotechnology and the Future of Big Business

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MAIN IDEA

Nanotechnology is the manipulation of matter at the atomic level to create better materials, devices and systems. Within the next few years and into the foreseeable future, nanotechnology will be introducing impressive new materials that will impact directly on a large number of industries – manufacturing, health care, energy, agriculture, communication, transportation and electronics. By 2010, the market for nanotechnology products and services will reach $1 trillion and will create 800,000 - 2 million new jobs.

In other words, the arrival and commercialization of nanotechnology products will impact every business and dramatically alter the general business climate. It is the next big thing which will hit the marketplace, and therefore, everyone needs to understand what nanotechnology is all about.

What Every Business Needs To Know About Nanotechnology

1. What is nanotechnology?
2. Why is it important for business?
3. Who's currently investing in it?
4. Where is nanotechnology at today?
5. What's in the pipeline for the future?
6. What should we be doing about it now?

"The impact of nanotechnology on the health, wealth and lives of people will be at least the equivalent of the combined influences of microelectronics, medical imaging, computer-aided engineering and man-made polymers in the twentieth century."

– Richard Smalley, winner of the 1996 Nobel Prize in Chemistry

"Because of nanotechnology, we will see more change in our civilization in the next thirty years than we did during all of the twentieth century." – Mike Rocco, senior adviser for nanotechnology at the National Science Foundation

A nanometer is one-billionth of a meter. At this level, it becomes possible to manipulate individual atoms and molecules to create materials and devices which have specified characteristics. The essence of nanotechnology is that new materials can be developed which will perform to exact specifications rather than being stuck with how naturally occurring materials perform.

Due to the fact nanotechnology will make available startling new raw materials, it alters the technology fabric of business. It will change the very nature of the opportunities which are available to be commercially exploited. In short, nanotechnology will change what has become standard operating procedure for most if not all industries.

Every major government in the world and many large corporations are investing in nanotechnology. The U.S. Government alone has increased nanotechnology funding from $422 million in 2000 to $710 million in 2003. Major corporations are outspending the government by a ratio of 2-to-1. Venture capitalists are also increasing their investments rapidly.

Nanotechnology is already starting to change the face of a number of industries, many of them quite ordinary – vinyl flooring, windows, coatings, mirrors, drill bits, lubricants, printers and others. Some companies are already starting to try and build a competitive advantage on the practical real-world applications of nanotechnology.

Over the next few years, the projected nanotechnology breakthroughs will be:

2004 and 2005 Nanotechnology will become faster, smaller, cheaper and better as new equipment and new knowledge expands the number of companies who will be able to be active in this field.

2006 - 2008 An avalanche of nanotechnology products will start coming to market. These technological innovations will transform the economic landscape and hit the semiconductor, publishing, advertising, food and clothing industries with such impact they will be permanently transformed.

2009 - 2013 Nanotechnology will take control of the economy. The majority (90-percent or more) of the world's economic value-added commercial activities will become centered around and integrate nanotech products.

2013 and beyond The world will become smaller and smarter as new uses will be found for nanotechnology that would have been in the realm of science fiction just a few short years ago.

Clearly, nanotechnology is going to be an important part of everyone's business future. Therefore, it's not too early to start thinking about the changes which will be required in the years ahead. Start planning now how to take advantage of nanotechnology rather than being swamped when it arrives with full force in the economy.

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