



**THE OECD GLOBAL CONFERENCE ON
“ENHANCING THE ROLE OF
SMALL & MEDIUM SIZED ENTERPRISES
(SMEs) IN GLOBAL VALUE CHAINS”
31 May – 1 June 2007, Tokyo, Japan**

Scientific & Precision Instruments Industry

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National SME Forum



Scientific Instruments

- ***Analytical Instruments***
Used for chemical analysis, Chromatography, Spectroscopy & Electro-chemistry
- ***Bio-Chemical Analysis Instruments***
- ***Microplate Readers***
- ***Medical Instruments***
- ***Explosive Detectors***
- ***Bio-Chip Instruments***
- ***Others***

Precision Instruments

- ***Optical Instruments***
- ***Surveying, drafting & navigational Instruments***
- ***Meteorological & geophysical Instruments***
- ***Guidance systems***
- ***Surgical / dental / ophthalmic instruments***
- ***Photographic***
- ***Military & Aerospace Instruments***
- ***Others***



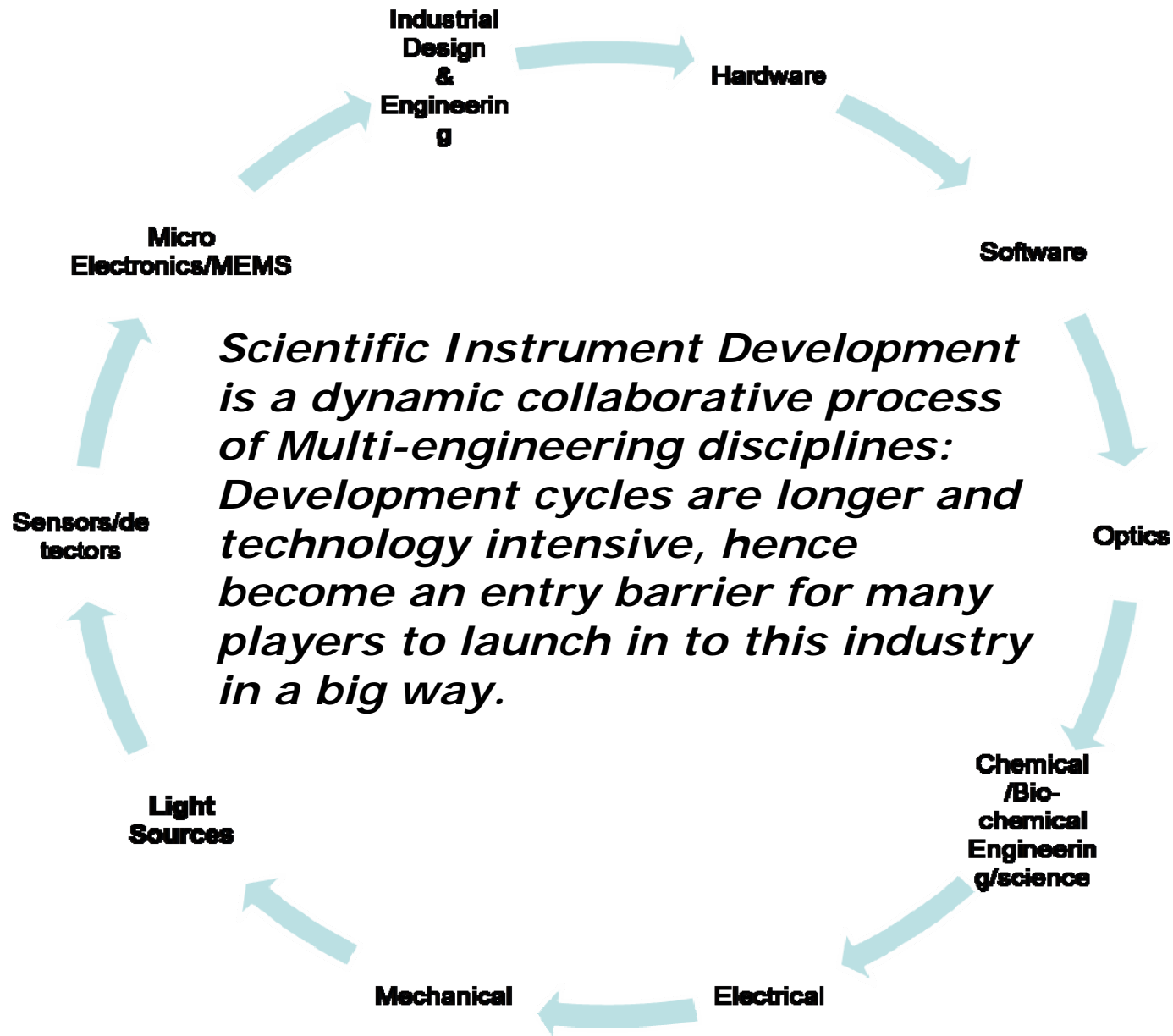
Instrument Industry Profile

- The *Analytical instrument* market worldwide is estimated around US\$ 32 Billion (2006) growing around 7 to 8%
- The top 25 companies have 50% of the worldwide revenues
- The largest 50 account for 70% sales and the rest comes from a large number of SME's
- 80% of market dominated by companies from USA, Japan and EU



Instrument Industry Profile

- Highly Mature Industry
- Research is mostly done in Developed countries
- Product development & manufacturing in developing countries.
- SME's are technology incubators
- Multidisciplinary Engineering





Indian Scenario

- 60's lot of work went into development of Analytical Instrumentation, mainly in Government Research Labs.
 - *This was mainly due to sanctions and self reliance objective set out by the government.*
- Very few of these technologies were ever commercialized.



Indian Scenario

- Dependence on Foreign products grew because of non availability of indigenous technology
- Most of the Indian companies even though initially started by developing own technologies could not keep pace with technological developments as all were in SME segment.



Case Study

- Elico an SME established in 1960
- Designs, develops, manufactures Analytical Instruments.
- Pre WTO - Majority Sourcing within the country /In-house (high duties)
 - *Mechanics, Optics, Electronics, Software*
- Developed low end technologies.



POST 1997 (WTO)

- Creating an environment to become a innovation led organization
- Developing High Tech/Value add products
- R&D as profit center
 - *Partnerships with competitors*
 - *Design, Development, Manufacturing & Software development*
- Sourcing worldwide (*US, EU, Japan*)
- Internet as a tool to
 - *Market, Source, Research, etc.*



Concerns

- Highly Competitive market
- HR Competency
- Availability
 - *Material (high cost due to low volume)*
 - *Technical Expertise*
- Infrastructural Issues
 - *Logistics*
 - *Procedures*
- Innovation and time to market



Recommendations

- *Developing a National Instrument Technology & Development Plan*
 - Focusing on New generation technologies
 - Mechanisms to encourage innovation & IPR generation
 - Innovative Funding mechanisms
 - *Commercialization of IPR's*
 - *Technology up-gradation*
 - Infrastructure



Recommendations

- *Create Centers of excellence with international cooperation for basic research and joint developments*
 - Sensor technologies, Optics, Materials, Fluidics, Electronics, Nanotechnologies (MEMS), Instrument Testing facilities
- *Human Resource Development*
 - Importance for Quality of human resource



Recommendations

- *Industry Institute interface*
 - Facilitate and create right environment for industry institute interface
 - Develop Incubation centers
- *Simplifying EXIM rules and procedures*
 - improvement in efficiencies
- *Developing Business Networks & Partnerships*
 - Industry Associations & International Partnerships



INDIA GLOBAL SUMMIT ON SMEs 2007

Event : International Conference cum Exposition

Date : 30 – 31 October 2007, New Delhi, India

Organizers :

CII Confederation of Indian Industry &
Ministry of Small Businesses, Government of India

Sessions at the Conference :

- **Enabling Policies**
- **Role of Finance/Innovative Finance & Measures for Risk Sharing**
- **Value Addition through Information and Communication Technology**
- **Global Outsourcing Opportunities**
- **Global Small Enterprise**



Thank You

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