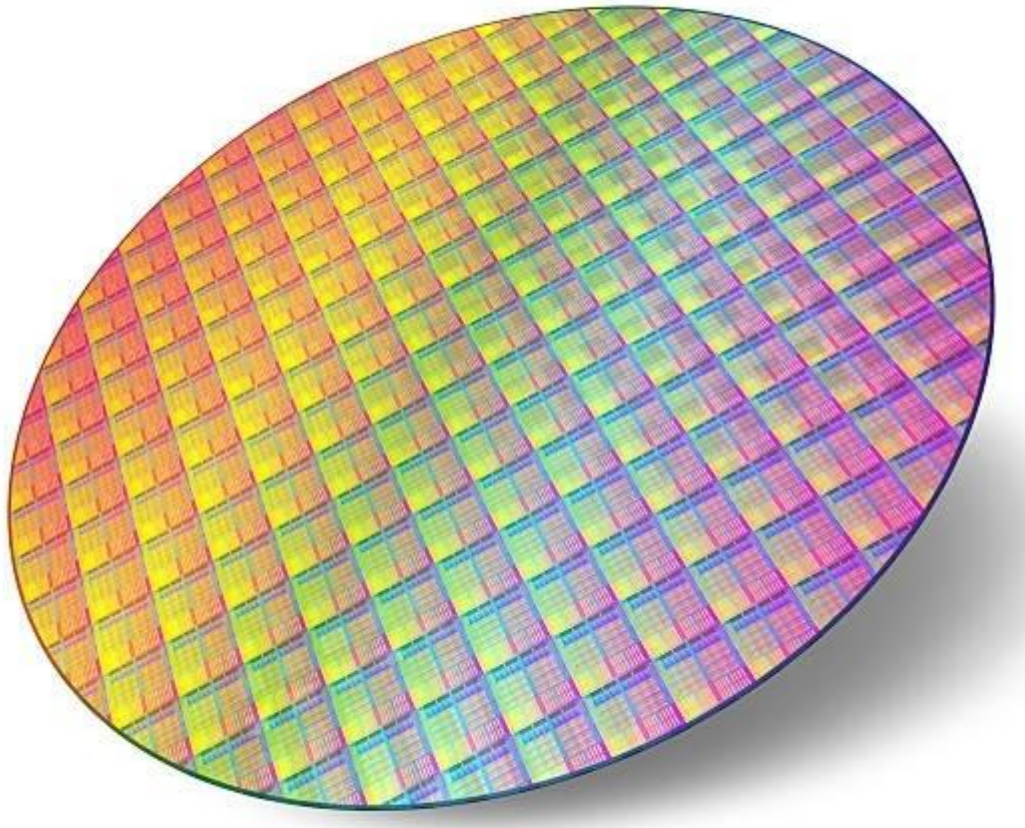
Modified Semicon India Program

An Opportunity for Global Semiconductor Ecosystem



ELECTRONICS INDIA
Billion Needs Million Chips

India Semiconductor Mission

Ministry of Electronics
& Information Technology
Government of India

Semiconductor Ecosystem in India (Since 1985)

Design/Virtual Fab Ecosystem

intel
Qualcomm
AMD
NXP
Infineon technologies
ST life.augmented
GlobalFoundries
Micron
MEDIATEK
BROADCOM
Texas Instruments
NVIDIA

EDA & IP Core

cadence
SYNOPSYS
Mentor
arm

Manufacturing Supplier Ecosystem

Equipment & Tools

APPLIED MATERIALS
Lam RESEARCH
KLA

Strategic Facilities

DRDO
SCL
SITAR
GAETEC

Fab Consumables

INOX AIR PRODUCTS
Linde
Air Liquide
PHOENIX Fuels Life
FINAR
IFFCO

India Houses 20% of Global Semiconductor Design Engineers

Vision for New India

Leading value chain through high-tech manufacturing

Shri Narendra Modi
Hon'ble Prime Minister of India

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

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

'State of World' address World Economic Forum, 2022

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

Semicon India, 2022

Software global leadership led AI & Hardware

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
1. Global Fintech Adopter
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

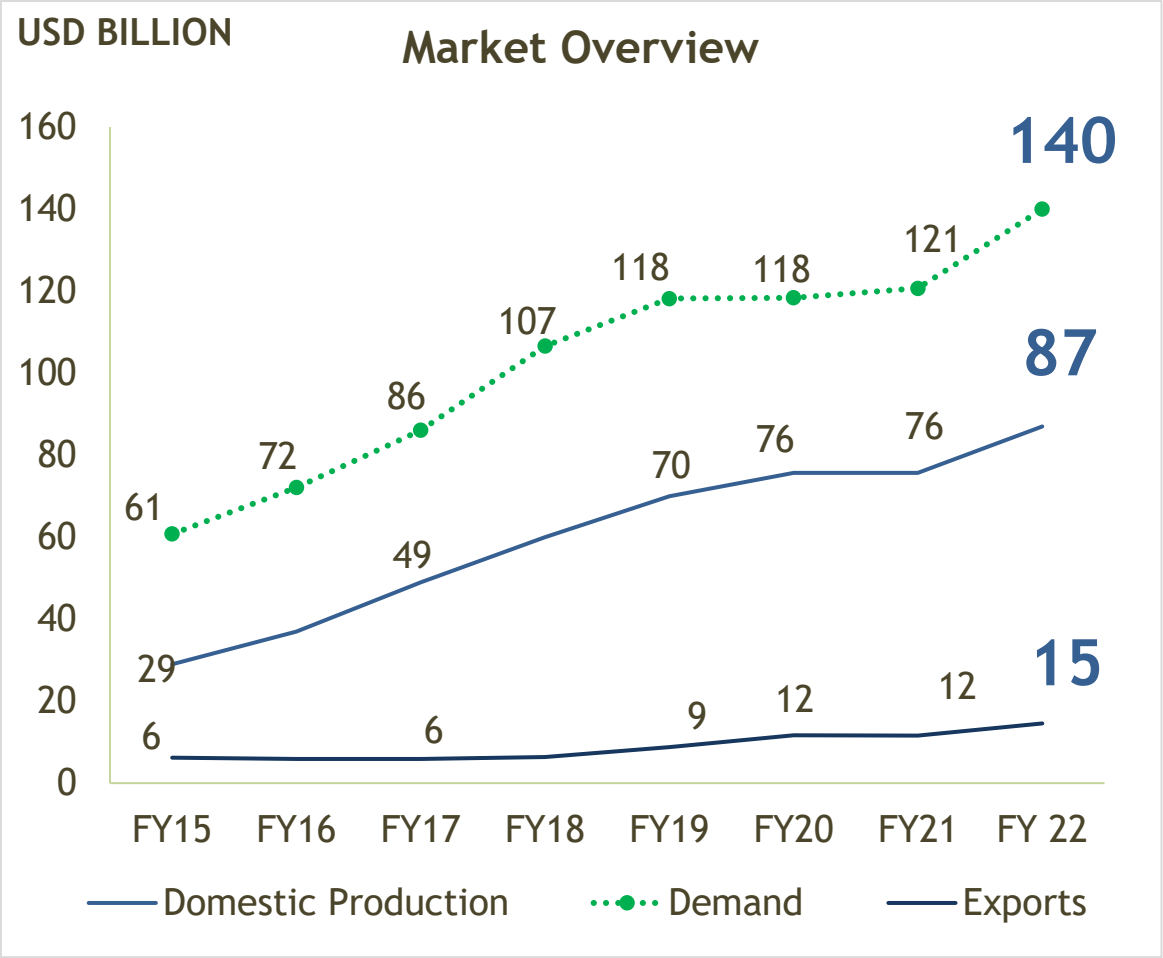
107 Unicorns
@ 10 days

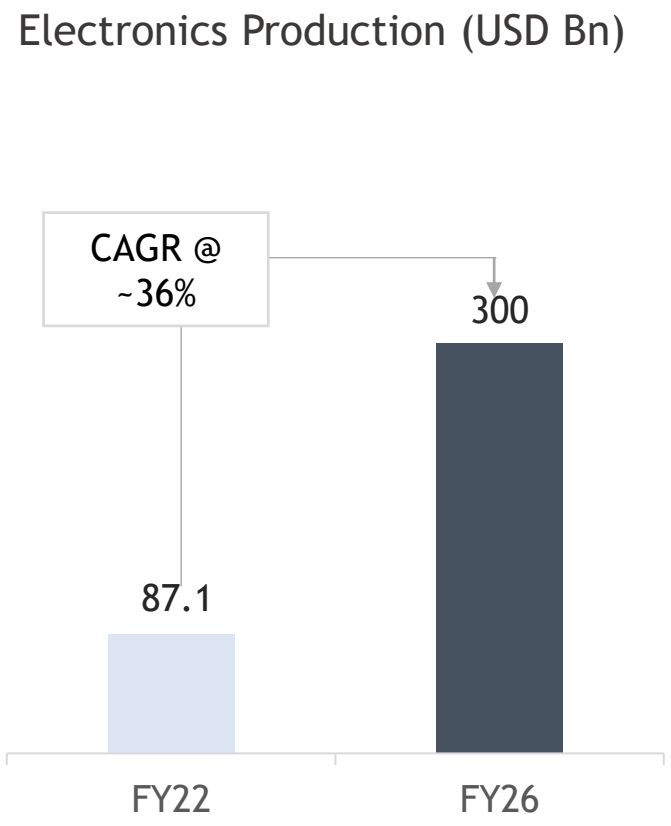
2011

2027 (E)

*Morgan Stanley Report 2022

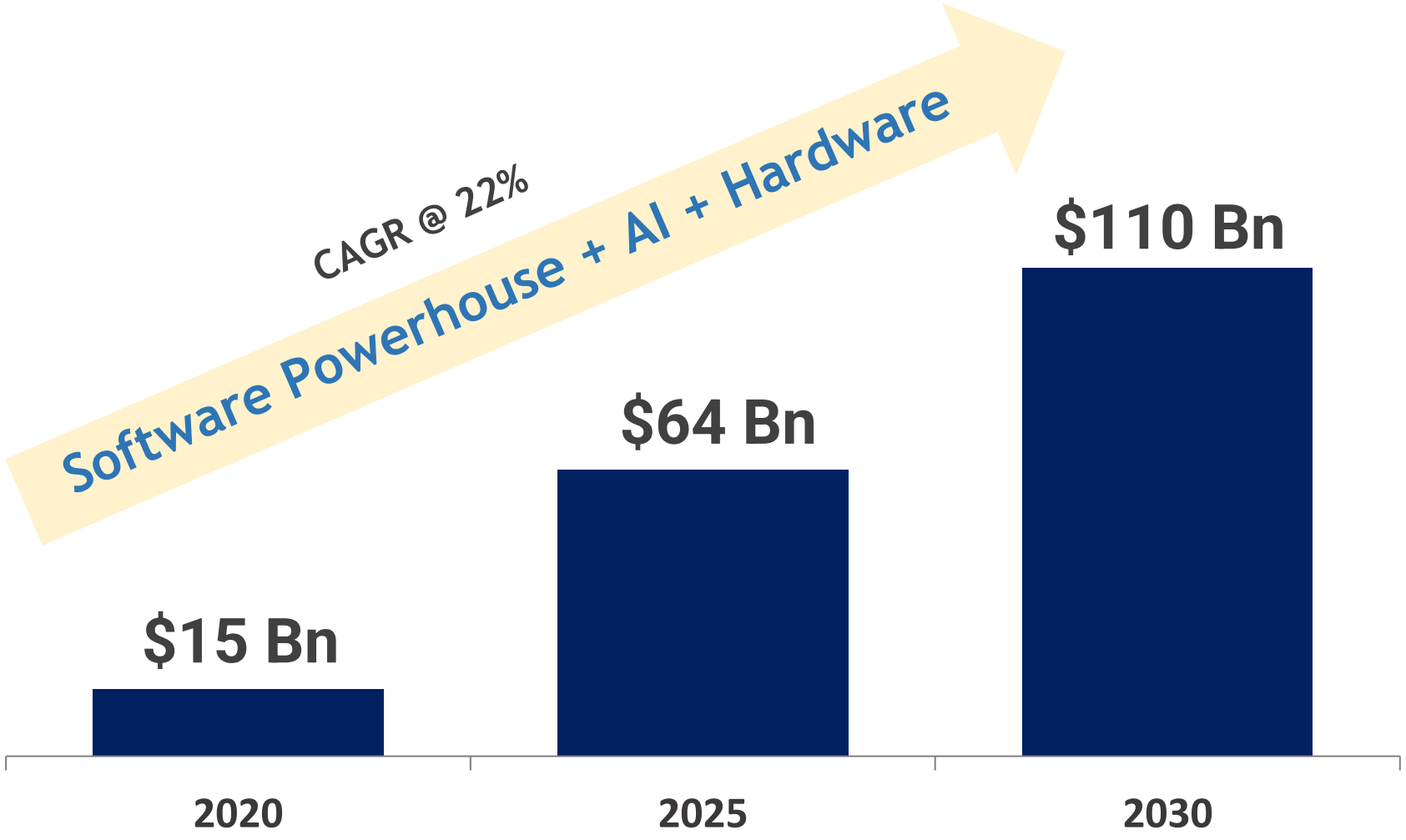
~$300 Bn Electronics Manufacturing by 2026





$110 Bn Semiconductor Market Opportunity by 2030

~10% of Global by 2030



Source: IBS

~US$30 Bn in Fiscal Support

Support to Make India Global Hub for Electronics Manufacturing

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 Semi-conductor 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

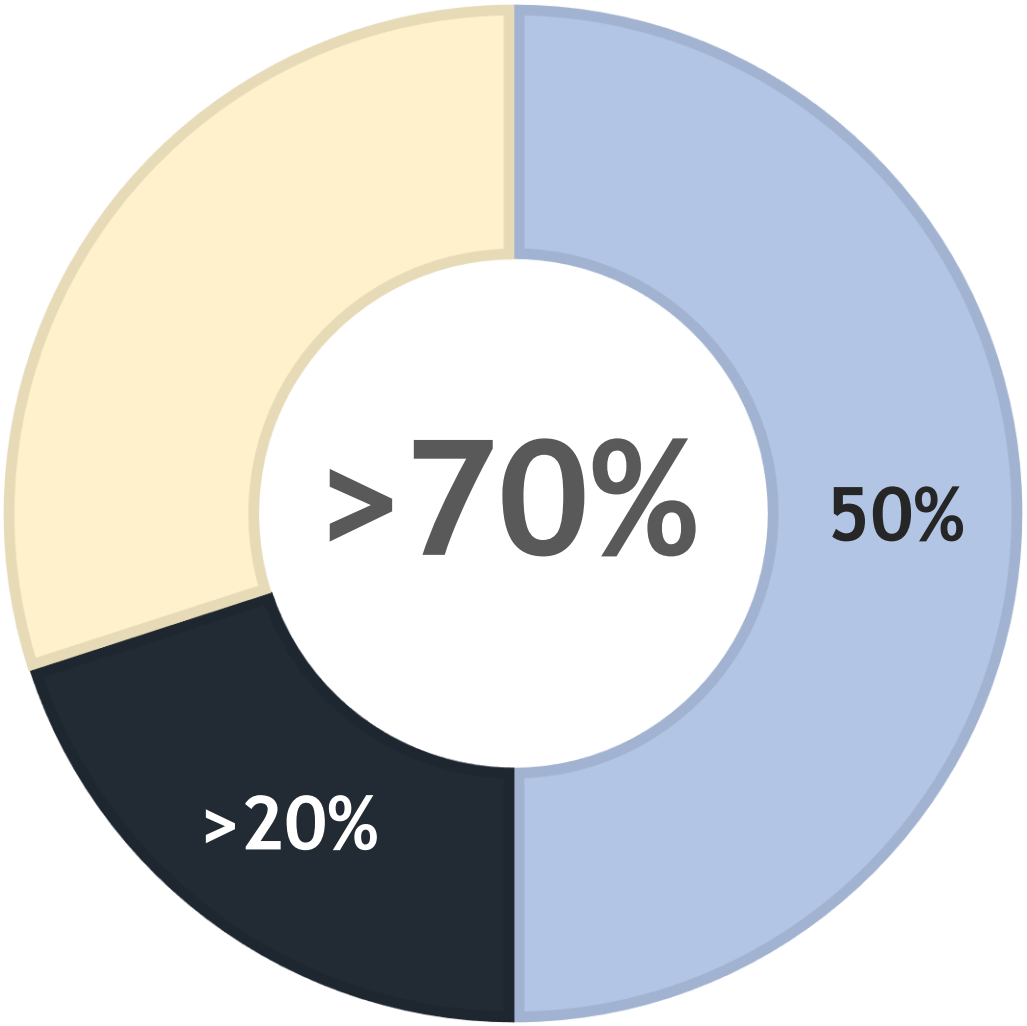
Support for Allied Sectors

Production Linked Incentives for

1. Advanced Chemistry Cell
2. Automobiles & Auto Components
3. Telecom & Networking
4. Solar PV Modules
5. White Goods

Semicon India Policy Framework

Semiconductor Fabs (All Technology nodes including legacy)



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

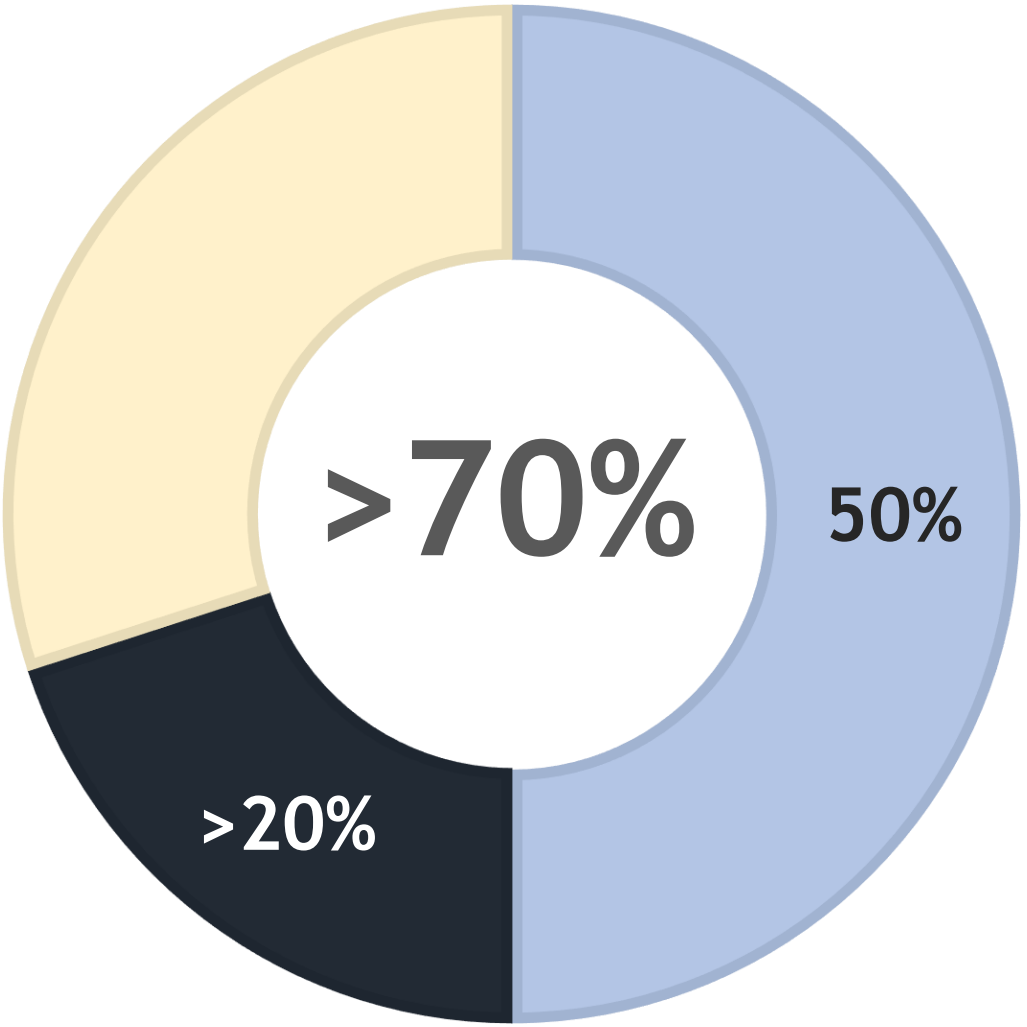
Wafer Size: 300 mm,

Capacity: 40K WSPM

Investment>$ 2.5 Bn,

Minimum Revenue: $1 Bn

Display Fabs

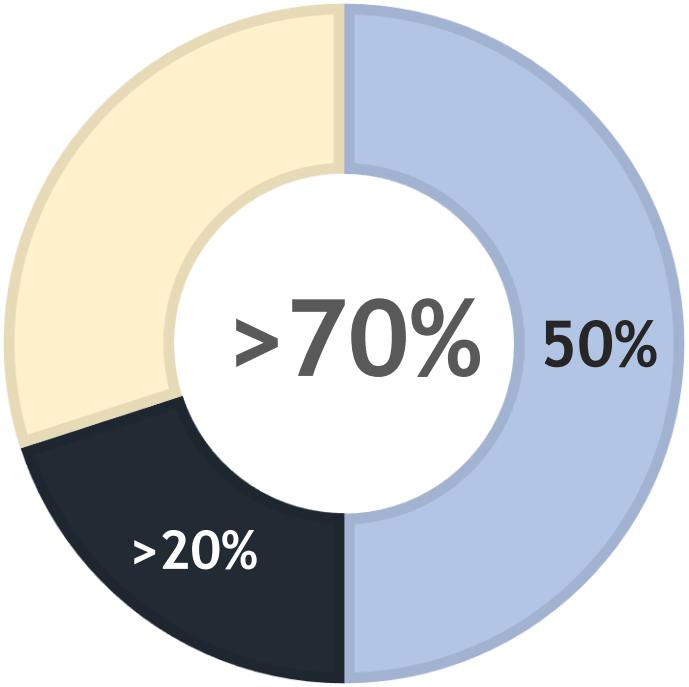


Govt. of India (Pari passu/Upfront) State Govt. Applicant

Technology	TFT LCD	AMOLED
Installed Capacity (in panels / month)	Generation 8 or above	Generation 6 or above
	60k or more	30k or more

Packaging (OSAT),Compound & Discrete Semiconductor

Incentive
(% of Capex)



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

	Compound Semiconductor /Discrete/ Si Ph / Sensors Fab	ATMP / OSAT Facilities
Technology	Wafer Size: 150 / 200 mm Installed Capacity: > 500 WSPM	Flip-chip, Embedded Die, 2.5D / 3D, Fan-outs Packaging, SiP, Chiplet etc.

Eligibility Thresholds

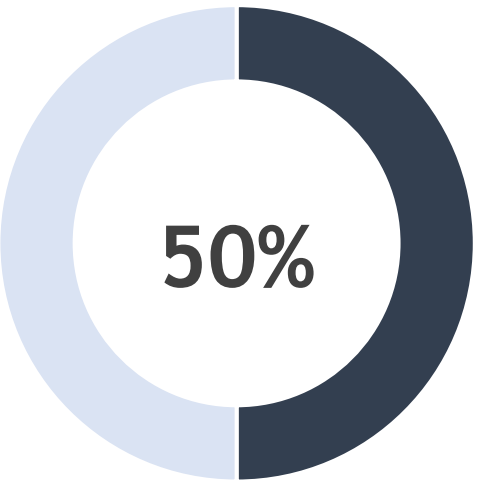
~$13Mn

Minimum Capital Investment for Compound Semiconductor / Silicon Photonics / Sensors Fab

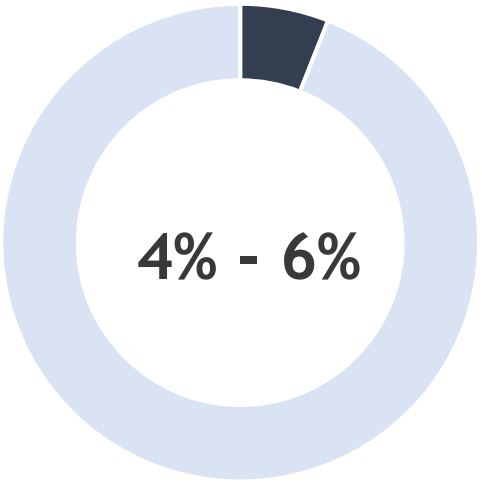
~$6.5Mn

Minimum Capital Investment for ATMP / OSAT Facilities

Design Linked Incentive (DLI)



Product Design Linked Financial Support



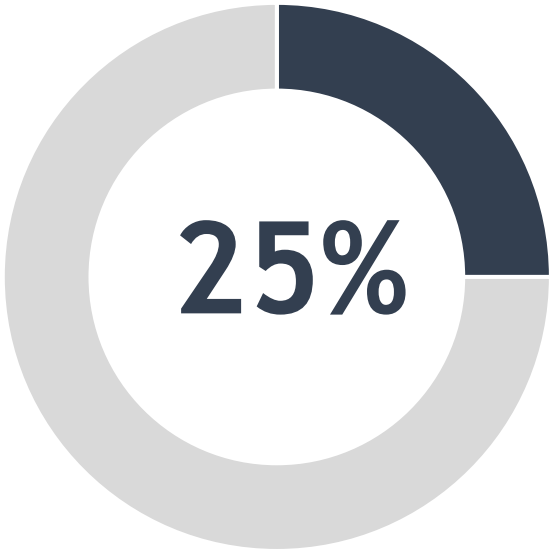
Deployment Linked

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)



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

Tenure
5 years

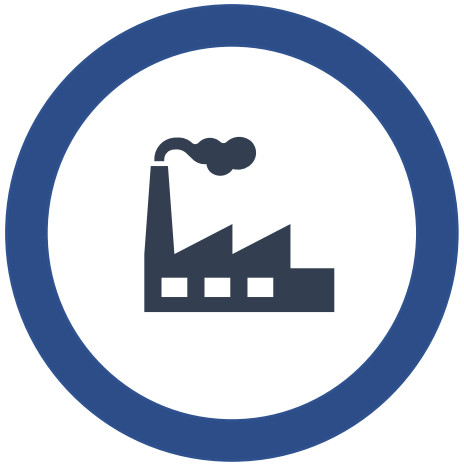
Application Window
Till 31.03.23

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)

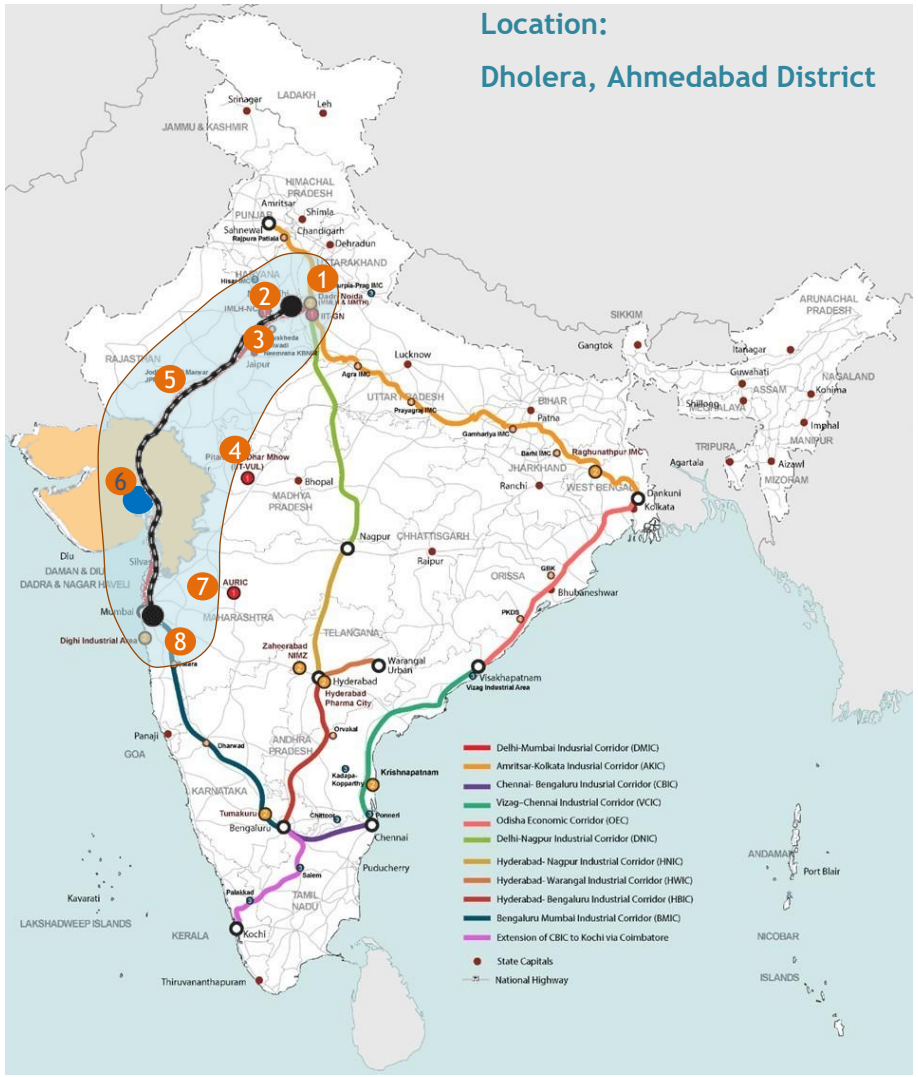
8.4 Mn UGs

0.7 Mn PGs

0.13 Mn PhDs

Science & Engg. Enrolment

Ecosystem: Semicon City (Dholera, Gujarat)



NICDC-National Industrial Corridor Development Programme

DSIRDA-The Dholera Special Investment Region Development Authority

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 ReNew POWER TATA

Make in India for the World

Million Chips, Billion Dreams!

For more information, please contact the India Semiconductor Mission

Website: ism.gov.in, **Email:** ism-dic@gov.in