



Semiconductor Facility in UP

Why in News?

Recently, it was announced that **Uttar Pradesh** is set to have its first [semiconductor manufacturing unit](#), marking a significant development in India's tech sector and positioning the state as a critical player in the country's [digital transformation](#).

Key Points

- **India-US Semiconductor Partnership:**
 - The announcement follows a **Memorandum of Understanding (MoU)** signed between India and the US to collaborate on **chip manufacturing**.
 - The [India-US partnership](#) in semiconductor development will have a far-reaching impact on India's technological advancements.
- **Importance for Digital Transformation:**
 - Semiconductors are critical for India's **digital transformation goals** and will become increasingly visible in daily life.
 - This development is part of a broader initiative to **leverage technology** for India's progress, extending its benefits to **rural and interior areas**.
- **Cybersecurity Focus:**
 - The semiconductor industry is also seen as crucial for strengthening [cybersecurity](#), given the shift in warfare from physical attacks to the **cyber realm**.
- **Economic Impact:**
 - The establishment of this facility will contribute to [macroeconomic growth](#), with India's economy being described as **resilient** and on a strong growth trajectory.
 - The **Indo-US bilateral ties** are now mutually beneficial, contributing to India's ongoing economic development.

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SEMICONDUCTORS

Semiconductors are materials having conductivity between conductors and insulators

EXAMPLES

- **Pure Elements:** Silicon and Germanium
- **Compounds:** Gallium Arsenide and Cadmium selenide

SIGNIFICANCE

- Essential to almost all sectors of the economy - **aerospace, automobiles, communications, clean energy, information technology** and **medical devices** etc.

SEMICONDUCTORS AND INDIA

- **India Imports from:** China, Taiwan, USA and Japan
- **Indian Semiconductor Market:** Expected to reach **USD 55 bn** by **2026**

SCHEMES

- ↳ **Production-Linked Incentive (PLI) scheme**
- ↳ **Design Linked Incentive (DLI) Scheme**
- ↳ Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECES)

OBJECTIVES

- ↳ Encourage semiconductor and display manufacturing in the country.
- ↳ Nurture >20 domestic companies in semiconductor design
Achieve a turnover of > Rs.1500 crore in next 5 years
- ↳ Manufacture electronics components and semiconductors

INDIA'S SEMICONDUCTOR MISSION (ISM)

VISION

- Build a **vibrant semiconductor and display design and innovation ecosystem**

LAUNCHED

- 2021

NODAL MINISTRY

- Ministry of Electronics and Information Technology (MeitY)

TOTAL FINANCIAL OUTLAY

- Rs 76,000 crore

COMPONENTS

- Scheme for setting up of Semiconductor Fabs
- Scheme for setting up of Display Fabs
- Scheme for setting up of Compound Semiconductors/Silicon Photonics/Sensors (including MEMS) Fabs/ Discrete Semiconductors Fab and Semiconductor ATMP/OSAT
- DLI Scheme



Drishti IAS