Modified
Semicon India
Program
An Opportunity for Global
Semiconductor Ecosystem
Semiconductor Ecosystem in India (Since 1985)

India Houses 20% of Global Semiconductor Design Engineers
Vision for New India
Leading value chain through high-tech manufacturing

“India is committed to becoming *the world’s reliable partner in global supply chains*. This is the best time to invest in India.”

‘State of World’ address World Economic Forum, 2022

“India is making *policies keeping in mind the goals of the next 25 years*.

We will work with *stakeholders to understand what more can be done* to build a vibrant semiconductor ecosystem.”

Semicon India, 2022

Shri Narendra Modi
Hon’ble Prime Minister of India
India Leading the Global AI Revolution in Most Parameters

- **1st**: AI Skill Penetration*
- **1st**: AI Skill Penetration - Female*
- **1st**: AI Adoption by Organization*
- **7th**: No. of newly funded AI companies* (2013-21)
- **3rd**: AI Conference & Publications*
- **1st**: Leading all 5 Pillars of Peak AI’s Decision Intelligence Maturity Scale

*Stanford AI Index 2021*
**World’s 3rd Largest Economy by 2027* - India’s Techade**

### Advantage India

1. Fastest Growing G20 Economy
2. Internet Users
3. Start-up Ecosystem

### Tech Start-up Ecosystem

- **~77,000** Registered Startups
- **>25k** Tech Startups
- **3000+** leveraging deep tech including AI
- **$24 Bn+** Total equity investment received by Indian tech start-ups
- **107 Unicorns @ 10 days**

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*Morgan Stanley Report 2022*
~$300 Bn Electronics Manufacturing by 2026
$110 Bn Semiconductor Market Opportunity by 2030

~10% of Global by 2030

CAGR @ 22%

Software Powerhouse + AI + Hardware

$110 Bn

2020

$15 Bn

2025

$64 Bn

2030

$110 Bn

Source: IBS
### Incentive Outlay ~$10 Bn

**Support for Semiconductor and Display Ecosystem**

1. Semiconductor Fabs and Display Fabs
2. Compound Semiconductor and ATMP
3. Design Linked Incentive (DLI)
4. Modernization of Semiconductor Laboratory (SCL)

### Incentive Outlay ~$7 Bn

**Support for Electronics Manufacturing**

1. Production Linked Incentives for Mobile Phones, Components, IT Hardware
2. Capex Linked Incentives for components, sub-assemblies
3. Development of Electronics Manufacturing Clusters

### Incentive Outlay ~$13 Bn

**Support for Allied Sectors**

Production Linked Incentives for
1. Advanced Chemistry Cell
2. Automobiles & Auto Components
3. Telecom & Networking
4. Solar PV Modules
5. White Goods
Semiconductor Fabs (All Technology nodes including legacy)

- **Wafer Size**: 300 mm,
- **Capacity**: 40K WSPM,
- **Investment**: >$2.5 Bn,
- **Minimum Revenue**: $1 Bn

**Govt. of India (Pari passu/Upfront)**: >70%

**State Govt.**: 50%

**Applicant**: >20%
Display Fabs

<table>
<thead>
<tr>
<th>Technology</th>
<th>TFT LCD</th>
<th>AMOLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed Capacity (in panels / month)</td>
<td>Generation 8 or above</td>
<td>Generation 6 or above</td>
</tr>
<tr>
<td></td>
<td>60k or more</td>
<td>30k or more</td>
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</tbody>
</table>

Govt. of India (Pari passu/Upfront) >70%
State Govt. 50%
Applicant >20%
Packaging (OSAT), Compound & Discrete Semiconductor

Incentive (% of Capex)

- Govt. of India (Pari passu/Upfront)
- State Govt.
- Applicant

Eligibility Thresholds

- ~$13Mn
  Minimum Capital Investment for Compound Semiconductor / Silicon Photonics / Sensors Fab

- ~$6.5Mn
  Minimum Capital Investment for ATMP / OSAT Facilities

Technology

- Compound Semiconductor / Discrete / Si Ph / Sensors Fab
  - Wafer Size: 150 / 200 mm
  - Installed Capacity: > 500 WSPM

- ATMP / OSAT Facilities
  - Flip-chip, Embedded Die, 2.5D / 3D, Fan-outs
  - Packaging, SiP, Chiplet etc.
Design Linked Incentive (DLI)

- **Product Design Financial Support**: 50%
- **Deployment Linked**: 4% - 6%

**Tenure**: 5 Years
**Target**: 100 companies

**Infrastructure Support**:
National EDA Grid, IP Core Repository, Prototyping, Post Silicon Validation
25% Fiscal Support (SPECS Scheme) for Ecosystem Development

Incentive ( % of Capex)

- 25%

Eligible Capex
- Plant, Machinery, Equipment, R&D, Utilities, ToT

Tenure
- 5 years

Application Window
- Till 31.03.23

Target Segments
- Semiconductor Grade Chemical & Gasses
- Capital Goods for Semiconductor Mfg.
- Engineering and R&D for Semiconductor Capital Goods
Additional Government Support

Development of High Tech Clusters

Electronic Manufacturing Clusters and Common Facility Centre

Demand Aggregation

Purchase preference in Government procurement

R&D, Skill Development and Training

85,000 manpower Roadmap for R&D, Skill Development and Training
~85,000 Skilled Workforce Development by 2026

Median Age: 29 yrs.  
World’s Youngest nation (till 2070)

1K+ Universities

38 Mn Graduates  
(49% female)

8.4 Mn UGs

0.7 Mn PGs

0.13 Mn PhDs

Science & Engg. Enrolment

High level Committee: India as a Semiconductor Talent Nation
Ecosystem: Semicon City (Dholera, Gujarat)

Location:
Dholera, Ahmedabad District

Salient Features

- **Land:** 10K Acre developed, > 100K Land
- **Water:** 30 MLD → 100 (2 yrs.) → 300 (5 yrs.)
- **Power (Quality):** 5 interconnected Substations
- **International airports by 2025-26**
- **High Speed Train from Ahmadabad planned**
- **5GW Solar Power under construction (300 MW commissioned)**
- **Good Ports connectivity**

Existing Allotees

NICDC - National Industrial Corridor Development Programme
DSIRDA - The Dholera Special Investment Region Development Authority
Million Chips, Billion Dreams!

For more information, please contact the India Semiconductor Mission

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