

IT Hardware & Electronics: Framework for Global Competitiveness & Promotion of Innovation

Knowledge Creation & Commercialization

- Set up a semi-conductor FAB with established technology to support fabrication of varioties of chips to meet the requirement of high volume products as well as the requirement of the fab-less design companies on pay per use basis.
- Focused scheme to induce indigenous production of critical raw-materials like PCB, precious metals & alloys etc.
- Create a national implementing agency to undertake a scheme for identifying at-least 10 champion user categories for electronic & communication equipment and develop an ecosystem for supporting manufacturing for of electronic components for these sectors.
- Formulate an agency to encourage and incentivize R&D efforts in the industry (On the lines of Israel's "Office of Chiat Scientist" model). The major objective of the agency should be to provide R&D grants to Indian companies that create Indian Products and IPR.
- Common research facilities should be made available for SMEs to enable
 a cost effective mechanism for co-development of products with
 enhanced utility and technology, thereby evening sustainable
 development of the industry.

Inclusive Innovation

- Focus on establishment of "Electronics Manufacturing Clusters (EMCs)" across the country for enhancing the competitiveness of electronics hardware manufacturing sector.
- Skill development scheme for workforce at supervisory level & below and engaged in assembly operations, sales and service support
- PPP model to be adopted to encourage collaborative research between industry and Academia.

Knowledge Diffusion & Absorption

- A national level scheme for development of organized reprocessing for Π hardware & electronics sector should be implemented.
- Set up a research center for embedded systems and semiconductor technology.
- Focused scheme for skill development in high-tech manufacturing. A
 three-pronged approach towards skill development in high-tech
 manufacturing for the electronics hardware manufacturing industry is
 proposed: (Regional Hi-tech Centers, curriculum updation in
 engineering colleges, train the trainer initiative.)
- Set up a cell with participation from research agencies, industry
 associations and industry for setting up technical standard for
 products to be sold in India to ensure quality products are sold within
 the country.
- Database creation in areas like quality standards, technology manuals, list of critical inputs, list of global manufacturers, etc.

Support Mechanisms

Skills

 Developing skills in areas like: Reading circuit diagrams and populating boards, Surface Mounted Technologies (SMT), LCD technologies, semiconductors,

nanotechnology, PLC and

robots etc.

- Policy
- Provide policy support in the form of improving duty structure for raw materials:
- Formulate a local procurement policy for electronic components.
- Explore possibility of FTAs with Hong Kong, USA, EU, Mexico, etc.

R&D

 Research in the following areas: Micro motors, discrete semi-conductors, mounted piezoelectric crystals, photosensitive semiconductor devices etc.

Infrastructure

- Electronics manufacturing clusters
- R&D institute
- · Semi-conductor fab
- Common Research Facilities for SMEs

Collaboration

- Collaboration for semiconductor fab
- Collaboration for domestic raw-material manufacturing
- · Collaboration for R&D