

GLOBALIZATION AND INNOVATION - A NEW PLAYING FIELD.

In the past few decades the challenge of Globalization has increased – and much more attention is needed.

Inexpensive telecommunications and computer technologies have made it possible to work seamlessly across borders - opening the door to outsourcing strategies, research collaborations, manufacturing alliances, new forms of networking and the need to rethink the way you organize your business, adapting to the “New Way” of doing business.

Despite all of the unresolved issues facing the WTO meeting in Hong Kong on Dec 13th this year, trade liberalization has nevertheless put developing countries like China, India, Russia and Brazil as major competitors on the global scene with enormous implication for the rich countries in the Developed World, including USA and EU.

The ability for developing countries to compete is made possible due to fundamental chances like:

1) A New Way to Connect

- a) The World Wide Web, enabled by PC's, e-mail, and Web browsers
- b) Digitalization and Fiber Optic Network
- c) Cell phones

2) A New Way to Collaborate

- a) Outsourcing – In-Sourcing
- b) Off-Shoring – Supply-chaining
- c) New Organizational Structures - Vertical to Horizontal

3) A New Cost structure

The yearly wage level for an unskilled worker in China and India is 10-30 times below the levels in Western Europe and USA. Even more striking – for highly skilled knowledge workers - salaries in China and India are 5-10 times lower than in USA.

4) A New group of Players

The total Global Economic Population in 1985 was approximately 2.5 Billion people. Fifteen years later, this population has increased to approx 4 Billion, with the inclusion of China, India, Russia and Eastern Europe.

PHARMACEUTICAL AND BIOTECHNOLOGY INDUSTRY – ADAPTING TO GLOBALIZATION CHALLENGES.

The Pharmaceutical and Biotechnology Industry has over the years adapted to the globalization challenge. To take advantage of the opportunity, they have strategically identified the Capabilities that give them a competitive advantage and focused their own resources and talent on these. The activities/processes they do not consider core are outsourced/off-shored.

The First Wave of outsourcing/off-shoring was primarily in manufacturing, taking advantage of the low cost of labor.

The Second Wave has been outsourcing/off-shoring of activities to countries where scientists and engineers (highly educated Knowledge workers) are available at a fifth of the costs in USA and with productivity and innovation at a very competitive level.

The Third Wave is the establishment of Centers of Excellence (R&D Centers) with a complete infrastructure, connected to the Global Network and collaborating on a 24/7 time schedule.

Several countries – big and small – have taken advantage of this “New Way of doing Business” by creating an attractive environment with financial incentives for businesses from many different industries. Especially countries like Ireland, Singapore and lately India and China have had success in attracting business.

The Pharmaceutical and Bio-Technology industry has for many years been active in establishing manufacturing in Ireland, Singapore, India and China. In the last ten years, they have created service centers for preclinical and clinical work in these countries and lately they have established R&D centers in Singapore, India and China with great success.

The Challenge for Denmark is: How can we meet the challenge of not only competing with the low cost structure in these markets, but also facing highly educated knowledge workers – scientists and engineers – who are prepared to work at a fifth of the salary and with a productivity and innovation that matches ours?

“Past Success is no Guarantee for Future Success”.

As a consequence, Denmark must select “Niches” where a competitive advantage can be maintained based on Knowledge, Innovation, Creativity, Risk-taking and adequate funding. Areas like High Technology in Science and Engineering (Biotechnology and Nanotechnology), Information and Communication Technology, Superior Design, Skillful Marketing and Trading are a few examples where Denmark can and should be a World Class competitor.

A fundamental basis for Denmark as a World Class Competitor should be a focus on:

- 1) Increased investment and flexibility in Education System, with more emphasis on Science and Engineering.
- 2) Increased investment in R&D.
- 3) Partnership between Universities and Private Sector Research with incentives for effective Transfer of Technologies and achieving commercial results.
- 4) Creating “Centers of Excellence” to attract World Class Expertise and as “meeting points” for world class scientists.
- 5) Making a serious effort to attract foreign investments with emphasis on financial incentives.
- 6) A Cultural change to a more flexible Capital Market – Attract Risk Capital from Venture Capital and Private Equity Firms.

PERFECTION IS NEVER ACHIEVED – ONLY ENDLESSLY PURSUED!

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