

GOVERNMENT OF INDIA  
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY  
**RAJYA SABHA**  
**STARRED QUESTION NO. \*367**  
TO BE ANSWERED ON: 27.03.2026

**SKILL DEVELOPMENT AND CAPACITY BUILDING IN ESDM SECTOR**

**\*367. SHRI SANA SATHISH BABU:**

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

- (a) the number of institutions and training centres dedicated to Electronics System Design and Manufacturing (ESDM) across the country, during the last three years, State-wise, particularly in Andhra Pradesh;
- (b) the schemes implemented to strengthen industry-aligned skill development, internships and hands-on training in the ESDM sector, along with funds allocated and utilised in Andhra Pradesh;
- (c) the steps taken to facilitate industry-academia collaboration, knowledge transfer and specialised training for the workforce in the sector; and
- (d) the measures taken to enhance labour productivity at all levels and workforce capability in the ESDM ecosystem?

**ANSWER**

MINISTER OF ELECTRONICS AND INFORMATION TECHNOLOGY  
(SHRI ASHWINI VAISHNAW)

(a) to (d): A Statement is laid on the table of the House.

**STATEMENT REFERRED TO IN THE REPLY TO RAJYA SABHA  
STARRED QUESTION NO. \*367 FOR 27.03.2026 REGARDING  
SKILL DEVELOPMENT AND CAPACITY BUILDING IN ESDM SECTOR**

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(a) to (d): Under the visionary leadership of Hon'ble Prime Minister Shri Narendra Modi, India is rapidly transforming into a major electronics manufacturing hub. This is driven by the initiatives under 'Make in India' and 'Aatmanirbhar Bharat'.

Government is building a complete ecosystem for the electronics sector through strategic and targeted interventions.

In line with this, government has launched several flagship schemes, including the Production Linked Incentive (PLI) Scheme for Large Scale Electronics Manufacturing (2020), the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) (2020), and the PLI Scheme for IT Hardware (2023).

In addition, the Electronics Manufacturing Clusters (EMC and EMC 2.0) Scheme has also been implemented. The scheme provides plug-and-play manufacturing infrastructure with ready land, utilities, and common facilities. This helps in reducing setup time, and enhancing production efficiency.

As a result of these policies, electronics manufacturing in India has expanded significantly in the last 11 years.

Table1:

#	2014-15	2024-25	Remarks
Production of electronics goods (₹)	~1.9 Lakh Cr	~11.3 Lakh Cr	Increased 6 times
Export of electronics goods (₹)	~0.38 Lakh Cr	~3.3 Lakh Cr	Increased 8 times
Production of mobile phones (₹)	~0.18 Lakh Cr	~5.5 Lakh Cr	Increased 28 times
Export of mobile phones (₹)	0.01Lakh Cr.	2 Lakh Cr	Increased 127 times
Mobile Phone imported (units)	75% of the total demand	0.02% of the total demand	

Industry estimates indicate that domestic value addition in electronics manufacturing has improved significantly over the years and is currently 18%-20%.

Smartphones has emerged as top most category among exported goods (CY 2025).

Table2:

#	HS Code	Item	Export value (in \$)
1	85171300	Smartphones	30.13 Billion

2	27101944	Automotive diesel fuel, not containing biodiesel, conforming to standard IS1460	16.34 Billion
3	71023910	Diamond (other than industrial diamond) cut or otherwise worked but not mounted or set	12.47 Billion

(Source: Directorate General of Commercial Intelligence and Statistics)

### **Semicon India Programme:**

Semiconductors is a foundational and strategic industry. Semiconductors are used in almost every device. To promote the development of its manufacturing ecosystem in India, the Government launched Semicon India Programme in January 2022.

Till date, Government has approved 10 projects with investment commitments of about ₹1.6 lakh crore. In a short span of 4 years, commercial production from one of the plants (Micron) has commenced. Pilot production has started in 3 more units. Construction is progressing rapidly in other units.

In order to support the growth of electronics manufacturing in the country, Government has taken several initiatives for creation of skilled workforce in the ESDM sector spread across the country.

### **1. Skill India Mission**

- It aims at skilling, re-skilling and up-skilling under various initiatives through an extensive network of Skill Development Centres and ITIs across the country
- These include Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Jan Shikshan Sansthan (JSS), National Apprenticeship Promotion Scheme (NAPS) and Craftsman Training Scheme (CTS)
- The mission equips the youth with industry relevant skills including ESDM Sector
- Skill development in the Electronics System Design and Manufacturing (ESDM) sector is carried out through Sector Skill Council affiliated centres, polytechnics and other institutions
- Electronics Sector Skills Council of India (ESSCI) has empaneled 9690 training centres nationwide, to facilitate to ESDM-related job roles

The state-wise details are given at Annexure.

In the State of Andhra Pradesh, 408 PMKVY centers, 6 Jan Shikshan Sansthan, 1,147 Apprenticeship (NAPS) establishments, 85 Government ITIs and 434 Private ITIs are conducting skill development programs in ESDM Sector.

Under PMKVY, in last 5 years, 8,07,016 candidates have been trained in various courses in Electronics and Hardware.

### **2. MeitY's Schemes on Skill Development in ESDM Sector**

- "Scheme for Financial Assistance to select States/Uts for Skill Development in Electronics System Design and Manufacturing (ESDM) Sector" (Scheme-1)
- "Skill Development in ESDM for Digital India" (Scheme-2)

Under both the Schemes, 4,93,919 candidates were trained and 3,75,289 candidates have been certified. Both the scheme concluded on 30.08.2025.

In the State of Andhra Pradesh, a total of 22,370 beneficiaries were trained and 17,215 candidates were certified. An amount of Rs 14.43 Crore was utilized for the state of Andhra Pradesh.

Government has also taken the following initiatives to develop a strong semiconductor talent pipeline through academic programmes, industry partnerships and national skilling initiatives:

### **Talent Development for Chip Design:**

Under the Chips to Start-up (C2S) Programme, Electronic Design Automation (EDA) tools have been made available to 315 academic institutions. This has helped students to undertake chip design, research and training activities. So far, their usage has exceeded 2 lakh crore hours.

Over 68,000 students have already been trained as part of this against the target of 85,000.

### **SMART Lab:**

A Skilled Manpower Advanced Research and Training (SMART) Lab has been setup in NIELIT Calicut with an aim to train 1 lakh engineers in the domains of VLSI, Embedded Systems and IoT. More than 1 lakh candidates have already been trained.

### **Semiverse:**

India Semiconductor Mission (ISM) has also partnered with LAM Research for conducting a large-scale training programme in nano-fabrication and process-engineering skills.

These would further augment skilled workforce for ATMP and advanced packaging. The program aims to generate 60,000 trained manpower in next 10 years.

### **FutureSkills PRIME:**

Further, under the FutureSkills PRIME programme, implemented by MeitY in partnership with NASSCOM, online courses are offered for skilling, reskilling and upskilling in emerging technologies including semiconductors.

Portal can be accessed at <https://futureskillsprime.in> to earn skill certificates in line with their aptitude and aspirations.

### **NIELIT:**

Through National Institute of Electronics and Information Technology (NIELIT)

NIELIT network has trained more than 43 Lakh candidates in last 5 years under various Degree/Diploma Level Courses and Skill-Based Courses (Long Term & Short Term).

### **NIELIT Digital University:**

NIELIT Digital University (NDU) Platform has been established to deliver online and blended skill-based courses in emerging technology areas. This platform also features built-in virtual labs for real-time experimentation in Semiconductor Design, cybersecurity and other emerging domains. So far more than 55,000 candidates have registered through NDU Platform.

### **NIELIT EdTech platform:**

NIELIT is developing an EdTech platform in the semiconductor domain. This platform will train 30,000 individuals by offering virtual labs and high-quality content in semiconductor skills.

### **eChipHub:**

Through eChipHub platform and ChipCraft virtual labs, learners across the country can access hands-on training in VLSI and chip design using open-source tools and cloud-based infrastructure. Under this initiative, 2,304 candidates have been trained.

NIELIT has also signed a MoU with the Government of Andhra Pradesh on 20th February, 2026 to establish India's first dedicated Quantum and Artificial Intelligence University campus in Amaravati.

### **Industry Academia Collaboration:**

In the ESDM sector, significant efforts have been undertaken to strengthen industry-academia collaboration by actively involving industry partners in curriculum design, training delivery, and assessments.

- Curricula of academic institutions, engineering colleges, and ITIs are being aligned with evolving industry requirements. Electronics Sector Skills Council of India (ESSCI) works closely with the institutions.
- Engineering colleges and universities are now offering graduate and post-graduate courses in semiconductors design. Industry is playing a big role in designing the course curricula.
- Training programs are supported through enhanced lab infrastructure, Training of Trainers (ToT), and industry-led certifications to maintain quality and relevance.
- Additionally, internships, on-the-job training (OJT), and apprenticeship opportunities are being promoted to effectively bridge the gap between academic learning and industry expectations.

### **Other Steps:**

To further improve workforce capability, an industry-driven training approach is adopted.

Targets are allocated to Training Partners based on Letters of Intent (LoIs) from electronics industries. This ensures robust industry linkages and demand-based skilling.

Moreover, alignment with the National Skills Qualifications Framework (NSQF) promotes standardization, improves skill quality, and enhances employability, thereby contributing to increased productivity across the ESDM ecosystem.

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**Annexure**

**State-wise Training Centre empanelled with ESSCI catering to ESDM-related job roles**

State/UT	No. of Training Centre
Andaman And Nicobar Islands	3
Andhra Pradesh	211
Arunachal Pradesh	56
Assam	399
Bihar	495
Chandigarh	16
Chhattisgarh	62
Delhi	93
Goa	12
Gujarat	158
Haryana	266
Himachal Pradesh	147
Jammu and Kashmir	240
Jharkhand	182
Karnataka	309
Keralam	172
Ladakh	2
Madhya Pradesh	1232
Maharashtra	1373
Manipur	61
Meghalaya	42
Mizoram	38
Nagaland	23
Odisha	122
Puducherry	22
Punjab	468
Rajasthan	904
Sikkim	9
Tamil Nadu	415
Telangana	150
Dadra and Nagar Haveli and Daman and Diu	6
Tripura	66
Uttar Pradesh	1575
Uttarakhand	170
West Bengal	191
Grand Total	9690

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