

Semicon 2.0

Prelims: Current events of national and international importance | Economy

Why in News?

Recently, India has launched Semicon 2.0, a comprehensive programme to strengthen the country's semiconductor design and manufacturing ecosystem.

- **Semicon 2.0** - Expansion of the India Semiconductor Mission (ISM) designed to holistically build a complete chip design and manufacturing ecosystem in the country.
- **Aim** - To position India as a global semiconductor design intellectual property (IP) hub.

Six Pillars of Semicon 2.0

1. **Design** - Deepen chip design capabilities, focus on IP and system designs.
2. **Machines and Materials** - Incentivise companies in manufacturing and R&D of machines, chemicals, gases essential for semiconductor production, which supports precision manufacturing.
3. **Fabs** - First fab scheduled for **2028**; includes silicon fabs, compound semiconductor fabs, discrete component fabs, display fabs.

Fab - Semiconductor fabrication (fab) plant.

4. **ATMP/OSAT** - Strengthen Assembly, Testing, Marking, Packaging (ATMP) and Outsourced Semiconductor Assembly and Test (OSAT); India emerging as an alternative location for advanced ATMP technologies.
5. **Research & Development** - Current nodes are **28nm-110nm**; focus on developing advanced nodes and technologies in collaboration with leading R&D centres in India and abroad.
6. **Talent Development** - 315 universities engaged in chip design training with latest EDA tools, further deepen the training in college.

Reference

