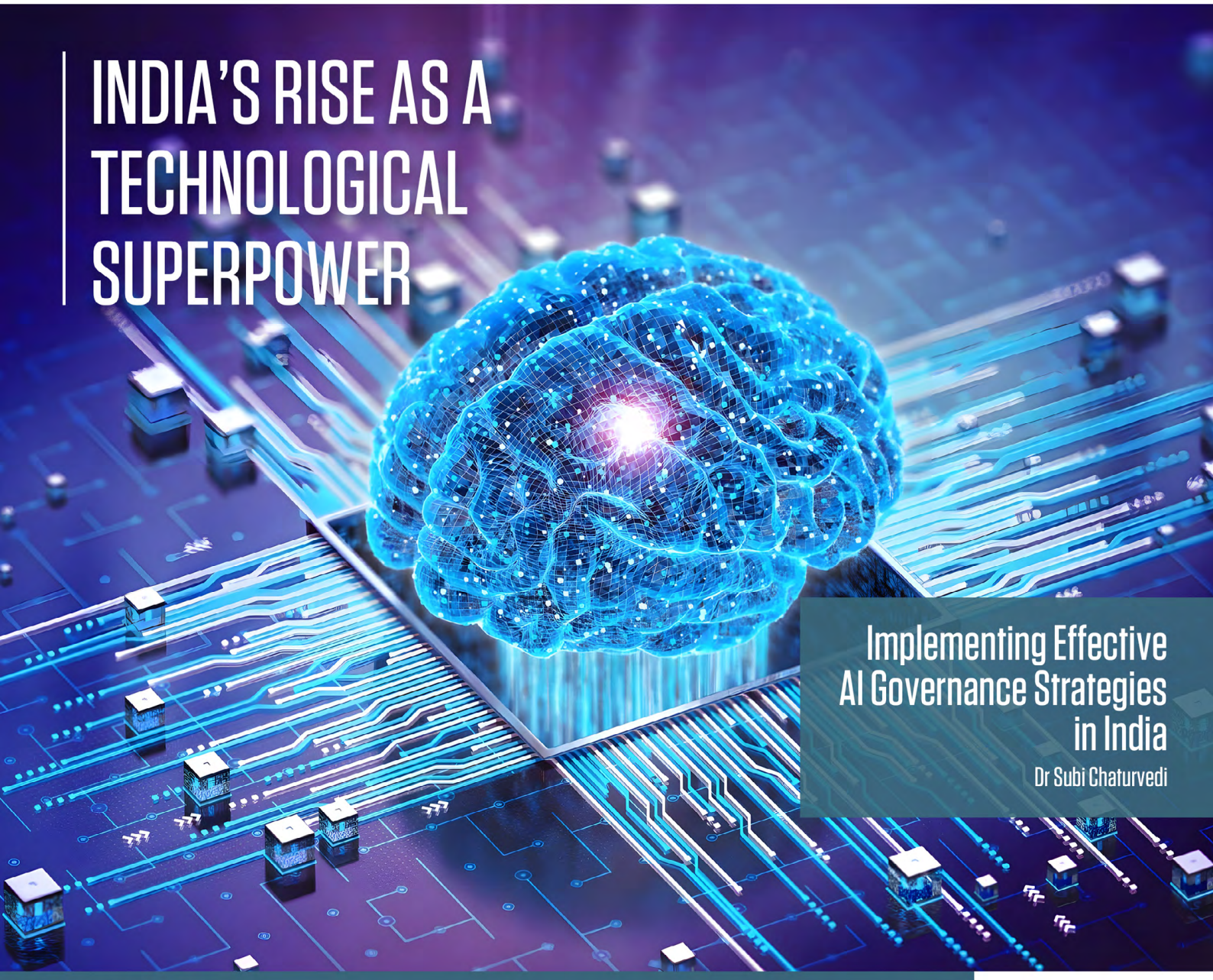
IGNITO

INDIA'S ESDM QUARTERLY DIGEST

4th Edition

INDIA'S RISE AS A TECHNOLOGICAL SUPERPOWER



Implementing Effective AI Governance Strategies in India

Dr Subi Chaturvedi

IN THIS ISSUE

Published By

ICEA
INDIA CELLULAR & ELECTRONICS ASSOCIATION
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4TH EDITION
Vol.01, Issue 04

Published by
India Cellular & Electronics Association (ICEA) New Delhi, India
LeMeridien Commercial Tower, 7th Floor, Raisina Road, Windsor Place, New Delhi, 110001
Tel: +91-11-4934-9900 Email: icea@icea.org.in Website: www.icea.org.in

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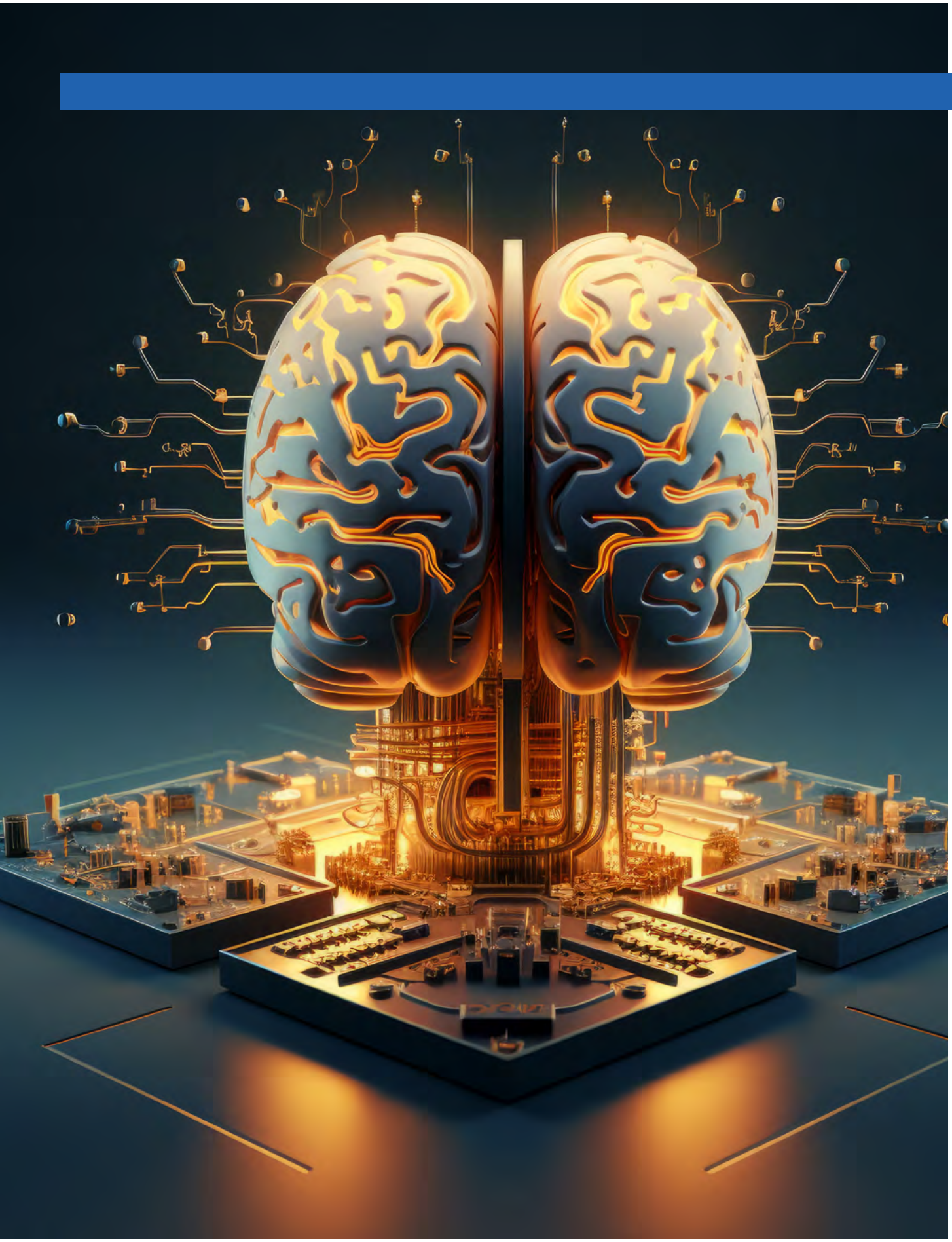


Dear Readers,

India's Rise as a Technological Superpower: Hardware & Software Marching in Lockstep

The past few months have witnessed monumental strides in India's journey towards becoming a technological powerhouse.

We have seen a one-two-punch combo for our domestic tech industry. First, the Union Cabinet approved three state-of-the-art semiconductor units to be built within India. This critical step will allow us to manufacture and package chips domestically, and be a step towards Atmanirbharta.

Secondly, the ambitious IndiaAI mission, with a dedicated budget of ₹10,372 crore over five years, signifies a major push towards fostering cutting-edge Artificial Intelligence (AI) development in India.

Hardware Powerhouse

The new facilities, including the transformative semiconductor fab by Tata and PSMC (targeting 50,000 wafers per month for high-performance and power management chips), Tata's Assam ATMP unit for advanced packaging technologies, and CG Power's Gujarat unit with Renesas and Stars Microelectronics (aiming for 15 million specialized chips daily), represent a paradigm shift. These investments, along with the previously announced Micron unit, solidify India's commitment to building a robust semiconductor ecosystem through strategic partnerships and substantial investments.

This vision transcends mere innovation. It marks a quantum leap towards India's firm positioning on the global semiconductor map and within the wider global electronics value chains. It's a testament to the unwavering collaboration between the government and industry leaders.

The establishment of these three semiconductor units is expected to generate a significant number of jobs – 20,000 direct high-tech positions and an estimated 100,000 indirect jobs. This will have a cascading effect, creating new employment opportunities across various sectors that rely on semiconductor technologies, including automotive, electronics, telecom, and industrial manufacturing.

AI Taking Flight

While hardware strides ahead, software development isn't taking a backseat. The IndiaAI mission aims to propel India's journey in Artificial Intelligence. This mission goes beyond fostering domestic AI innovation; it aims to highlight the positive impact of AI on society on a global stage.

The IndiaAI mission will cultivate a comprehensive AI ecosystem by fostering strategic partnerships between the public and private sectors. This initiative prioritizes democratizing access to computing resources, nurturing homegrown AI talent, and attracting global expertise. It will also provide crucial support for startups, ensure the ethical development of AI, and prioritize projects with a positive social impact.

A Decade of Remarkable Progress

As we strive to become a global tech leader, it's crucial to acknowledge our recent accomplishments from the past decade.

At the end of the 2014-2024 decade, India now stands as the world's second-largest producer of mobile phones. This sector has transitioned from being 78% import-dependent in 2014 to currently 97% self-sufficiency.

Mobile phone production has skyrocketed from ₹18,900 crore in 2014-15 to an estimated ₹4,10,000 crore in FY24, a phenomenal 2000% increase. India finished the decade at ₹19,45,100 crore of cumulative production. Exports have mirrored this growth, surging from a mere ₹1,556 crore in 2014-15 to an estimated ₹1,20,000 crore in FY24, a staggering 7500% increase! Mobile phones have become India's 5th largest export commodity, a testament to the industry's remarkable trajectory, with the cumulative exports of mobile phones in the last decade reaching a total estimate of ₹3,22,048 crores.

Ideas to Ponder

This edition of IGNITO delves deeper into these exciting developments. We explore insightful ideas and policy solutions in the domains of Artificial Intelligence, the rationalization of regulations to better utilise investments in factory units, changing the mandate for SAR Values for Mobile Phones in India, and how the electronics industry can become more environmentally conscious by adopting circular economy models.

We hope you enjoy reading this edition and find it informative and perceptive.

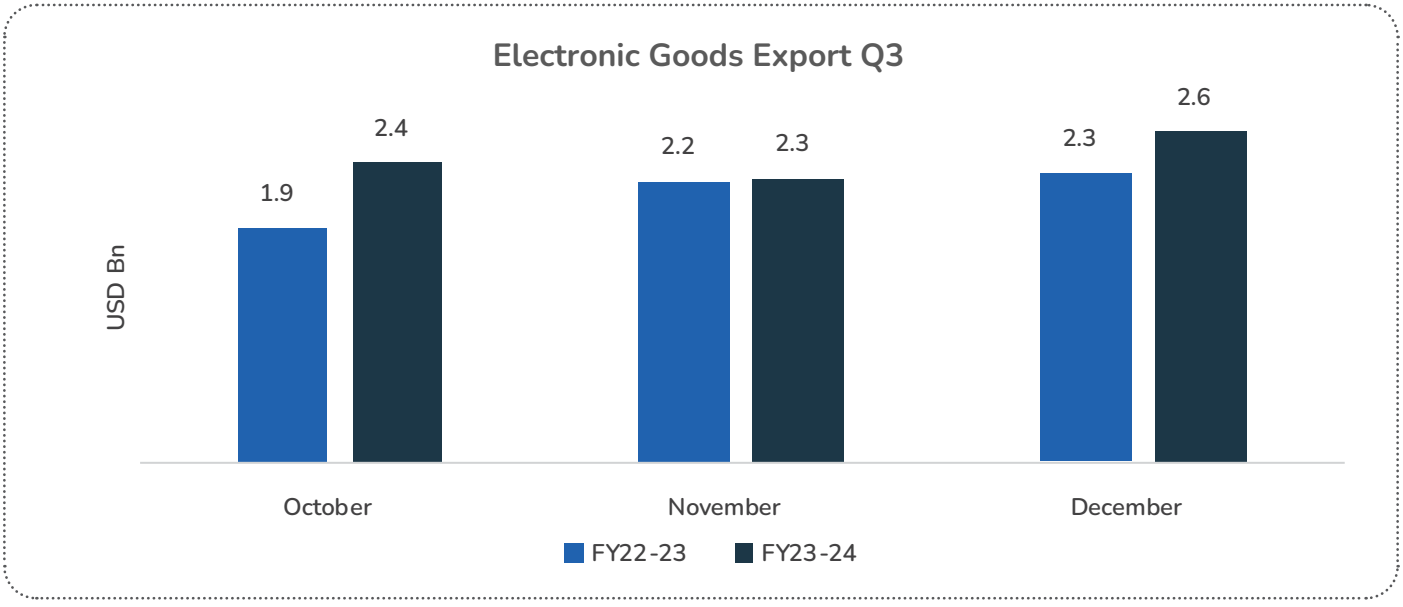
Thank you for your readership.

Sincerely,
Pankaj Mohindroo
Editor-in-Chief

INDUSTRY STATISTICS

ELECTRONIC GOODS

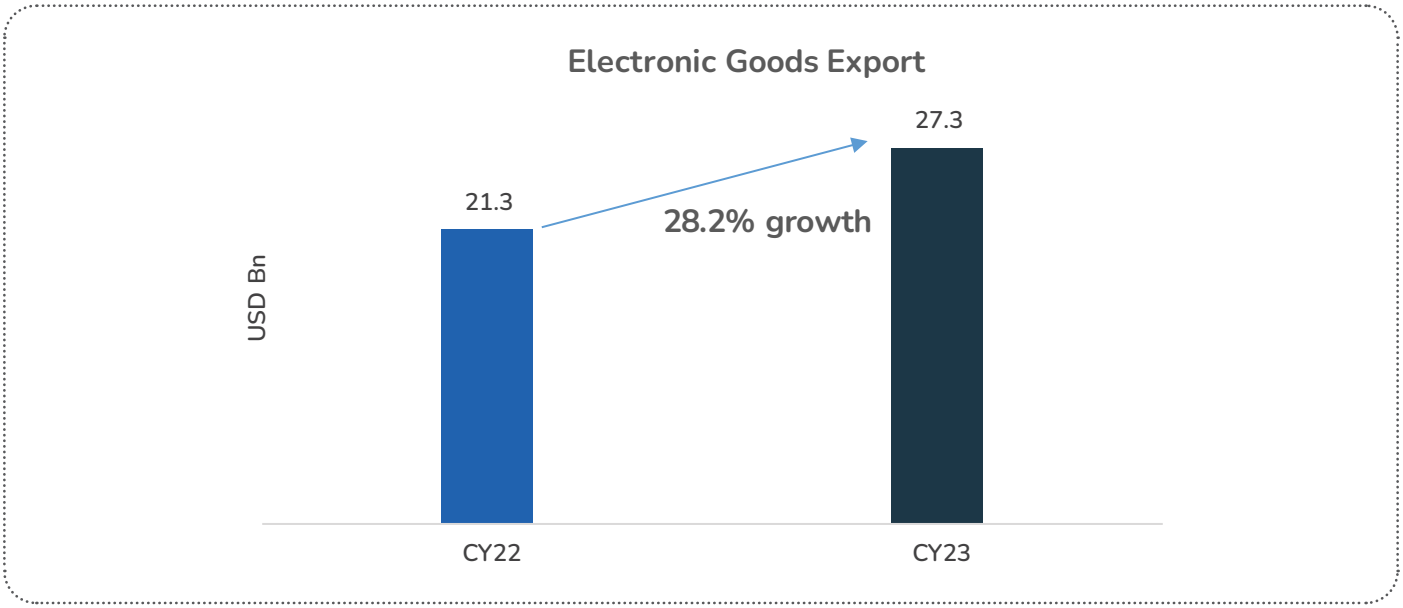
FIG. 1A ELECTRONIC GOODS EXPORTS FOR Q3: FY23-24 VS FY22-23



Source: Department of Commerce

Fig. 1a compares electronics goods exports for the third quarter of FY22-23 to FY23-24. In October, exports grew from USD 1.9 Bn to USD 2.4 Bn, followed by growth in November from USD 2.2 Bn to USD 2.3 Bn, and in December the exports increased from USD 2.3 Bn to USD 2.6 Bn. This trend indicates a consistent month-over-month growth in exports for the electronic goods sector during the third quarter.

FIG. 1B ELECTRONIC GOODS EXPORTS: CY23 VS CY22

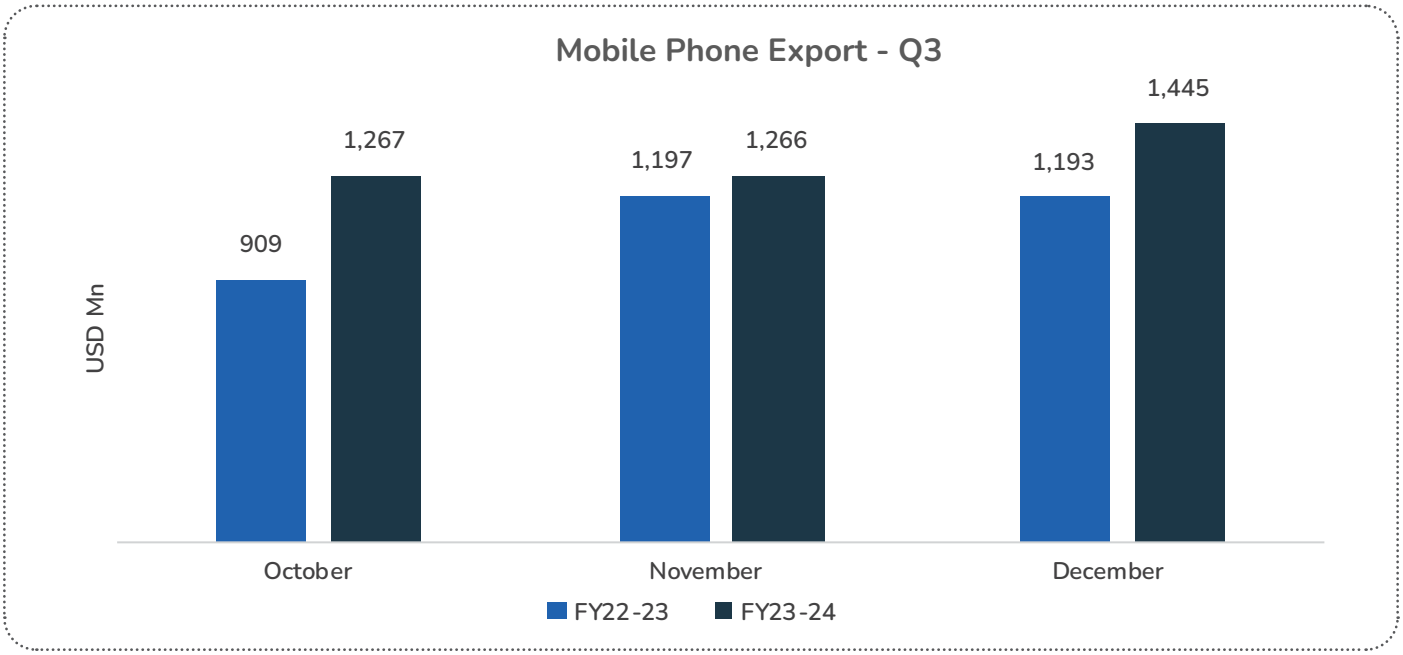


Source: Department of Commerce

Fig. 1b shows electronic goods exports for CY22 and CY23. Overall, there's a rise in exports from USD 21.3 billion in CY22 to USD 27.3 billion in CY23, marking a jump of USD 6 Bn, which is about a 28.2% growth. This also suggests an increase in the production of electronic goods over the years.

MOBILE PHONES

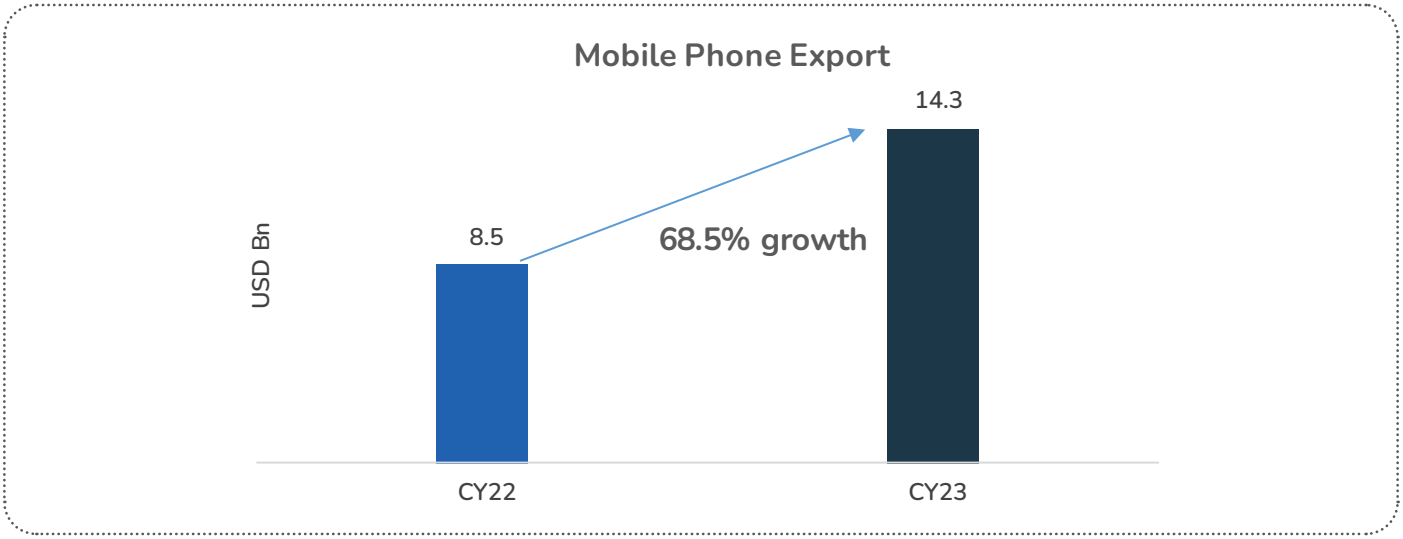
FIG. 2A MOBILE PHONE EXPORTS FOR Q3: FY23-24 VS FY22-23



Source: Department of Commerce

Fig. 2a shows that mobile phone exports in the third quarter of FY23-24 have increased overall compared to FY22-23. October and December saw significant increases, with October rising from USD 909 Mn to USD 1,267 Mn, and December from USD 1,193 Mn to USD 1,445 Mn. However, November exports remained almost constant, with a marginal increase from USD 1,197 Mn to USD 1,266 Mn.

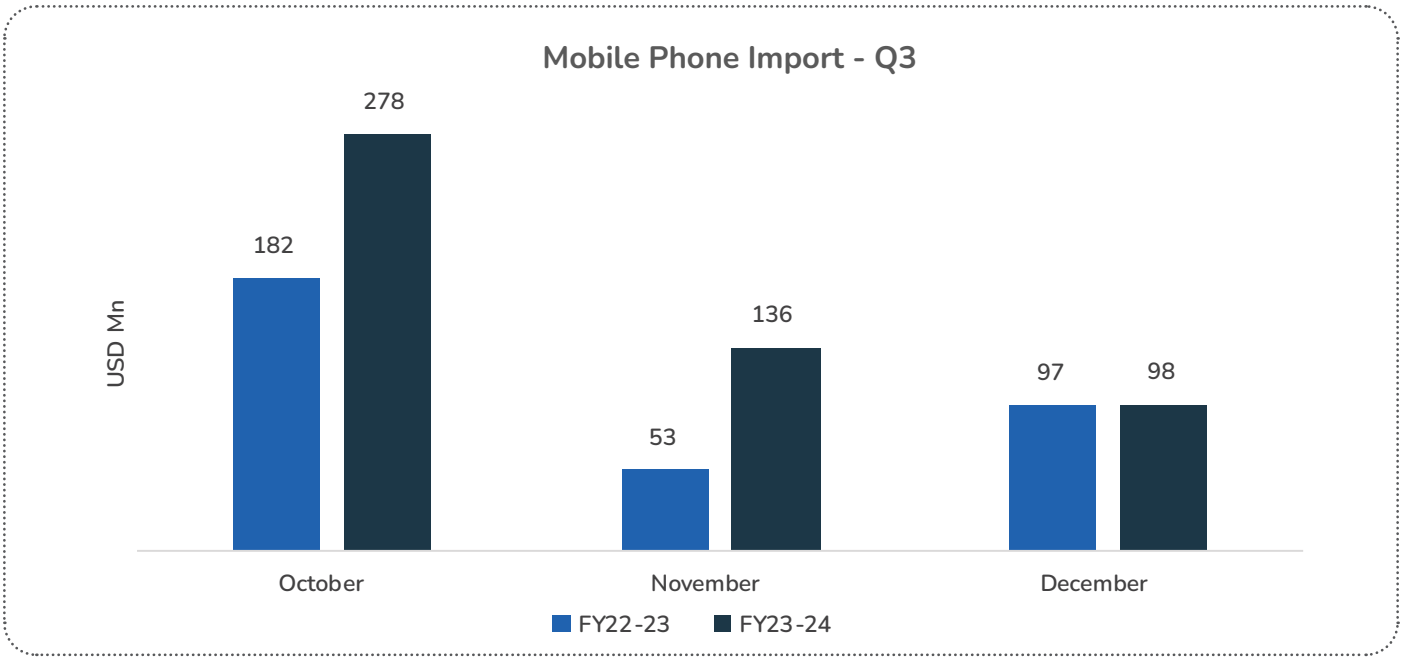
FIG. 2B MOBILE PHONE EXPORTS: CY23 VS CY22



Source: Department of Commerce

The data shows a significant year-over-year increase in mobile phone exports, with a rise of USD 8.5 Bn in CY2022 to USD 14.3 Bn in CY2023, indicating a 68.5% growth. This overall escalation reflects a robust expansion of mobile phone exports from India. The growth underscores a strong global demand and enhanced domestic production of mobile phones from India.

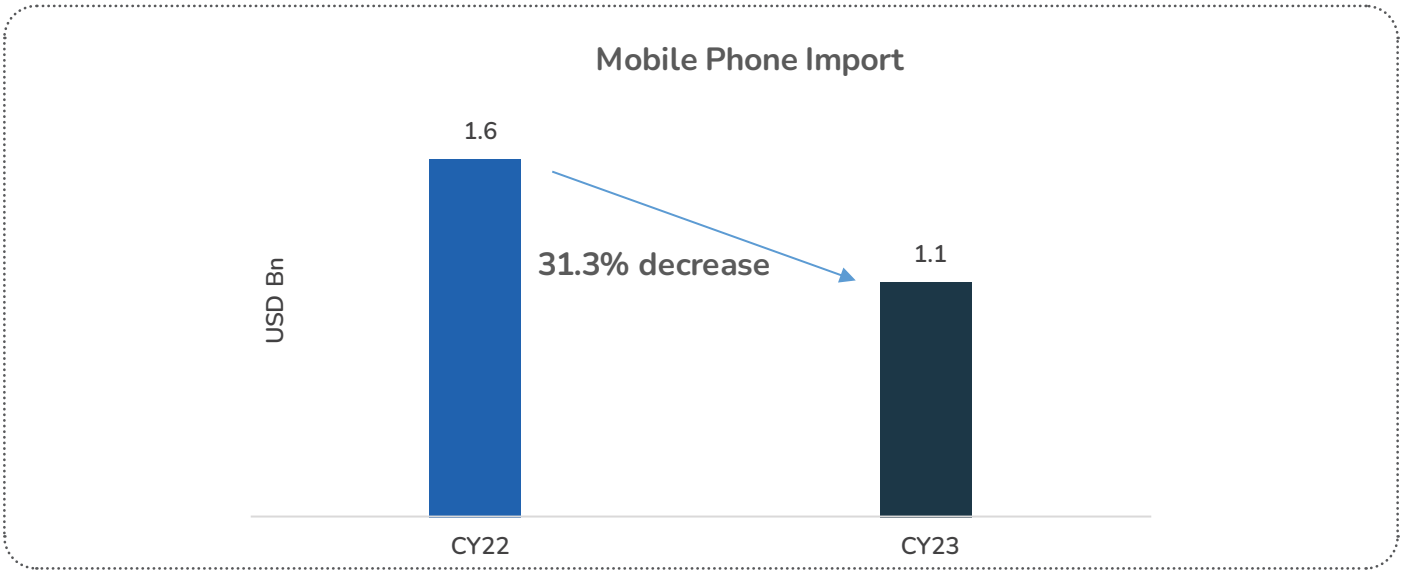
FIG. 3A MOBILE PHONE IMPORTS FOR Q3: FY23-24 VS FY22-23



Source: Department of Commerce

Fig. 3a indicates an increase in mobile phone imports in the third quarter of FY23-24 from FY22-23. However, the overall trend for the import of mobile phones is decreasing in FY23-24 as compared to FY22-23. For the month of October, with imports jumping from USD 182 Mn to USD 278 Mn, in November also there was a significant increase in imports rising from USD 53 Mn in FY22-23 to USD 136 Mn in FY23-24. December saw almost no change year-over-year, with imports going from USD 97 Mn in FY22-23 to USD 98 Mn in FY23-24.

FIG. 3B MOBILE PHONE IMPORTS: CY23 VS CY22

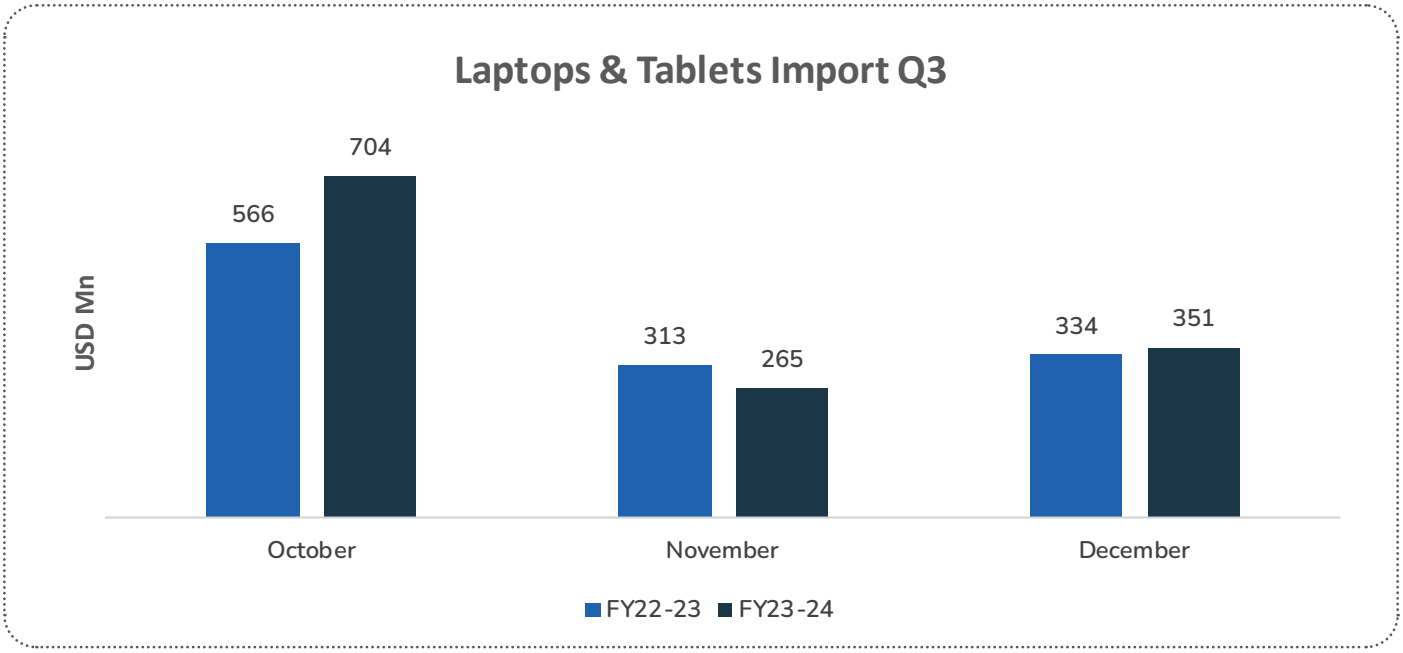


Source: Department of Commerce

The Fig. 3b indicates a decrease in mobile phone imports from CY22 to CY23. In CY22, the imports stood at USD 1.6 Bn, which dropped to USD 1.1 Bn in CY23, marking a significant reduction of 31.3% year over year. This indicates an increase in domestic production during CY23 compared to CY22, catering to the domestic demand.

LAPTOPS & TABLETS

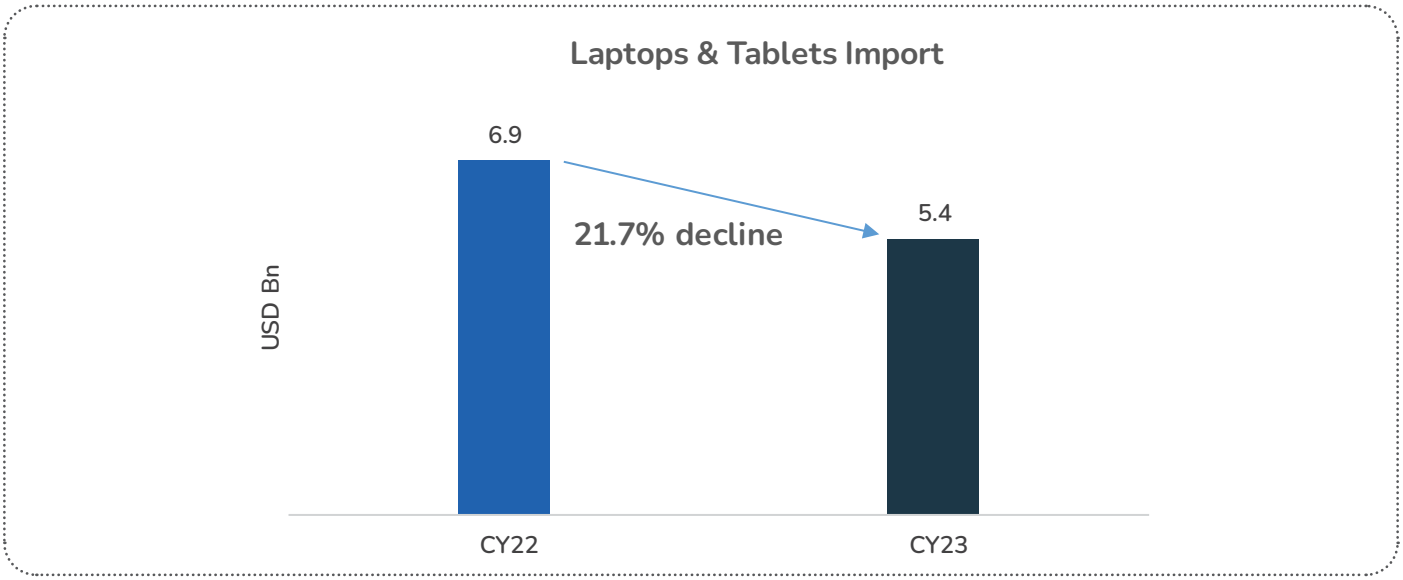
FIG. 4A LAPTOP & TABLETS IMPORT FOR Q3: FY23-24 VS FY22-23



Source: Department of Commerce

Fig. 4a shows imports of Laptops & Tablets for the third quarter (Q3) across two fiscal years (FY22-23 and FY23-24). There's an increase in imports from October FY22-23 at USD 566 Mn to USD 704 Mn in FY23-24. While November sees a decline from USD 313 Mn in FY22-23 to USD 265 Mn in FY23-24. December has a slight increase from USD 334 Mn in FY22-23 to USD 351 Mn in FY23-24. However, the overall trend of Laptops & Tablets imports is decreasing for FY23-24 as compared to FY22-23.

FIG. 4B LAPTOP & TABLETS IMPORT: CY23 VS CY22

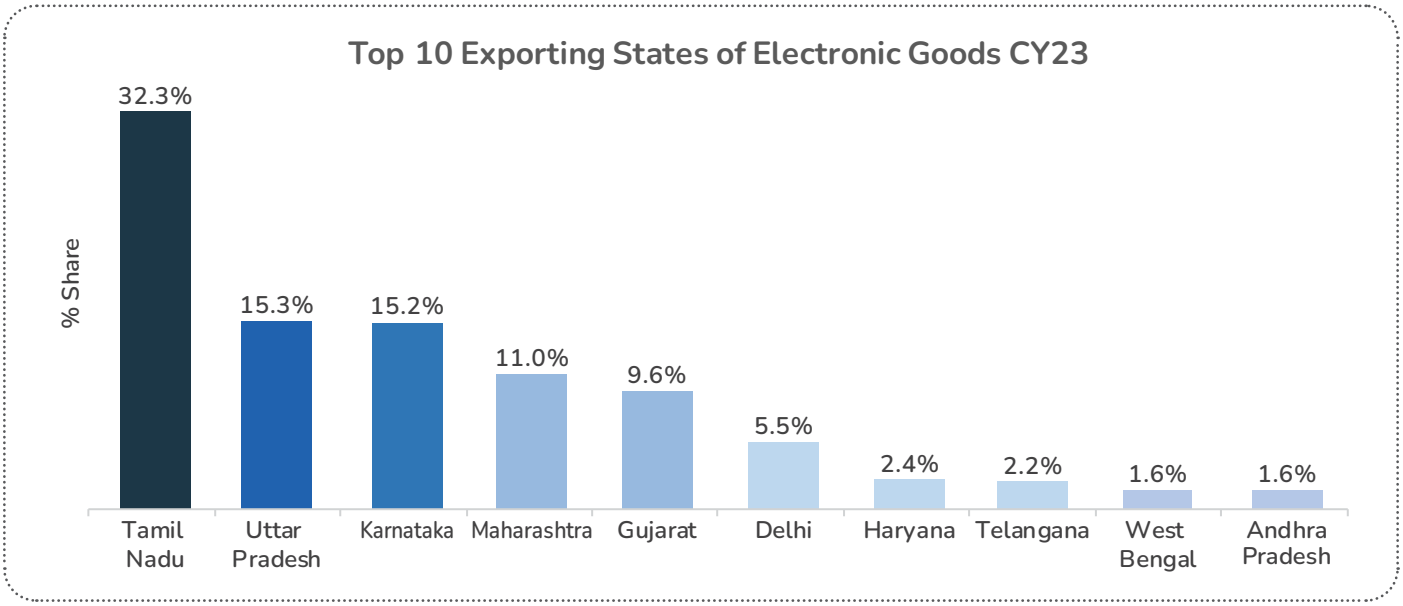


Source: Department of Commerce

The above data presents a year-over-year comparison of Laptop & Tablets imports for CY22 and CY23. There's a noticeable decrease from USD 6.9 billion in CY22 to USD 5.4 billion in CY23, indicating a decline of about 21.7%.

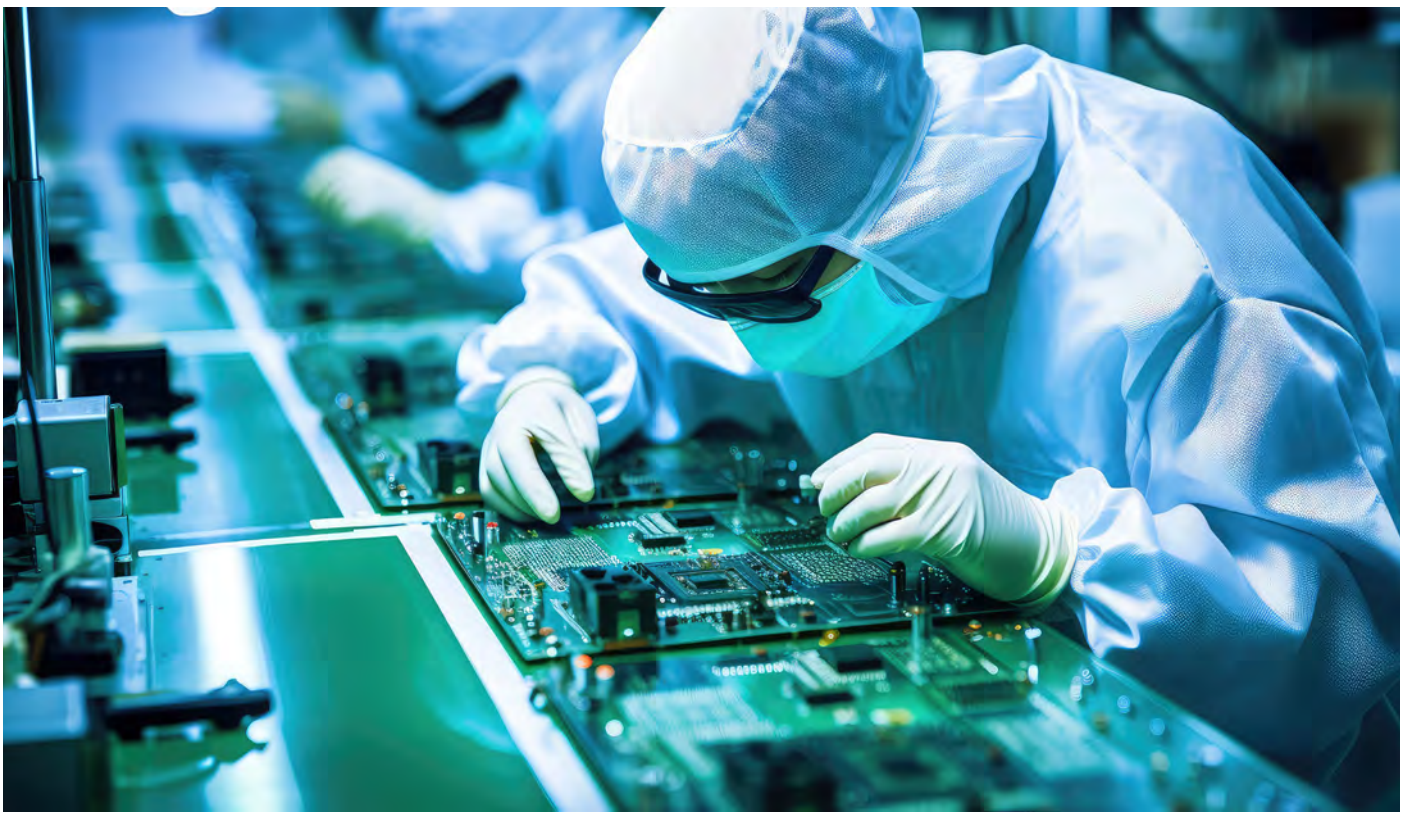
TOP 10 ELECTRONIC GOODS EXPORTING STATES

FIG. 5: TOP 10 ELECTRONIC GOODS EXPORTING STATES FOR 2023:



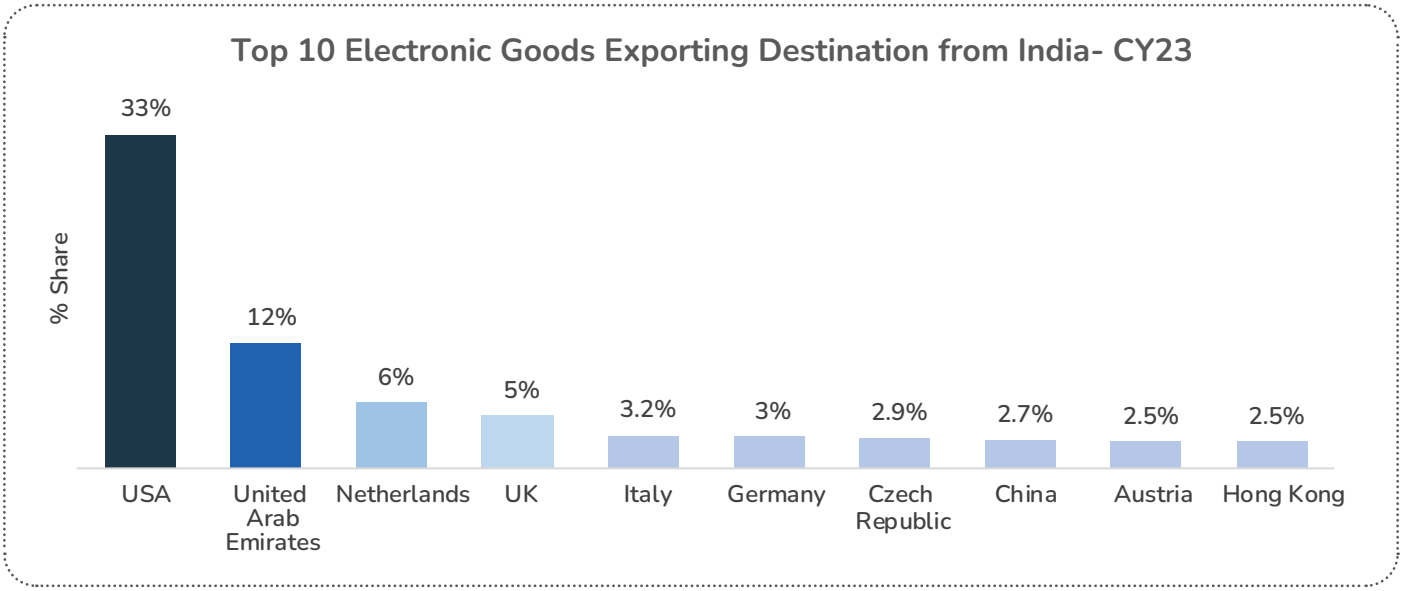
Source: Department of Commerce

The data in Fig. 5 indicates the total exports from different states and union territories (UT) of India for the Calendar Year 2023. Tamil Nadu leads by a significant margin with exports worth USD 8,798 Mn. Uttar Pradesh and Karnataka follow with USD 4,180 Mn and USD 4,141 Mn, respectively. The top five states are contributing about 83% of total electronic goods exported from India. Maharashtra and Gujarat also show strong export figures, contributing over USD 2,000 Mn each. The capital territory, Delhi, records USD 1,495 Mn, while Haryana, Telangana, West Bengal, and Andhra Pradesh have lower export values, all below USD 700 Mn, with West Bengal and Andhra Pradesh closely matched around the USD 438 Mn mark.



TOP 10 ELECTRONIC GOODS EXPORTING DESTINATION FROM INDIA

FIG. 6: TOP 10 ELECTRONIC GOODS EXPORT DESTINATIONS FROM INDIA CY23 - % SHARE

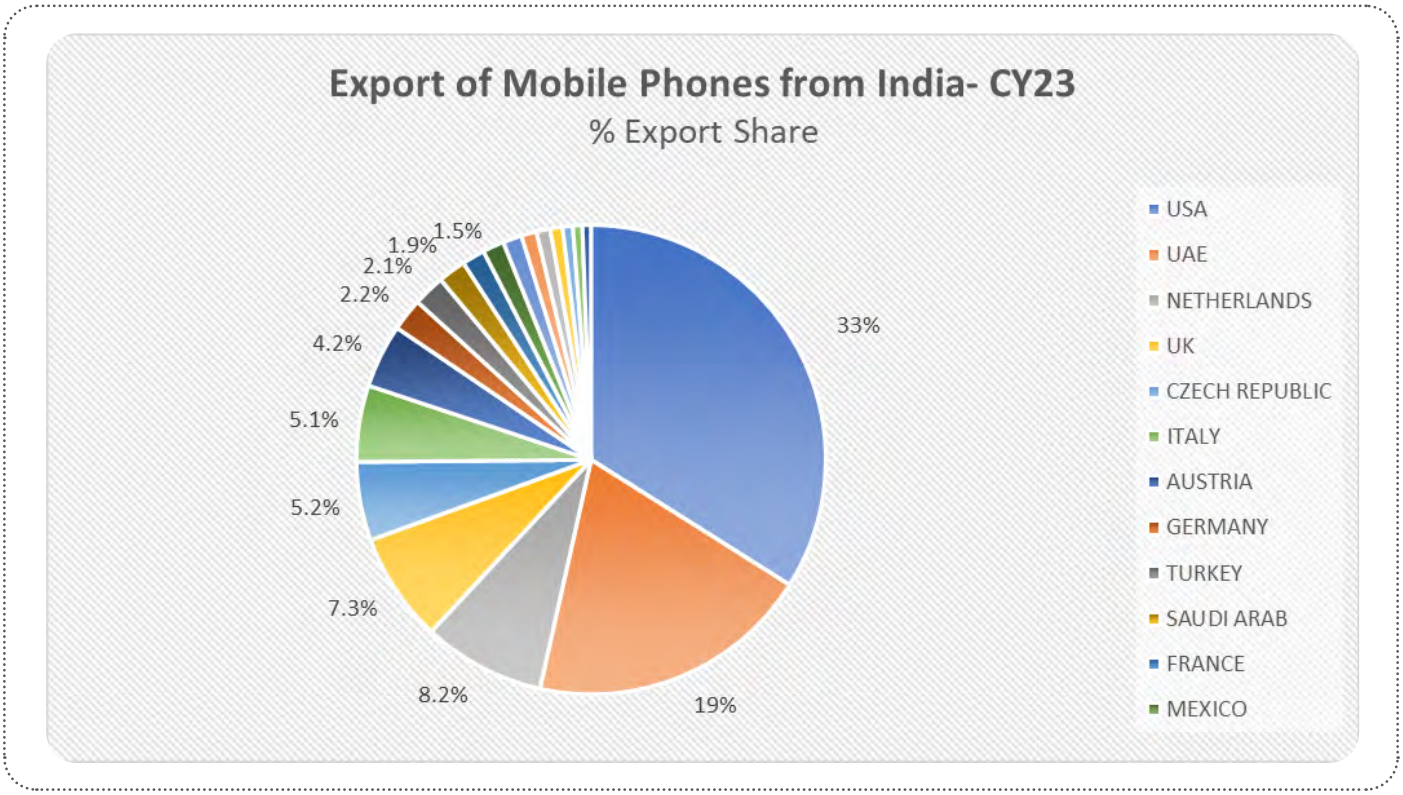


Source: Department of Commerce

The data in Fig. 6 shows the total electronic goods exports from India to various countries and territories. The USA is the primary export destination with a value of USD 8.9 Bn which is a 33% share of the total exports. The United Arab Emirates holds the second position with exports of USD 3.3 Bn which is a 12% share of the total. European countries such as the Netherlands, UK, Italy, Germany, Czech Republic, Austria, and France also feature on the list, with percentages ranging from 6% to 2.1%. China and Hong Kong together account for 5.2% of the exports, indicating significant trade with these regions as well. This reflects a diverse set of export destinations, with a strong emphasis on the USA and a notable presence in West Asia and Europe. The top 10 exporting destinations account for 73% of the total exports from India.

MAJOR EXPORT DESTINATION OF MOBILE PHONES

FIG. 7: MAJOR EXPORT DESTINATION OF MOBILE PHONES FROM INDIA FOR 2023:



Source: Department of Commerce

Fig. 7 shows the percentage share of mobile phone exports from India to various international markets. The USA dominates the export market with a third of the total exports at 33%. UAE also represents a significant market with a 19% share. European countries, namely the Netherlands, the UK, the Czech Republic, Italy, Austria, Germany, and France, collectively account for an important portion, with individual shares ranging from 8.2% to 1.5%. Turkey and Saudi Arabia follow closely behind. The list also includes a mix of countries from different continents, including Mexico, South Africa, Spain, Canada, Australia, Russia, Japan, and Thailand, with shares below 2%. This suggests a diverse global reach, with the majority of exports concentrated in the USA and West Asia.

GOVERNMENT ANNOUNCEMENTS

MINISTRY OF ELECTRONICS & INFORMATION TECHNOLOGY (MEITY)

India's Semiconductor Mission Takes a Leap: Three New Units Approved

In a significant boost to the 'India Semiconductor Mission,' the Union Cabinet has greenlit the construction of three new semiconductor units. This move, part of the broader initiative to develop semiconductor and display manufacturing ecosystems, comes with an impressive investment of Rs. 76,000 crore announced back in December 2021.

The first unit, a collaboration between Tata Electronics Private Limited (TEPL) and Powerchip Semiconductor Manufacturing Corp (PSMC), Taiwan, will be a semiconductor fabrication facility with a capacity of 50,000 wafer starts per month. Located in Dholera, Gujarat, the project commands an investment of Rs. 91,000 crores and will focus on high-performance computing chips and power management chips for various sectors including EVs and telecom.

The second unit, an ATMP (Assembly, Testing, Marking, and Packaging) facility by Tata Semiconductor Assembly and Test Pvt Ltd, will be established in Morigaon, Assam, with an investment of Rs. 27,000 crore. It aims to develop advanced semiconductor packaging technologies and has a capacity of 48 million units per day.

The third unit, also an ATMP facility, is a partnership between CG Power, Renesas Electronics Corporation, Japan, and Stars Microelectronics, Thailand. Set for Sanand, Gujarat, this unit will focus on specialized chips with an investment of Rs. 7,600 crore.

These developments are expected to create 20,000 direct and 60,000 indirect jobs, significantly bolstering India's semiconductor design capabilities and establishing a robust manufacturing ecosystem.

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India-EU MoU to Boost Semiconductor Ecosystem

The Union Cabinet, chaired by Prime Minister Narendra Modi, approved a Memorandum of Understanding (MoU) between India and the European Commission. The MoU, signed on November 21, 2023, aims to enhance the semiconductor ecosystems and their supply chains under the EU-India Trade and Technology Council framework. This agreement is expected to strengthen both government-to-government and business-to-business cooperation, boosting the resilience of semiconductor supply chains.

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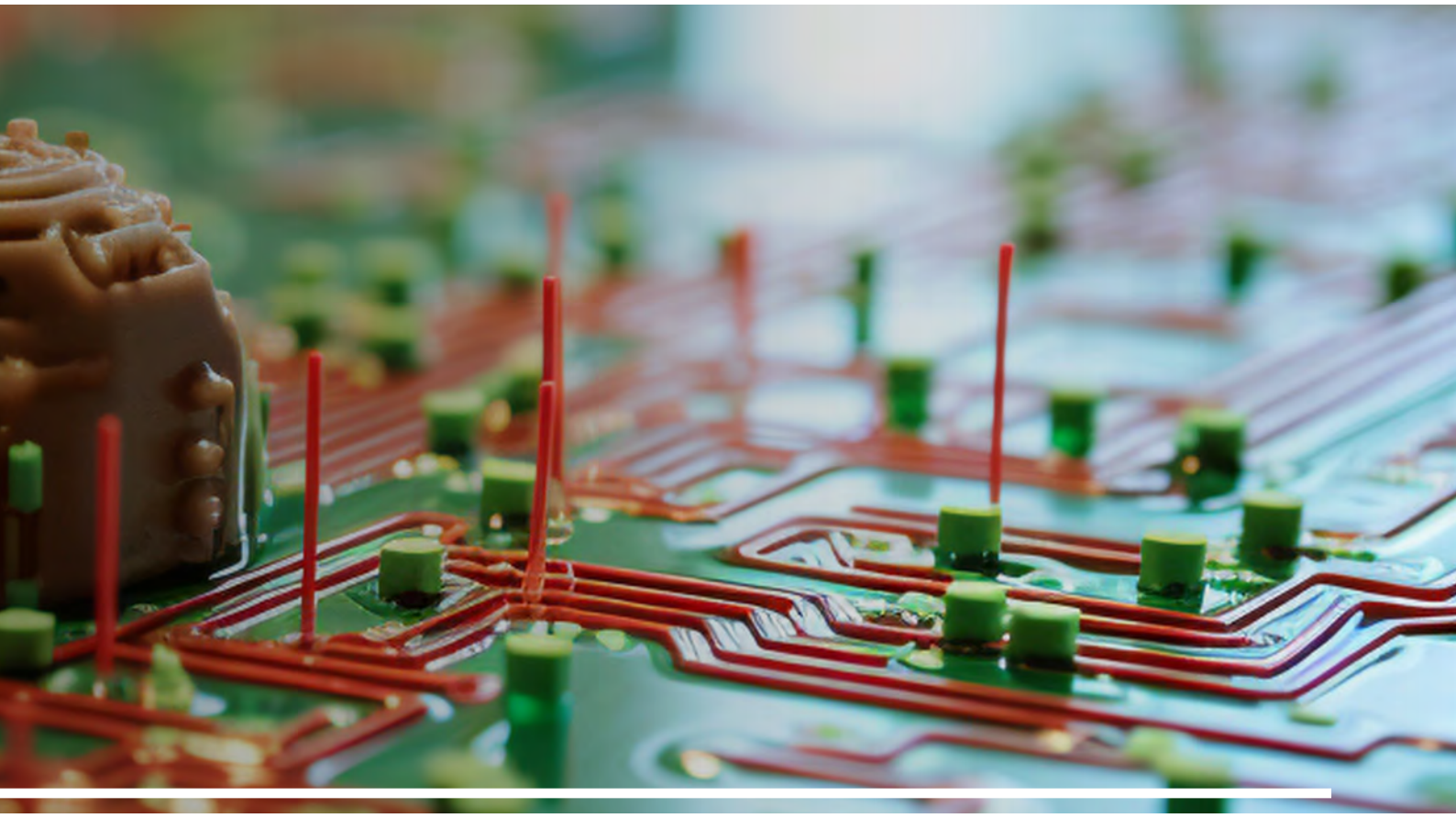

Secretary, MeitY launches "Centre of Excellence in Intelligent Internet of Things Sensors" and "India Innovation Centre for Graphene" in Kerala

Shri S Krishnan, Secretary of MeitY, launched the "Centre of Excellence in Intelligent Internet of Things Sensors" and "India Innovation Centre for Graphene" at Maker Village, Kochi. These centres aim to catalyze the development of IoT sensors and foster R&D in Graphene and 2D material systems, respectively.

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India and Saudi Arabia Forge Digital and Manufacturing Alliance

The Indian Cabinet, led by Prime Minister Narendra Modi, has approved a Memorandum of Cooperation (MoC) with Saudi Arabia. The MoC, signed on August 18, 2023, aims to enhance collaboration in Digitization, Electronic Manufacturing, e-Governance, and emerging technologies. It also seeks to foster innovative training, strengthen the SME and start-up ecosystem, and indirectly create employment opportunities.

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Public Procurement (Preference to Make in India) for CCTV/Video Surveillance System for Security

MeitY on March 08, 2024 issued a notification regarding the Public Procurement (Preference to Make in India) for CCTV/ Video Surveillance System for Security

This has a reference to the order 1119(E) Public Procurement (Preference to Make in India) Order 2017 dated June 15, 2017 to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment.

It states that the preference shall be provided by all procuring entities to locally manufactured Video Surveillance Systems for Security.

CRO Requirements for CCTV Systems

On 9 April 2024, MeitY amended the Electronics and Information Technology Goods (Requirement of Compulsory Registration) Order, 2021 (CRO 2021). Under the amendment, MeitY has mandated certain 'essential security requirements' for Closed-Circuit Television (CCTV) cameras (CRO Amendment). The CRO Amendment will

be effective from 9 October 2024, giving manufacturers of CCTV cameras six months to conform to the requirements under the CRO Amendment.

Boosting India's Semiconductor Ecosystem: SemiconIndia DLI Scheme Supports Two More Start-ups

In a significant move to bolster India's semiconductor ecosystem, two Karnataka-based start-ups, Saankhya Labs and Sensesemi Technologies, have been announced for financial support under the SemiconIndia Design Linked Incentive (DLI) Scheme. The announcement was made by Shri Rajeev Chandrasekhar, Minister of State for Electronics & IT, Skill Development and Entrepreneurship, and Jal Shakti, during the launch of "Digital India FutureLABS" at IIIT Delhi. Saankhya Labs is set to design a full spectrum of next-gen communication solutions, while Sensesemi Technologies will develop the System on Chip (SoC) for Internet of Medical Things (IoMT) and IoT devices.

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Pioneering E-Waste Management: Inauguration of Centre of Excellence at C-MET, Hyderabad

The Centre for Materials for Electronics Technology (C-MET), Hyderabad, has inaugurated a first-of-its-kind Centre of Excellence (CoE) on E-waste Management. The CoE, launched by MeitY Secretary S Krishnan, aims to develop environmentally friendly e-waste recycling technologies to promote resource efficiency and a circular economy in India. The CoE has already developed various e-waste recycling technologies and designed the necessary processing equipment. The initiative aligns with India's mission towards Atmanirbharata and a circular economy, focusing on resource efficiency, carbon footprint reduction, recovery of precious materials from e-waste, and minimization of health hazards. The materials extracted from e-waste will also contribute to the resilience of the supply chain for the upcoming semiconductor industry.

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Digital India FutureLABS: A Leap Towards Next-Gen Electronics System Design

Union Minister of State, Shri Rajeev Chandrasekhar, inaugurated the "Digital India FutureLABS" at IIIT in New Delhi. The initiative, coordinated by C-DAC, aims to tap into the trillion-dollar opportunity presented by the Electronics System Design and Manufacturing (ESDM) sector. The FutureLABS initiative focuses on key growth areas such as Compute, Communication, Automotive & Mobility, Strategic Electronics, and Industrial IoT. It is strategically positioned to leverage futuristic technologies, including AI, Big Data, and Quantum Computing. The summit also witnessed the signing of 22 MoUs with industry partners for the implementation of futureLABS.

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MINISTRY OF FINANCE

Boost to Mobile Manufacturing with Revised Customs Duty

The Indian Government has rationalised Basic Customs Duty (BCD) on mobile phone inputs, reducing rates on mechanics and die-cut parts from 15% to 10%, and others under HSN 85177990 from 15% to 10% through Customs Notification No. 9/2024, dated 30th January 2024. This move addresses industry concerns, simplifies the tariff structure, and enhances the competitiveness of Indian mobile manufacturing.

Inputs of Mobile Phones	Previous Duty	Revised Duty
Mechanics and Die Cut Parts	15%	10%
Inputs of mechanics and die-cut parts	7.5%-15%	0%
'Others' under HSN 85177990	15%	10%

Retrospective non-applicability of Rule 2(A) on the wearable and hearable industry.

The Ministry of Finance's notifications No. 7/2024 – Customs (N.T.) and No. 8/2024 – Customs (N.T.), dated 24th January 2024 exempt importers from penalties under Rule 2(A) between 1st February 2022 and 27th April 2023, saving manufacturers from cost implications and enforcement agencies' harassment.

These notifications address the import of wearable and hearable goods in the Semi-Knocked Down (SKD) form, aligning with Phased Manufacturing Programme (PMP) Notifications 11/2022-Customs and 12/2022-Customs dated 1st February 2022.

Broader definition of Wearables for Customs Duty

The Department of Revenue has broadened the definition of wearable devices subject to customs duties with its latest notification No. 17/2024-Customs published on 14th March 2024.

Previously, only smartwatches fell under the HSN Code (8517 62 90), but now it includes other smart wearable devices including smart rings, shoulder bands, neck bands, and ankle bands.

Electronic Cash Ledger (ECL) to streamline import duty payments

Effective March 1st, 2024, the Indian government implemented the Electronic Cash Ledger (ECL) system for import duty payments on goods imported through international courier terminals. This replaces the previous method and offers greater flexibility for the express industry.

ECL allows companies to make payments electronically via internet banking and NEFT/RTGS from their preferred banks. This eliminates the prior limitation of using only one designated bank. The move follows the successful rollout of ECL for import duties on seaport, airport, and other cargo shipments in April 2023.

Anti-Dumping Duties on PCB Imports from China and Hong Kong

The Directorate General of Trade Remedies (DGTR) has advised the implementation of an anti-dumping duty on certain Printed Circuit Boards (PCBs) originating from China and Hong Kong. It is proposed that majorly 30% duty, based on the CIF value, be levied on these imports. This measure is aimed at safeguarding the interests of the domestic PCB manufacturing sector.

A few specific types of Printed Circuit Boards (PCBs) are excluded from the anti-dumping investigations, which are mentioned below:

1. PCBs with more than 6 layers
2. PCBs for use in mobile phone applications
3. Populated printed circuit boards of all sizes
4. PCBs with embedded copper coin
5. Inlay PCB
6. Plated Over Filled Via (POFV) PCB or Via-in-Pad PCB
7. High-Density Interconnect (HDI) PCB
8. Rigid-flex PCBs
9. Packaging substrates / IC packaging.

MINISTRY OF CONSUMER AFFAIRS

Permanent Institution of the BIS Parallel Testing Scheme for CRO Products

The Indian government has introduced an efficient parallel testing process for electronic products under the Compulsory Registration Order (CRO) of 2021, significantly reducing testing and registration times from 16-20 weeks to 8-12 weeks. This development is expected to expedite the market launch of electronic items. The Bureau of Indian Standards (BIS) has expanded this method to include 64 CRO-notified products and made parallel testing a permanent option as of January 9, 2024.

CCPA Drafts Guidelines to Regulate Greenwashing

The Central Consumer Protection Authority (CCPA) has released draft guidelines for the prevention and regulation of greenwashing. The guidelines aim to curb deceptive or misleading environmental claims in advertisements. They require all environmental claims to be fully disclosed, backed by verifiable evidence, and substantiated with credible certification. The guidelines also stipulate that vague terms such as 'green', 'eco-friendly', and 'good for the planet' should be used only with adequate disclosures. The CCPA has invited public comments on the draft guidelines until March 21, 2024. The guidelines, which were developed after detailed deliberations with stakeholders, will be issued under section 18 (2) (l) of the Consumer Protection Act 2019.

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MINISTRY OF COMMERCE & INDUSTRY

Extension of RoDTEP benefits to AA Holders, EoU and SEZ Units

The Government of India has expanded the Remission of Duties and Taxes on Exported Products (RoDTEP) scheme to include key export sectors like Advance Authorization holders, Export Oriented Units (EOUs), and Special Economic Zones (SEZs). This aims to make Indian exports more competitive globally, particularly amidst economic uncertainties.

https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2012779#:~:text=In%20the%20current%20financial%20year,2024.

QCO exemption for imports under Advance Authorisations, and by EOUs and SEZ units

The Indian government has eased quality control requirements for specific imports by manufacturers who export their finished goods. This applies to holders of Advance Authorizations (AAs), Export Oriented Units (EOUs), and units in Special Economic Zones (SEZs).

The relaxation applies to certain Quality Control Orders (QCOs) issued by the Ministry of Steel, Department for Promotion of Industry and Internal Trade (DPIIT), and Ministry of Textiles. Manufacturers can now import inputs exempt from these QCOs, provided the finished products are physically exported (not sold domestically). Strict rules govern any unused imported materials to prevent them from entering the domestic market.

Cabinet approves amendment in the Foreign Direct Investment (FDI) policy on Space Sector

The proposed reforms seek to liberalize the FDI policy provisions in space sector by prescribing liberalized entry route and providing clarity for FDI in Satellites, Launch Vehicles and associated systems or subsystems, Creation of Spaceports for launching and receiving Spacecraft and manufacturing of space related components and systems.

Benefits:

Under the amended FDI policy, 100% FDI is allowed in space sector. The liberalized entry routes under the amended policy are aimed to attract potential investors to invest in Indian companies in space.

The entry route for the various activities under the amended policy are as follows:

I. Upto 74% under Automatic route: Satellites-Manufacturing & Operation, Satellite Data Products and Ground Segment & User Segment. Beyond 74% these activities are under government route.

II. Upto 49% under Automatic route: Launch Vehicles and associated systems or subsystems, Creation of Spaceports for launching and receiving Spacecraft. Beyond 49% these activities are under government route.

III. Upto 100% under Automatic route: Manufacturing of components and systems/ sub-systems for satellites, ground segment and user segment.

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India-US Trade Policy Forum: Strengthening Bilateral Trade

The 14th Ministerial-level meeting of the India-United States Trade Policy Forum (TPF) was held in New Delhi, co-chaired by India's Minister of Commerce and Industry, Shri Piyush Goyal, and U.S. Trade Representative, Ambassador Katherine Tai. The ministers committed to launching future joint initiatives in areas including critical minerals, customs and trade facilitation, supply chains, and high-tech products trade. They agreed to establish a Joint Facilitative Mechanism (JFM) to mitigate non-tariff barriers, aiming to eliminate duplicative testing requirements and reduce compliance costs. The meeting highlighted the progress made in addressing bilateral trade concerns since the 13th TPF, including the settlement of seven longstanding trade disputes at the World Trade Organization (WTO). The ministers appreciated the strong momentum in India-US bilateral trade, which has likely surpassed $200 billion in 2023.

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India and US Strengthen Innovation Ecosystems with MoU

The Union Cabinet, chaired by Prime Minister Shri Narendra Modi, approved a Memorandum of Understanding (MoU) between the United States and India on December 15, 2023. The MoU aims to enhance innovation ecosystems through an "Innovation Handshake". This initiative will connect the dynamic startup ecosystems of both countries, address regulatory hurdles, and promote innovation and job growth, particularly in critical and emerging technologies. The MoU includes a series of India-US Innovation Handshake events, round tables with the private sector, hackathons, and open innovation programs. Two future Innovation Handshake events are scheduled for early 2024 in India and the United States. The MoU is expected to significantly strengthen commercial opportunities in the high-tech sector.

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Shri Piyush Goyal releases the "Logistics Ease Across Different State (LEADS) 2023"

Union Minister Shri Piyush Goyal released the "Logistics Ease Across Different States (LEADS) 2023" report on December 16, 2023. The report provides strategic insights for stakeholders in the logistics sector and encourages states and union territories to enhance their logistics performance. It highlights the impact of various reforms across states and union territories, emphasizing initiatives like PM GatiShakti, 'industry' status for logistics, multimodal connectivity, and digital initiatives in logistics. The report is based on a pan-India primary survey conducted between May and July 2023, covering over 7,300 responses across 36 states/union territories. Shri Goyal stated that the logistics sector will be a cornerstone in India's endeavour to achieve a tenfold growth from USD 3.5 trillion to USD 35 trillion by 2047.

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DPIIT releases Report on "Logistics Costs in India: Assessment and Long-Term Framework"

The Department for Promotion of Industry and Internal Trade (DPIIT) released a report titled "Logistics Cost in India: Assessment and Long-Term Framework" on December 14, 2023. The report, prepared by the National Council of Applied Economic Research (NCAER), presents a baseline logistics cost estimate and a framework for long-term logistics cost calculation. It recommends a hybrid approach using primary and secondary survey data, as well as real-time Big Data, to estimate logistics cost. The report aims to instil confidence in investors regarding the efficient movement of goods and services, and is expected to play a pivotal role in optimizing logistics efficiency and enhancing India's global competitiveness.

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IPEF Partners Sign Supply Chain Agreement, Conclude Negotiations on Clean and Fair Economy Pillars

The third Indo-Pacific Economic Framework for Prosperity (IPEF) Ministerial Meeting was held in San Francisco, California, on November 14, 2023. Union Minister Shri Piyush Goyal participated in the meeting, which saw the signing of the IPEF Supply Chain Agreement by the 14 IPEF partners. The meeting also marked the substantial conclusion of negotiations under the Clean Economy (Pillar-III) and Fair Economy (Pillar-IV) of the IPEF. Shri Goyal emphasized the need for increased collaboration on research and development of innovative and affordable climate-friendly technologies under Pillar-III. Under Pillar-IV, he highlighted the benefits of enhancing information sharing among partners and strengthening cross-border investigations and prosecutions.

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MINISTRY OF HEAVY INDUSTRIES

Government approves E- Vehicle policy to promote India as a manufacturing destination for EVs

The new Electric Vehicle (EV) Policy 2024 in India aims to position the country as a prime manufacturing hub for electric vehicles. Here is a summary of the key highlights of the policy:

- Minimum Investment required: Rs 4150 Cr (USD 500 Mn)
- No limit on maximum Investment
- Timeline for manufacturing: 3 years for setting up manufacturing facilities in India, and to start commercial production of e- vehicles, and reach 50% domestic value addition (DVA) within 5 years at the maximum.
- Domestic value addition (DVA) during manufacturing: A localization level of 25% by the 3rd year and 50% by the 5th year will have to be achieved
- The customs duty of 15% (as applicable to CKD units) would be applicable on vehicle of minimum CIF value of USD 35,000 and above for a total period of 5 years subject to the manufacturer setting up manufacturing facilities in India within a 3-year period.
- The duty foregone on the total number of EV allowed for import would be limited to the investment made or ₹6484 Cr (equal to incentive under PLI scheme) whichever is lower. A maximum of 40,000 EVs at the rate of not more than 8,000 per year would be permissible if the investment is of USD 800 Mn or more. The carryover of unutilized annual import limits would be permitted.

STATE POLICY

Tamil Nadu Semiconductor and Advanced Electronics Policy 2024

The Tamil Nadu Semiconductor and Advanced Electronics Policy 2024 aims to position Tamil Nadu as a significant player in the semiconductor and electronics sectors, with a focus on attracting investments, fostering a semiconductor design ecosystem, and contributing to India's electronics exports. Key highlights of the policy include:

- Objectives: Attracting anchor investments in semiconductor and advanced electronics manufacturing, creating a skilled workforce, and contributing 40% of India's electronics exports by 2030.
- Incentives: Eligible units offered capital subsidy, special training incentive, product testing and prototyping incentive, and land cost incentive.
- Investment Requirements: Companies need to meet a minimum investment threshold of ₹200 crore and a minimum employment threshold of 150 jobs, with additional job creation for increased investment.
- Implementation: Facilitated by Guidance Tamil Nadu and SIPCOT, with a single window portal for streamlined processes.

Uttar Pradesh Semiconductor Policy 2024

The Uttar Pradesh Semiconductor Policy 2024 aims to position the state as a prominent hub for the semiconductor industry in India. Some of the key highlights of the policy include:

Incentives for Investors

- Capital subsidy: The state government will provide a 50% subsidy on top of the capital subsidy offered by the central government.
- Interest subsidy: Units investing up to ₹200 crore will receive an interest subsidy of up to ₹1 crore.
- Land discounts: A 75% discount on the first 200 acres of land and a 30% discount on additional land will be provided.
- Exemptions: 100% exemption on registration and stamp duty for land acquisitions.

Infrastructure Support

- Power incentives: 10-year exemption from electricity duty and 50% discount on wheeling/ transmission charges for interstate electricity purchases for 25 years.
- Dedicated infrastructure: Provision of double power grid networks for semiconductor fabrication units.

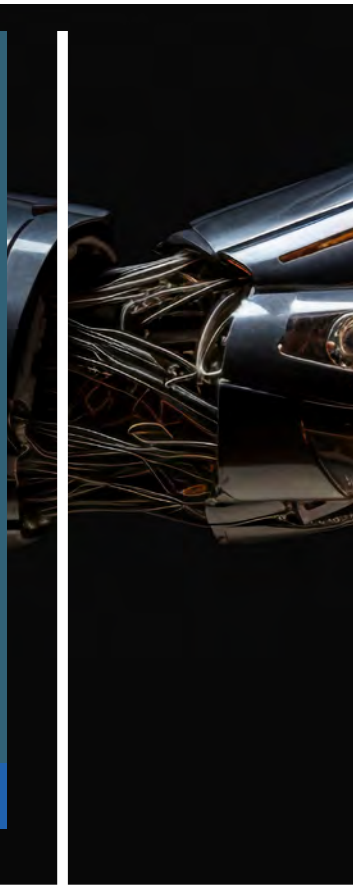
Talent Development

- Skill development: Up to ₹1 crore in one-time assistance for training and skill development for up to 12 months.
- R&D and Centers of Excellence: Subsidies of up to ₹10 crore for setting up R&D centers and 50% of project cost (up to ₹10 crore) for Centers of Excellence.

Implementation

- Nodal agency: The IT and Electronics Department will be the nodal agency for implementing the policy.
- Policy implementation unit: A dedicated unit will be set up under the chairpersonship of the Additional Chief Secretary/Principal Secretary of the IT and Electronics Department.

FROM POLICY TO PRACTICE: IMPLEMENTING EFFECTIVE AI GOVERNANCE STRATEGIES IN INDIA



By:
Dr Subi Chaturvedi, PhD IIT Delhi
Global SVP, Chief Corporate Affairs and Public Policy Officer, InMobi Group

India has been a technological and innovative global powerhouse in recent years. With a thriving startup ecosystem and a quickly expanding digital economy, the nation is at the forefront of technological advancement. Artificial Intelligence (AI), one of the many technologies reshaping the modern world, is extremely promising for India. But this promise has its own set of difficulties, especially concerning governance, regulation, and policy.

AI technologies are becoming more and more integrated into different facets of society, such as healthcare, banking, transportation, and education, raising concerns about their ethical use and regulation. What is expected to be a market opportunity worth US$ 1,811.8 billion by 2030 globally, adding US$ 15.7 trillion to the global economy, is also raising concerns regarding its impact on users.

How do we make sure that AI is created and applied in a way that minimizes risks and enhances society? The answer lies in effective AI governance strategies – which require undertaking a journey from policy to practice. Like a true Indian fable, it is replete with its own set of demons, heroes, magical shape-shifting animals, healing plants which patch the wounds, friends, allies and partners who build capacity and coalitions and consortiums who often come together based on agendas, issues and common minimum programs.

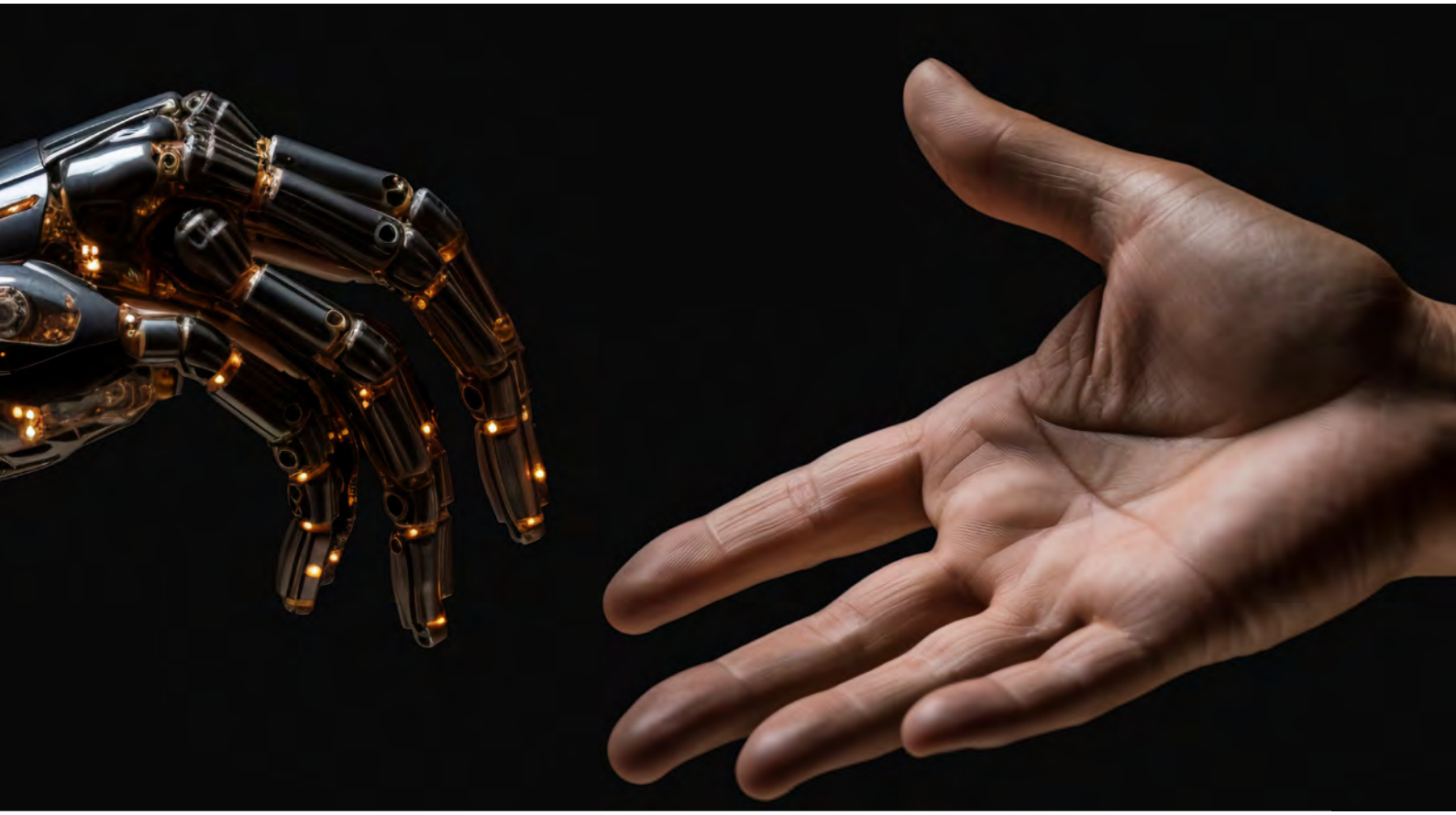
There are however many dark dungeons to be explored, and many unsurmountable seas of challenges to be encountered because with great power comes great responsibility as many of our superheroes have vouched and there are many doors which you need to keep knocking till one of them opens or you find a window of direction and you see light at the end of the tunnel. In a world of unknowns, persistence, tenacity, and greater good using tech for the last mile can be our armour where there are webs of lies and deceit galore on what is and what can be, powered by reams of misinformation, disinformation and fake news.

In the words of the renowned poet Ahmad Faraz, this couplet best describes our current engagement with AI which roughly translates into,

'There is a lot of faith I have on your love, the fear of separating from you is constantly there too.':

Dil ko teri chahat pe bharosa bhi bahut hai
Aur Tuzh se bichad jaane ka darr bhi nahin jaata

दिल को तेरी चाहत पे भरोसा भी बहुत है
और तुझ से बिछड़ जाने का डर भी नहीं जाता |



Laying the groundwork

India has made great progress toward creating the framework for AI governance. The National Strategy for Artificial Intelligence, which the Indian government unveiled in 2018, lays out a plan to establish India as a world leader in AI research and development. The aforementioned plan placed significant emphasis on the development of a competent workforce, the promotion of innovation, and the ethical and responsible implementation of AI.

India's commitment to utilising AI for societal benefit has been further solidified by subsequent efforts like the National AI Mission and the National AI Portal. Transforming these policy declarations into practical actions on the ground, however, continues to be a work in progress with several milestones achieved but requiring consistent upgrades and mitigating newer risks to keep pace with the speed of innovation and rapidly expanding ambit of digital India with new and first-time internet users.

The absence of comprehensive legal frameworks specifically designed for AI technologies is one of the main challenges. While some aspects of AI, like data protection and privacy, may already be covered by current laws, specific guidelines and even legislation are eventually needed to address the particular problems that AI presents, such as algorithmic bias, racism, discriminatory content, copyright issues, responsible innovation, diversity and inclusion, accountability, and transparency.

Entrepreneurs, investors, academicians and policymakers are increasingly struggling to keep up with the quick pace of technological advancement and new trends and use cases. The regulatory environment controlling the use of AI applications must change along with the technology. This calls for a flexible and dynamic approach to AI governance, one that is shaped by continuing discussions between stakeholders, engineers, policymakers, and civil society.

Responsible Development of AI

The development of norms and values is a crucial component of efficient AI governance. If AI systems are not developed and implemented responsibly, they could reinforce or worsen already-existing prejudices and inequities. It is crucial to ensure fairness and equity in AI systems in a nation as diverse as India, with its wide range of cultural, linguistic, and socioeconomic distinctions. This calls for an all-encompassing strategy that integrates inclusion, accountability, transparency, and fairness into the development and application of AI technologies.

For AI to be widely used and accepted, the public's trust and confidence must be increased. This means demystifying AI systems' inner workings, promoting an environment of openness and transparency around them, and making sure their application adheres to social norms and values. In this sense, public involvement and awareness-raising initiatives are essential for addressing concerns and dispelling myths about artificial intelligence.

Managing the skills gap is just another essential component of good AI governance. As AI technologies advance, there will be a greater need for qualified experts to create, implement, and oversee these systems. To satisfy this need and provide students with the information and abilities they need to prosper in an AI-driven environment, India's educational system must change. This involves interdisciplinary cooperation, ethical reasoning, critical thinking, and technical proficiency.

Furthermore, in order to guarantee that AI technologies represent the requirements and viewpoints of all societal segments, and we are able to remove the very high entry barriers towards creating localised Gen AI models with adequate cultural context, initiatives to advance diversity and inclusivity in the AI workforce are crucial along with decentralised models of frugal innovation. A bit like India's mission to Mars, where we were able to successfully indigenise even rocket science!

This requires proactive measures to overcome barriers to entry and create pathways for underrepresented groups, including women, minorities, academia, research centres, and persons with disabilities, to participate in the AI ecosystem. Institutions of higher learning can play a crucial role in making India the hub of everything AI the Indian way!

A Regulatory Framework for Building Trust in Emerging Technology

India's first global Framework for Integrity, Security and Trust (FIST) was recently created and launched by InMobi with USI and CyberPeace indicating a colossal shift in policy leadership. Despite India being one of the leaders in tech development and adoption, we have usually waited for international standards and frameworks to be created before adopting them. The FIST framework is a multi-stakeholder initiative to make the Internet more open, accessible, transparent, safe and secure.

The framework was created with the aim of developing a digital landscape that ensures responsibility and accountability at each step of the development and deployment of new and innovative technologies while securing the space for the users. With this framework, India has announced its intent to assume the policy and regulatory leadership of the global digital landscape, ascertaining the rise of the global south. This framework has been the precursor to more specific frameworks for AI safety, consumer interest, and entrepreneurship, among others.

The Gen AI Case

Generative Artificial Intelligence (Gen AI) has an unparalleled opportunity for growth and innovation, making it a revolutionary force that is poised to disrupt sectors in India. According to a recent report, Gen AI has the potential to add up to US$ 1.5 trillion to India's GDP by 2030.

India's semiconductor mission is both bold and ambitious in its vision and scope. The Hon. Prime Minister Shri Narendra Modi laid the foundation stone of three semiconductor facilities across Dholera Gujarat, which will be India's first Fab, CG Power OSAT Facility in Sanand, and TEPL OSAT facility in Morigaon Assam on March 13th, 2024. The aim is to build a vibrant semiconductor and display ecosystem to enable India's emergence as a global hub for electronics manufacturing and design. The government of India is now offering attractive and competitive schemes for Semiconductor fabs up to 50% of project cost, Display fabs, Compound Semiconductor ATMP, and design-linked incentives. There has never been a better time to make in India.

As technology advances, there is an increasing requirement for efficient governance to control related dangers. The rapid advancement of Generative AI technology prompts worries about false information, skewed results, and ecological issues including higher energy use. Transparency, accountability, and adherence to ethical standards must be given top priority by Indian enterprises across the whole lifecycle of generative AI systems.

Indian organizations need to put strong governance structures in place that include transparent decision-making procedures, well-defined lines of duty, and strict cybersecurity measures in order to handle these difficulties. Moreover, it is imperative to interact proactively with dynamic regulatory frameworks on a national and international level to guarantee adherence to rising standards and best practices.

India can fully utilize Generative AI while reducing risks and establishing itself as a global leader in ethical AI innovation by promoting a culture of responsible AI development and application.

To put it simply, negotiating the terrain of Generative Artificial Intelligence in India necessitates a comprehensive strategy that integrates technological know-how with moral and legal issues. By finding this balance, Indian businesses can harness AI's transformative potential while avoiding its possible drawbacks, which will eventually spur sustainable growth and innovation across a range of economic sectors.

Best Practices for AI Governance: The Road Ahead

For enterprises to guarantee the responsible and significant deployment of AI technologies, it is imperative to establish an efficient AI governance framework. The following are essential best practices that direct the creation and application of AI governance frameworks:

1. **Establishing Internal Governance Structures:**

   The development of strong internal governance procedures inside enterprises is essential to the success of AI governance. This entails assembling working groups made up of diverse and prominent stakeholders, business executives, and AI specialists. These committees are essential in developing the rules that control AI use in the company. The creation of AI business use cases, the distribution of roles and duties, the upholding of accountability, and the evaluation of results are made possible by internal governance frameworks.

2. **Stakeholder Engagement:**

   Building trust and openness in AI governance requires open communication with all parties involved. Employees, end users, investors, and community members are a few examples of stakeholders. Each stakeholder group should be informed on how AI functions, its intended application, and any potential advantages or disadvantages by organizations. Creating official policies for involving stakeholders aids in creating norms and avenues for communication that are unambiguous.

3. **Assessing AI's Impact on Humans:**

   AI systems that are well-regulated put people's privacy and autonomy first, abstaining from bias and discrimination. Risks that need to be recognized and reduced include those caused by biased data sampling techniques, low-quality training data, and a lack of diversity in development teams. Adopting strong risk management techniques guarantees ethical and responsible use of AI.

4. **Managing AI Models:**

   As AI models age, accuracy and performance problems may arise. To avoid model drift, lag, fatigue, and preserve peak performance, rigorous testing, model refreshes, and constant monitoring are necessary. Establishing procedures for continuous model management is necessary for organizations to guarantee AI systems function well and produce accurate results.

5. **Addressing Data Governance and Security:**

   Given the sensitive nature of the data involved, data governance and security are critical issues in AI governance. To protect customer data and preserve the integrity of AI system results, organizations need to put strong data security measures in place and follow applicable data privacy laws. Responsible AI deployment is ensured by reducing the risks of data breaches and misuse through the development of AI-specific data governance and security policies.

6. **Higher Focus on Corporate Governance:**

   A lot of entities in the space and key players are startups, often driven with a growth mindset to the exclusion of purpose. The pressure for numbers, and profit over people or planet is quite real. In an environment where there is a funding winter the temptation to make a quick buck and take the project live with unrealistic investor expectations, fear of missing out from competitors is plaguing giant US tech as well as legacy businesses. More than ever it's important to slow down, build consciously and build to last. What we do today with AI literally shapes the discourse and wipes out millions in value overnight.

7. **It's an arms race:**

   Keeping AI at an arm's length is equally important. Much like Indian homemakers or an experienced chef who knows exactly when to bring the curry to boil, add curd or cream without the gravy separating AI infusions across process both in government and the private sector need to paced right and need based. An unhealthy obsession with AI only because of the fear of missing out shouldn't also be encouraged with an adequate transition time while we build capacity.

8. **Fail early fall forward:**

   For any technological innovation to reach its potential, it is important to create governance frameworks that are light touch, encouraging and facilitative. Once the technology has reached its logical zenith, regulation is a must but over regulation in the early stages can hinder and even discourage innovation. So regulatory sandboxes which allow experimentation will help us to quickly understand what works.

9. **Equity over equality:**

   AI for all is not a mere slogan, rather a pertinent warning. AI has the potential to bridge the gap between the digitally endowed and the digitally limited as well as increasing it. It is important to ensure that we use equitable distribution of resources, focus and effort of deploying AI and training people in it, rather than equal distribution. A neat example would be the digital trickle-down effect of new technology adoption in cities where people end up using one tool or the other just because everybody else is using it while in rural areas, the users are never exposed to new tools and thus never end up using them or learning how to use them. Allowing for decentralised models with a plug and play system and choice based adoption will go a long way in ensuring everyone has a voice and we do not leave people behind.

10. **#HarGharAI:**

    AI is probably the biggest technological innovation since the fortunate marriage between affordable smartphones and cheap data tariffs. While this led to remarkable digital and economic growth in the next decade, the AI promise is much bigger. While the former gives people access, the latter promises to give them power. AI is transforming industries as well leading to revolutions in many sectors. Take Nvidea for example, which crossed US$1 trillion in value, fuelled by the Gen AI boom as they developed

the semiconductors and GPUs to process it. Other components used in developing, deploying or sustaining AI will witness similar growth and success and that is what makes AI so transformative.

Moving from Policy to Practice:

A multifaceted strategy that takes into account the regulatory, ethical, educational, and socioeconomic aspects of AI governance is needed to move from policy to practice. Even though India has laid a strong foundation for AI governance, there is still more to be done to make sure that AI technologies are created and applied in a way that benefits society as a whole.

Government, business, academia, and civil society can work together to unlock and harness AI's revolutionary potential while avoiding some of its possible hazards and pitfalls in India. Realizing AI's potential as a positive force in India and abroad would require coordinated efforts so that we can create a truly connected and empowered Digital India where technology becomes a force for good.

About the Author:

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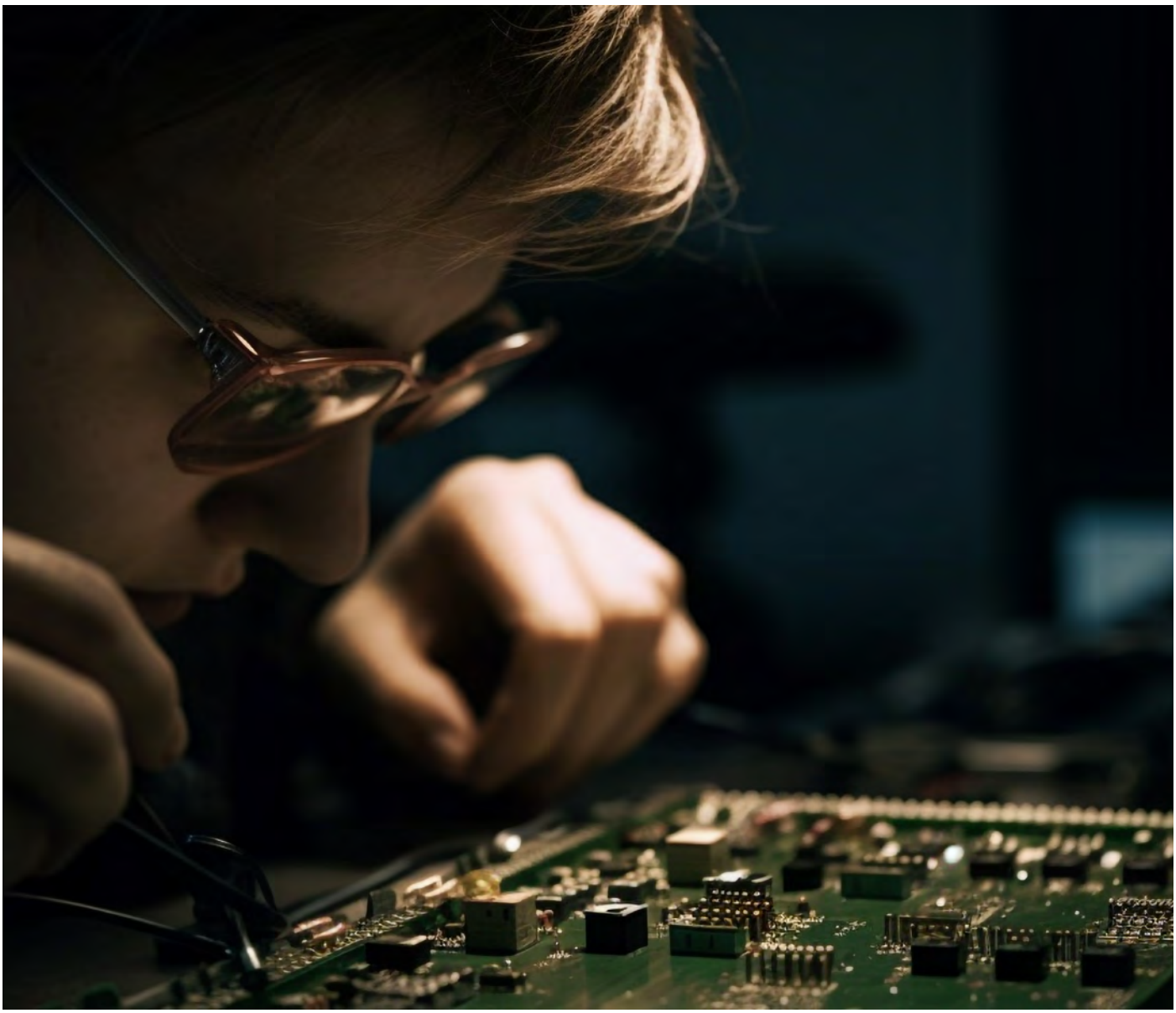
The opinions expressed here are those of the authors.



FROM BUDDING TO THRIVING: RATIONALISING FACTOR REGULATIONS FOR ELECTRONICS MANUFACTURING

By:
Bhuvana Anand, Sargun Kaur, Shubho Roy, and Abhishek Singh
Prosperiti

Introduction

The Government of India has set a target of tripling electronics production from $101 billion to $300 billion by 2026. To this end, the government is currently focusing on two approaches. The first approach involves offering fiscal benefits like capital subsidies and production-linked incentives, and the second approach involves process simplification by promoting ease of doing business (EoDB) in the country.

Both these approaches help attract investment to the country but these investments can be substantially better utilised and given a boost. This requires a review of existing regulations and standards, particularly for buildings and employment. Rationalising standards makes no demand on government coffers and can have an outsized impact.

For example, an Indian factory could increase its floor space by 100% by liberalising building standards.[1] Similarly, Indian workers could increase their yearly earnings by 60% by liberalising regulations on working hours.[2]

This article shows how regulatory standards restrict industrial efficiency and job creation in the electronics manufacturing sector.

Building standards hurt industrial productivity

Indian building regulations limit an electronics manufacturing firm's ability to use land productively and generate employment. A factory in India is likely to lose 50% of land, or more, to building standards.[3] Figure 1 shows the percentage of land lost by factories of different sizes in 10 Indian states. These building standards make us uncompetitive compared to electronics manufacturing successes like Singapore, Hong Kong, Taiwan, and Seoul which have long relied on high-density industrial buildings enabled by regulatory standards cognizant of the economic needs of the country.

[1] *Anand, Bhuvana, Kaur, Sargun and Roy, Shubho. 2023. State of Regulation: Building standards reforms for jobs and growth. New Delhi: Prosperiti. https://prosperiti.org.in/wp-content/uploads/2024/01/State-of-Regulation-Report_Building-Standards_December-2023.pdf*
[2] *Anand, Bhuvana, Roy, Shubho and Saxena, Prisha. October 04, 2023. Lower the bar, Increase the earnings. Prosperiti Insights. https://prosperiti substack.com/p/lower-the-bar-increase-the-earnings*
[3] *Anand, Bhuvana, Kaur, Sargun and Roy, Shubho. 2023. State of Regulation: Building standards reforms for jobs and growth. New Delhi: Prosperiti. https://prosperiti.org.in/wp-content/uploads/2024/01/State-of-Regulation-Report_Building-Standards_December-2023.pdf*

FIGURE 1: LAND LOST BY FACTORIES OF DIFFERENT SIZES IN 10 STATES (IN %AGE)

Source: State of Regulation 2023: Building standards reforms for jobs and growth

Flatted factories: an example

To set up high-density industrial buildings, one innovative setup used by the East Asian tigers is a flatted factory. These factories are multi-storeyed manufacturing facilities with high worker density located closer to urban areas allowing easy access to city amenities. These factories constitute approximately 70% of industrial floor space in Hong Kong.[4]

However, India may not be able to replicate this success because of our regulatory environment. A critical constraint that harms flatted factories in India is the floor area ratio (FAR) which determines the factory floor area that can be constructed on a piece of land. The following illustration shows how a flatted factory currently based in Singapore will lose out on critical floor space were it to set up the unit in Uttar Pradesh. Consider the flatted factory set up by Mapletree at 16 Kallang Place, Singapore. This factory is on a 14,000 sqm plot with 46,000 sqm of floor space.[5] If Mapletree built the same factory in Uttar Pradesh, it would have 21,000 sqm of productive floor space (Table 1).

TABLE 1: COMPARING PERMITTED BUILT-UP AREA FOR A FLATTED FACTORY IN SINGAPORE AND UTTAR PRADESH

Parameter	Singapore	Uttar Pradesh (Noida)
Plot area (sqm)	14,000	14,000
FAR	3.2	1.5
Built-up area (sqm)	~46,000	21,000
Units that can be built (#)	~46	~21

To encourage factories, Uttar Pradesh has provided fiscal incentives. However, these incentives do not offset the loss due to restrictive building standards. For example, Uttar Pradesh offers a 50% exemption from stamp duty to industries being set up in Noida.[6] Let us assume that the same Mapletree factory is set up in Sector 63, Noida.[7] Per circle rates, the factory will get a stamp duty exemption of Rs 2.15 crores.[8] However, the same flatted factory will incur a loss worth Rs 110 crores due to restrictive FAR regulations based on circle rates.[9]

This problem is not peculiar to Uttar Pradesh. Even as other states like Rajasthan, Andhra Pradesh, and Karnataka want to encourage flatted factories, their impractical building standards do not allow such facilities to proliferate.[10]

Labour regulations limit production efficiency

Similarly, electronics manufacturing in India is stymied by labour regulations which make production operationally difficult. Working hour restrictions in India hurt operational efficiency and workers' ability to earn more. Regulations on working hours force factories to carry out production in 8-hour shifts. Factories can run longer shifts by offering overtime or increasing the work shifts to 12 hours, as in the case of China and Vietnam. In India, overtime work is restricted by hours, and the premium is prohibitively high making overtime work practically infeasible.[11] To make matters worse, firms are forced to set aside 30–45% of the factory building for various welfare facilities (Figure 2). Last but not least, electronics manufacturing firms are also impeded by regulations that make it difficult to employ women and set up temporary employment arrangements.

[4] *Government of Hong Kong. 2019. Statistical Highlights: Industrial Buildings in Hong Kong. Legislative Council. https://www.legco.gov.hk/research-publications/english/1819issh30-industrial-buildings-in-hong-kong-20190816-e.pdf*

[5] *Mapletree Industrial Trust. n.d. Property portfolio. https://www.mapletreeindustrialtrust.com/~/media/MIT/Investor%20Relations/Publications/Annual%20Reports/2012-2013/sections/Property%20Portfolio.ashx*

[6] *Government of Uttar Pradesh. 2022. Uttar Pradesh Industrial Investment & Employment Promotion Policy 2022. https://invest.up.gov.in/wp-content/uploads/2023/02/Uttar_Pradesh_Industrial_Investment_Employment_Promotion_Policy_2022-en.pdf*

[7] *Government of Uttar Pradesh. 2021. Revised minimum rates for residential, commercial and industrial land in Gautam Budh Nagar/NOIDA, UP. https://cdn.s3waas.gov.in/s30e01938fc48a2cfb5f2217fbfb00722d/uploads/2021/08/2021080293.pdf*

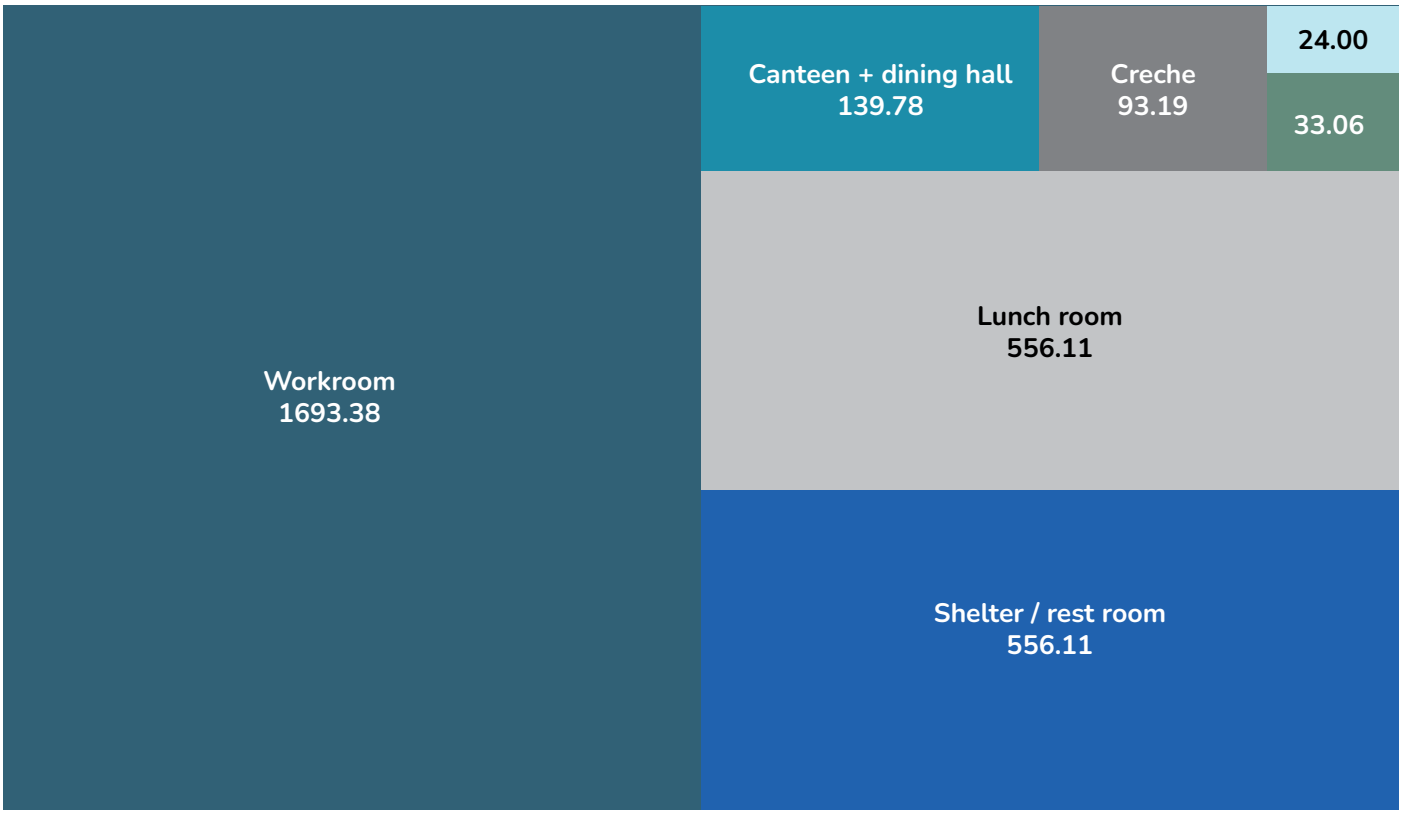
[8] *The stamp duty is charge @7% based on the circle rate of land. The circle rate for a factory being set up in Sector 63, Noida is Rs 44,000.*

[9] *The circle rate for a factory being set up in Sector 63, Noida is Rs 44,000. Even though the built-up area is more expensive than the cost of land, we multiply the circle rate with the built-up area to arrive at a conservative estimate of the cost of built-up area lost.*

[10] *Government of Rajasthan. 2019. Rajasthan Industrial Development Policy 2019. Department of Industries. https://rajnivesh.rajasthan.gov.in/Uploads/a1786588-588a-46fc-8452-3ad89b2f59a2.pdf*
Government of Andhra Pradesh. 2023. Andhra Pradesh Industrial Development Policy 2023-27. Industries and Commerce Department. https://www.apindustries.gov.in/incentives/Data/GO%20MS%20NO%2022%20IDP%20.pdf
Government of Karnataka. 2021. Special Incentives Scheme for ESDM Sector 2020-2025: Operational guidelines. Department of Electronics, Information Technology, Biotechnology, and Science & Technology.https://itbtst.karnataka.gov.in/storage/pdf-files/Special%20Incentives%20Scheme%20for%20ESDM%20OPG%20-%20Approval.pdf

[11] *Roy, Shubho and Dandekar, Suyog. October 23, 2023. Double or Nothing. Prosperiti Insights. https://prosperiti.substack.com/p/double-or-nothing*

FIGURE 2: SPACE NEEDED FOR WELFARE FACILITIES IN A 501-WORKER FACTORY IN TELANGANA (IN SQM)



Effects of restrictions on hiring women

Electronics exporting powerhouses such as Taiwan, South Korea, and Vietnam, have historically relied on female workers to succeed in electronics manufacturing, but India has not been able to fully realise this opportunity.[12] Like the case of flatted factories, Indian regulations restrict the employment of women, harming both women and the sector. The law hurts the interest of the industry and female job-seekers in two ways—by hindering the employment of women in night shifts and in several factory processes.

Electronics manufacturers prefer to employ women workers given their greater precision abilities.[13] However, only 12 Indian states allow factories to employ women at night. Even in these 12 states, factories are required to comply with unrealistic requirements. For example, factories in Tamil Nadu must staff 2/3rd of the workforce and 1/3rd of the supervisory staff with women each night. It is unlikely that factories in India will be able to meet this minimum requirement, particularly the minimum requirement for supervisory staff. In contrast, South Korea only requires women's consent for women to be employed in the night shift.[14]

In addition to working night shifts, women are also prohibited from working in certain processes of the electronics manufacturing industry. Consider electroplating, a common and essential step in electronics manufacturing. Women in Gujarat, Karnataka, and Tamil Nadu are prohibited from working in any process that involves electroplating (see Table 1).

[12] *Arrigo, Linda Gail. 2019. The industrial work force of young women in Taiwan. Bulletin of Concerned Asian Scholars, 12:2, 25-30. https://www.tandfonline.com/doi/pdf/10.1080/14672715.1980.10405570*
Park, Kyung Ae. 1995. Women workers in South Korea: The Impact of Export-led Industrialisation. Asian Survey, Vol. 35, No. 8 (Aug., 1995), pp. 740-756. https://www.jstor.org/stable/2645733?read-now=1&seq=13#page_scan_tab_contents
International Pollutants Elimination Network, Research Centre for Gender, Family and Environment in Development. 2017. Stories of women workers in Vietnam's electronics industry. https://ipen.org/sites/default/files/documents/FINAL_Stories%20of%20Women%20Workers%20in%20Vietnam%27s%20Electronics%20Industry%20FINAL%20Nov%202017.pdf

[13] *K, Sankunni. March 22, 2023. 12-Hour Shift, More Women In Factories: What Apple Wants From India To 'Diversify Beyond China'. India.com. https://www.india.com/business/12-hour-shift-more-women-in-factories-what-apple-wants-from-india-to-diversify-beyond-china-5957876/*

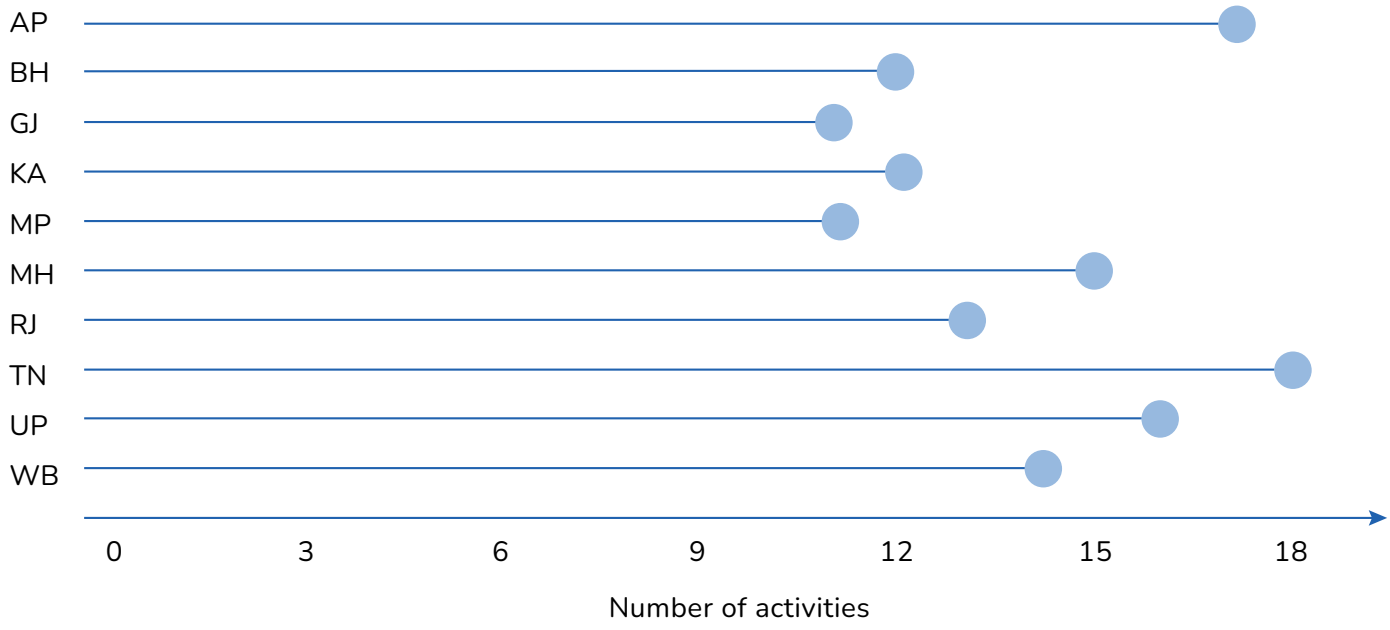
[14] *Government of South Korea. March 13, 1997. Laour Standards Act. Act No. 5309. https://www.ilo.org/dyn/travail/docs/1586/Labour%20Standards%20Act%20-%20www.moel.go.kr.pdf*

TABLE 2: REGULATIONS ON HIRING WOMEN

International Finance Corporation EHS Guidelines: Semiconductor manufacturing	Tamil Nadu Factories Rules, 1950 (Schedule 2): Electrolytic plating
"..... Selective interconnection of different regions and layers on the wafer is obtained through metallization: a dielectric material is deposited and patterned in damascene processing; then the features are filled with aluminium alloys under vacuum or copper by electroplating or electrochemical deposition." (emphasis added)	1b. "bath" means any vessel used for an electrolytic process or for any subsequent process 3. No woman, adolescent or child shall be employed or permitted to work at a bath.

Women are not just prohibited from participating fully in the manufacture of semiconductors, India's 10 most populous states prohibit women from an average of 15 industrial activities (Figure 3).

FIGURE 3: NUMBER OF PROHIBITED INDUSTRIAL ACTIVITIES FOR WOMEN IN INDIA'S 10 MOST POPULOUS STATES



Effects of laws regulating flexible employment arrangements

Temporary employment arrangements have been a common feature of electronics manufacturing across countries leading in the sector. To compete globally, electronics manufacturing firms have had to build the capacity to produce a high volume of goods in progressively shorter periods. For instance, demand for the latest iPhone is the highest in the first few months after launch, and rises during holidays like Christmas and Thanksgiving. To meet such demand shocks, firms must have flexible hiring policies. Consequently, temporary workers make up at least 60% of all workers in electronics manufacturing across countries.[15] Indian factories also prefer to employ temporary workers to mitigate the cost of size-dependent labour regulations and to ensure operational efficiency.

Indian regulations restrict the supply of temporary workers by requiring suppliers to repeatedly seek authorisation and maintain extensive records. Under India's contract labour law, a labour contractor/staffing firm must procure

[15] *McFalls, Ricarda. 2016. The impact of procurement practices in the electronics sector on labour rights and temporary and other forms of employment. International Labour Organisation. https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_541524.pdf*

a new licence for each client each year. In contrast, a labour contractor/staffing firm in Vietnam has to get a single licence for all its clients which is valid for five years.[16] Labour contractors/staffing firms in India must also maintain 7 registers and submit half-yearly returns for each client. In contrast, a labour contractor/staffing firm in Vietnam needs to submit only two half-yearly returns and one yearly return, regardless of the number of clients.[17]

Indian lawmakers have acknowledged that compliance requirements for labour contractors in India are overly cumbersome:

> *"The concept of a single all India licence with 5 years validity de-linked with work order has been proposed as an option available for contractors who undertake a project or are supplying human resources. At present a number of licences are being obtained by a contractor for each work order. (The reform) Promotes ease of doing business. Reduces corruption and reduces paperwork as well."* ***(Introductory remarks, Report of the Standing Committee on Labour on the Occupational Safety, Health and Working Conditions Code 2019)***

Indian regulations also increase the operational cost of supplying temporary workers. In India, labour contractors/staffing firms must provide temporary workers with rest rooms and canteens. In addition to increasing costs, these requirements create legal confusion since factory owners are already required to construct resting rooms and canteens for all workers. For instance, factory owners are required to provide canteen facilities in factories with at least 250 workers. If a labour contractor/staffing firm supplied 100 or more workers to this factory, then the labour contractor/staffing firm is also legally obligated to provide canteen facilities. It is not clear if the labour contractor/staffing firm is permitted to offset their duties against facilities already provided by the factory.[18]

Conclusion

India has experienced remarkable growth in electronics production, experiencing a 17% Compound Annual Growth Rate (CAGR) over the past nine years. To hit the $300 billion target by 2026, India needs to improve the efficiency of business operations in the electronics industry and become a favourable destination for investment.

This endeavour necessitates the use of high-impact reform approaches. The current initiatives focused on fiscal incentives and process simplification have improved the business environment, but the fundamental regulations/codes need to be looked afresh to catapult electronics manufacturing capability. The Union and state governments must consider the impact of rationalising standards and controls that can help India to become as competitive as East Asian successes like Singapore and Vietnam.

Our standards often surpass standards set by countries which are 10x India's per capita GDP. This regulatory baggage may be hampering our efforts to boost electronics manufacturing. Labour and land use regulations prevent manufacturers from expanding production scale in the first place. Rationalising standards that deter growth can help our factories unlock productive land, increase employment opportunities, and grow from dwarves to giants.

About the Author:

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The opinions expressed here are those of the authors.

[16] *Socialist Republic of Vietnam. May 23, 2014. Regulations on conditions and procedures for issuing employment service permits of employment service enterprises. https://thuvienphapluat.vn/van-ban/doanh-nghiep/Nghi-dinh-52-2014-ND-CP-dieu-kien-thu-tuc-cap-giay-phep-doanh-nghiep-hoat-dong-dich-vu-viec-lam-231323.aspx*

[17] *Socialist Republic of Vietnam. March 19, 2021. Prescribing details of Clause 3 of Article 37 and 39 in the employment law on employment service centers and businesses. https://lawnet.vn/en/vb/Decree-23-2021-ND-CP-prescribing-details-of-clause-3-of-Article-37-in-the-Employment-Law-74188.html*

[18] *Government of India. 1948. Chapter V, Factories Act. https://labour.gov.in/sites/default/files/factories_act_1948.pdf*
Government of India. 1970. Chapter V, Contract Labour (Regulation and Abolition) Act, 1970. https://www.indiacode.nic.in/bitstream/123456789/1467/1/A1970-37.pdf

INDIA'S SAR LIMITS SHOULD CHANGE – HERE'S WHY

By:
Michael Milligan
Secretary General of Mobile & Wireless Forum (MWF)

Not many people get excited about a mobile phone's Specific Absorption Rate (SAR). But mention radio frequency (RF) exposure, and that will soon change. Yet the relationship between the two is not well known outside of the industry. The SAR is the measure of the amount of RF energy absorbed within the body. The SAR limits for devices are well established and based on a robust body of scientific knowledge. Compliance with the limits is an essential requirement in many countries worldwide, including India.

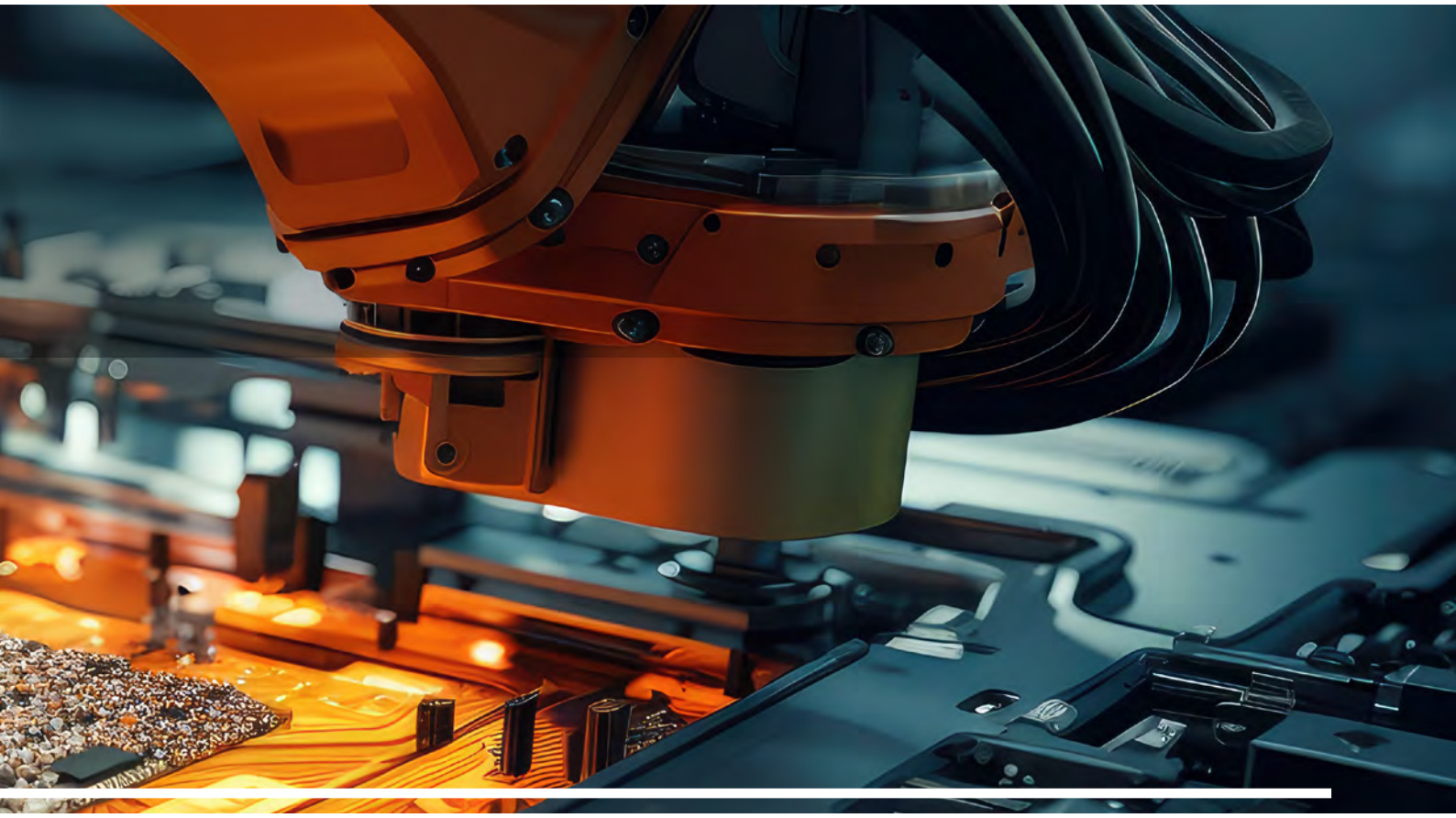
Most of the world has adopted the recommendations of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), a body recognized for its expertise by the World Health Organization (WHO). ICNIRP's recommended SAR limit of 2 watts per kilogram over a 10-gram mass ('2W limit') has been adopted into national regulations and standards in more than 158 countries around the world - but not India.

While most countries have followed ICNIRP's recommendations since 1998, a handful have gone with the limits used by the United States Federal Communications Commission (FCC), which were adopted in 1996. The FCC limit for mobile phones is 1.6 W/kg over a 1 gram mass ('1.6W limit') and has been traditionally used by countries that have used similar frequency bands as the US - although the SAR limits have little to do with the operating frequencies. So, the globe has generally been in either of two camps - the vast majority adopting ICNIRP's 2W limit or the FCC's 1.6W limit.

Differing SAR Limits	
ICNIRP	**US FCC**
2 W/kg over a 10-gram mass (2W Limit)	1.6 W/kg over a 1-gram mass (1.6 W Limit)

Yet in 2012, India adopted the US FCC limit even though its frequency allocations would typically align it with ICNIRP. This created a hybrid approach that does very little for anyone - except make it harder for India's device manufacturers, who must design and test devices against the 1.6W limit while competitors marketing outside of India design and test against the 2W limit.

One of the first questions that is often asked about the two limits is whether one is safer than the other. The answer to that is no. There is no health difference between the two limit values – since both values are far below the levels known to cause harm. The difference between the actual



level of harm and the limit devices must comply with is known as 'reduction factors'. These reduction factors allow for different populations such as the sick, elderly, children, and pregnant women to all be protected, and they are just one of the elements incorporated into the standards to ensure suitable protection. As ICNIRP has said:

> *... there are a number of steps involved in deriving ICNIRP's guidelines. ICNIRP adopts a conservative approach to each of these steps in order to ensure that its limits would remain protective even if exceeded by a substantial margin. For example, the choice of adverse health effects, presumed exposure scenarios, application of reduction factors and derivation of reference levels are all conducted conservatively. The degree of protection in the exposure levels is thus greater than may be suggested by considering only the reduction factors, which represent only one conservative element of the guidelines. There is no evidence that additional precautionary measures will result in a benefit to the health of the population.*

Since the ICNIRP recommended limits are considered protective for all – what is the difference between them and the FCC limits? Well, as indicated above, the limits are based on a substantial body of scientific research, and in the case of ICNIRPs, the scientific basis of the recommendations was last updated in 2020. This followed a seven-year process of review, consultation, and scientific evaluation. Therefore, the ICNIRP (2020) recommendations represent the latest in scientific knowledge. The 2020 guidelines introduced some changes, particularly above 6 GHz for 5G technologies that were not in the previous 1998 guidelines, and this shows how the guidelines have evolved based on increased knowledge and the latest research.

In contrast, the FCC limits were adopted in 1996 and are based on the ANSI/IEEE C95.1-1992 standard and the NCRP's 1986 report on the Biological Effects of RF Fields. The FCC has not updated them since then, so the scientific basis and rationale of the FCC limits are now 30 years old.

Although the IEEE C95.1 standard has been updated twice since the FCC adopted its limits – once in 2005 and again in 2019 – the FCC has not acted to revise its limits to reflect the updated science. As a result, even though the IEEE standard now has largely harmonized its recommendations with those of ICNIRP – to the point that both now recommend a 2W/kg SAR limit – the FCC's limits continued to reflect the old standards rather than the latest science.

As was noted in the IEEE C95.1-2005 standard,

> *Since publication of ANSI C95.1-1982, significant advances have been made in our knowledge of the biological effects of exposure to RF energy*

ICES agrees that the biologically based ICNIRP rationale is more appropriate than the purely dosimetry based rationale in ANSI C95.1-1982 and IEEE Std C95.1-1999."

That really highlights the difference between the FCC and ICNIRP/IEEE approaches—the latter is based on biological effects (which seems more appropriate for a standard designed to protect us), while the FCC's limits were based on limitations in measurement—or dosimetry—which the IEEE revised.

One might argue that there is not much difference between 1.6W/kg and 2W/kg of power absorption, but it is really in the measuring mass (the 1gm vs 10gm) that things become difficult. The FCC's smaller averaging mass makes design and testing more difficult, while ICNIRP's measuring mass is actually based on biology—a fact that makes it inherently more suitable for human exposure limits, i.e., the 10 gram average correlates with local temperature rise much better than the 1 gram average.

In 2012, when India adopted the 1.6W limit, it was not at all clear why the decision was made, but the telecom market in India has changed dramatically since then. The industry had very little in the way of manufacturing and was importing the devices that it was selling. Now, 97% of the devices sold within the country each year are manufactured in India, and the industry is exporting 25% of its manufacturing output worth $10 Billion, making it the second largest device manufacturing country in the world – with enormous potential still before it.

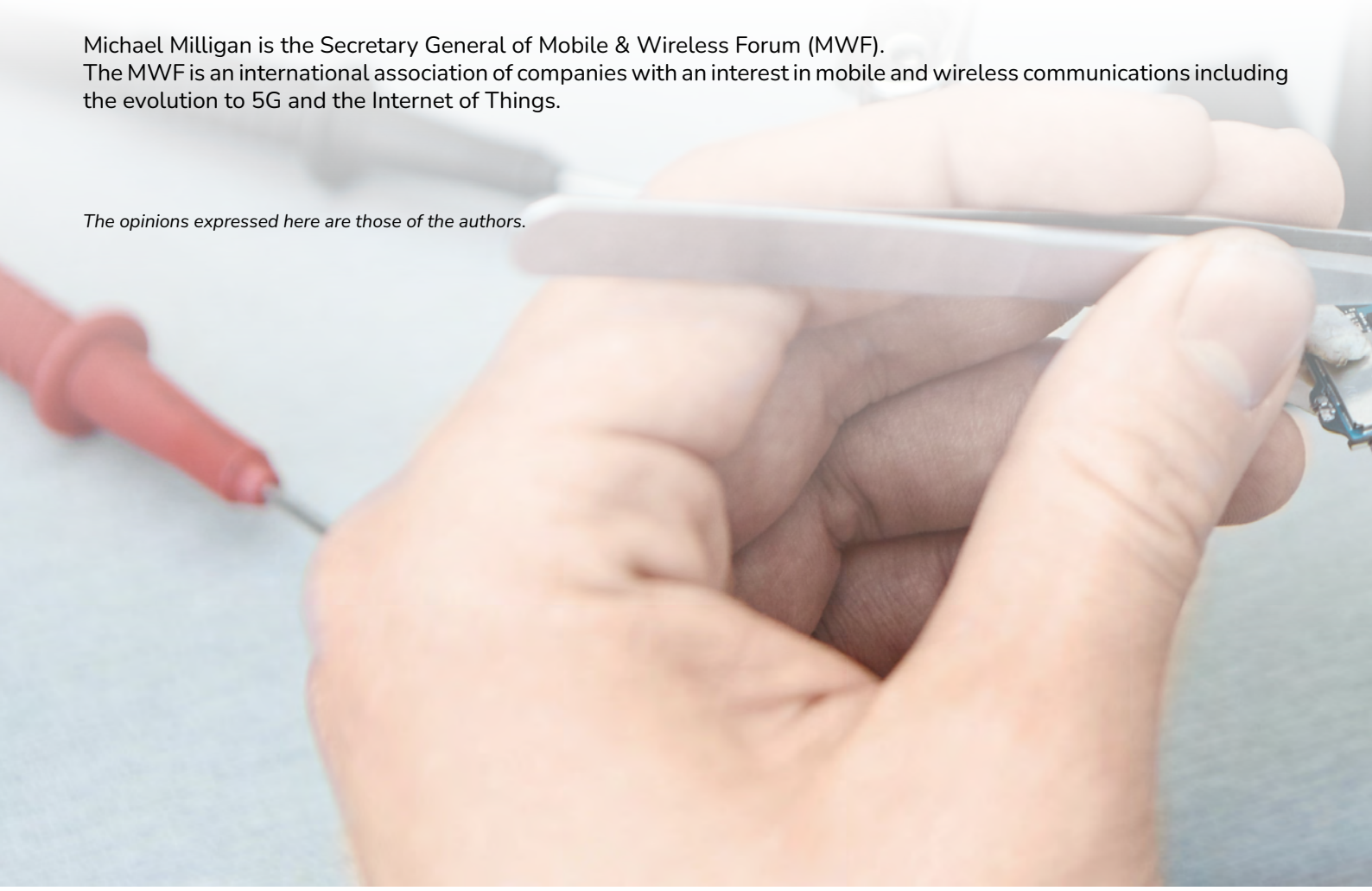
With this growth, the government has an opportunity to reconsider the SAR limit that devices must be tested against. In fact, sticking with SAR limits that are scientifically outdated and that are at odds with the markets that India is, or is planning to, export to could pose a potential roadblock to achieving the overall aims of the Government's policies and plans for the industry.

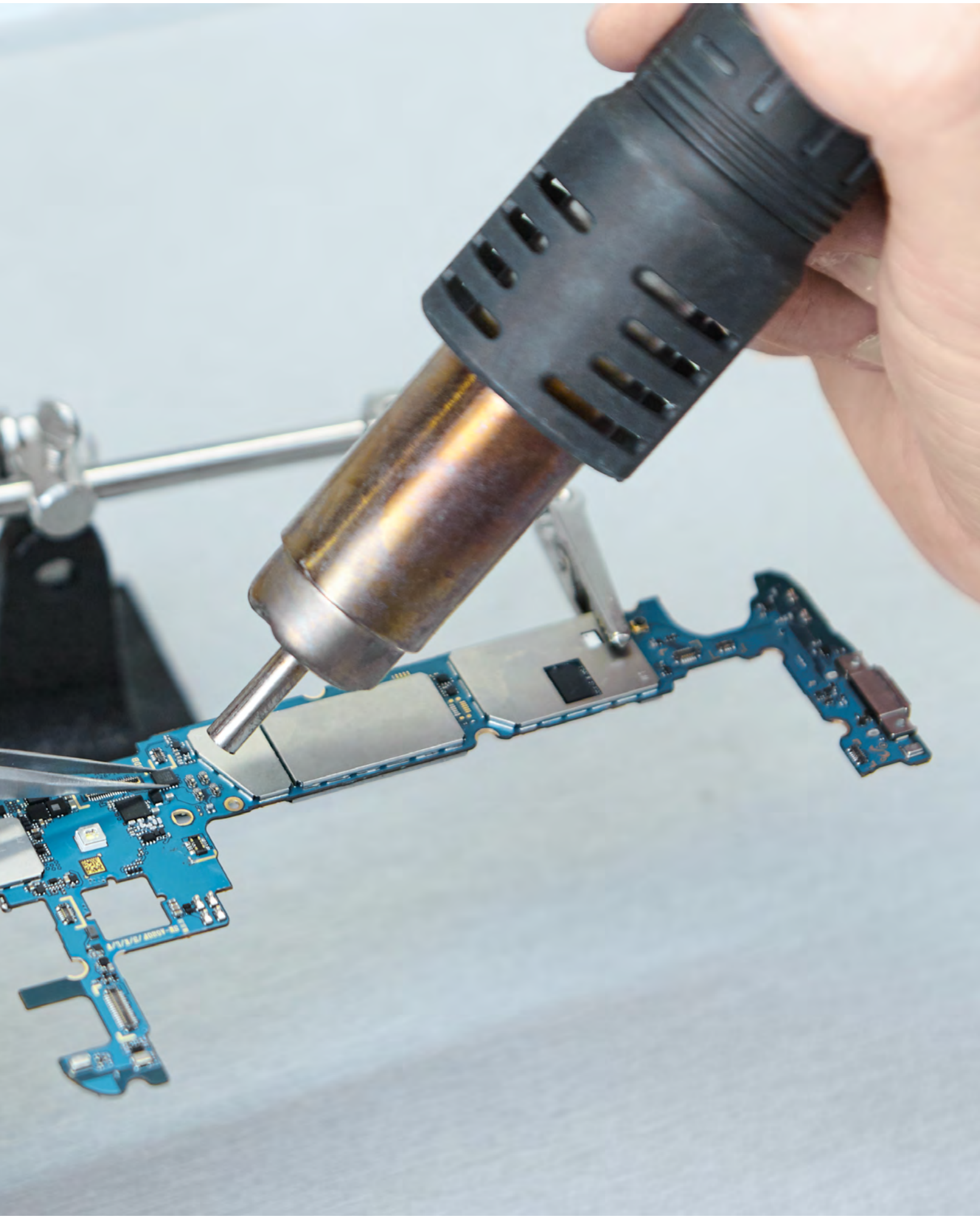
As we have already seen, the current limit does not offer any health benefits, but it certainly complicates compliance testing, adding additional time and cost, which in turn makes devices more expensive. Addressing this issue will make India's device manufacturers even more competitive and will only further encourage the industry's success.

About the Author:

Michael Milligan is the Secretary General of Mobile & Wireless Forum (MWF).
The MWF is an international association of companies with an interest in mobile and wireless communications including the evolution to 5G and the Internet of Things.

The opinions expressed here are those of the authors.





UNLOCKING INDIA'S CIRCULAR ELECTRONICS POTENTIAL: A PATHWAY TO SUSTAINABLE GROWTH

By:
Shambhavi Singh and Amit Kumar
India Cellular & Electronics Association (ICEA)

One of the most frequently cited definitions of Circular Economy has been provided by the Ellen MacArthur Foundation which describes the concept as "an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models".

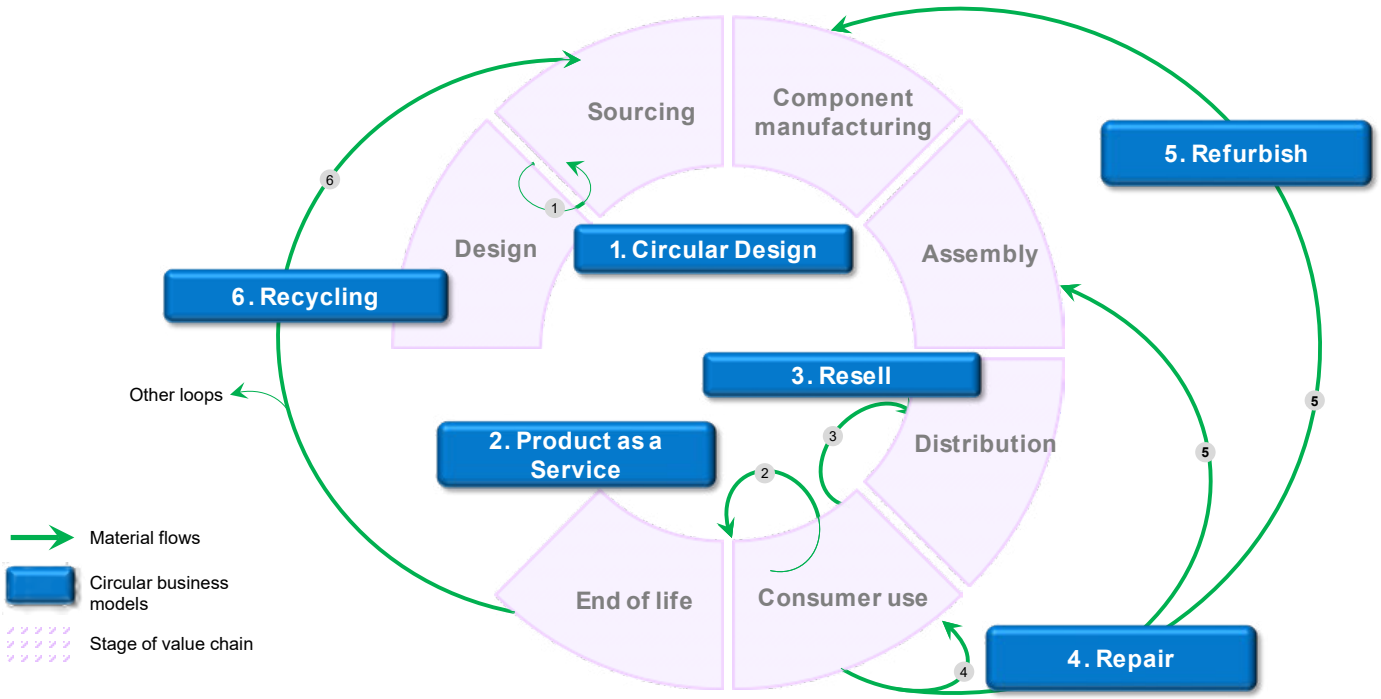
Circularity in the electronics industry transcends mere waste management; it embodies resilience, resource efficiency, and economic prosperity. India's journey towards circularity has seen significant strides in the past decade, with the formulation of comprehensive policies and strategic initiatives. For example, the Ministry of Electronics & Information Technology (MeitY) is implementing the 'Action Plan on Circular Economy in Electronics and Electrical Sector' under the guidance of NITI Aayog. However, realizing the full potential of circular electronics demands a nuanced understanding of India's unique context and a concerted effort to address key trade-offs.

This article delves into the evolving landscape of circular electronics in India, identifies critical findings, and proposes game-changing policy interventions to accelerate the transition towards a circular economy.

The Potential of Circular Electronics Business Models:

There are six circular business models in the electronics sector, namely, Circular Design, Product-as-a-Service (PaaS), Repair, Resell, Refurbishment and Recycle. The projected market size of these six in a business-as-usual scenario (based on existing commitments and targets) in 2035 stands at $13 billion whereas the total addressable market, if the right public and private sector actions were to be undertaken, is as high as $20 billion.

FIGURE 1: SIX CIRCULAR BUSINESS MODELS FOR ELECTRONICS INDUSTRY



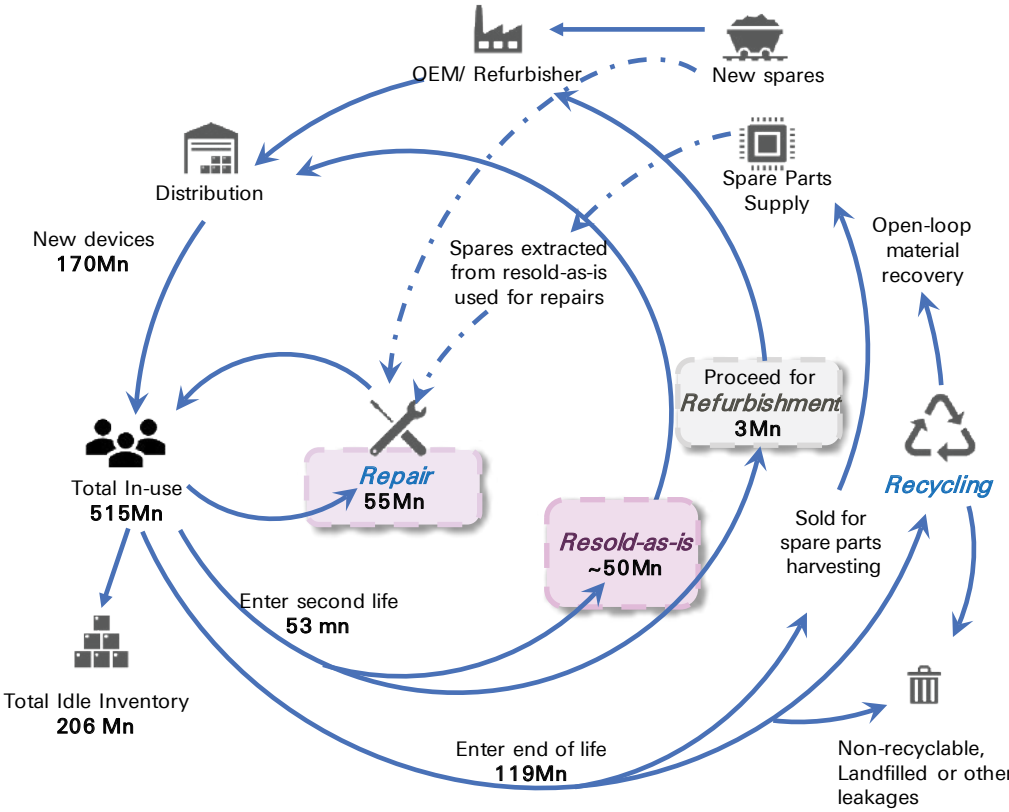
Three of the six business models (repair, resell, and recycling) are currently widely used, with the informal sector playing a significant role.

Recover and Recycle, which is a highly competitive informal sector manages approximately 90% of collection and 70% of recycling activities. The formal sector recycles just 22% of collected Waste Electrical and Electronic Equipment (WEEE), owing to small-scale fragmentation and a lack of technical know-how for difficult-to-recycle fractions. Furthermore, the recovered secondary components are lacking in both quality and quantity. In reality, fraudulent activity including coordination between formal recyclers and informal collectors has been observed. The remaining 8% of WEEE is mishandled, such as when it is dumped or leaks into the environment. Idle inventory is another significant barrier, with over 200 million useless gadgets held in Indian households at any given moment.

Approximately 60% of gadgets in need of repair are serviced by a low-cost and easily accessible informal sector, particularly for devices that are no longer under warranty. Consumers who value service quality choose formal sector repairs, which account for 18% of overall demand and are mostly related to in-warranty repairs. The remaining 22% of users in need of repair continue to use their gadgets as is. Venture capital investments in multi-brand businesses are enabling quick expansion to overcome the formal repair and refurbishment industry's present restricted reach.

India imports a large portion of its electronics, and while domestic production is growing and design is becoming more important, working with global suppliers is still essential. An interesting trend is the rise of "Product as a Service" (PaaS), which lets businesses rent equipment like laptops instead of buying them. This model has grown significantly (by 65% last year) but is still new, especially for everyday consumers.

FIGURE 2: CIRCULAR MATERIAL FLOW OF SMARTPHONES AND LAPTOPS IN INDIA



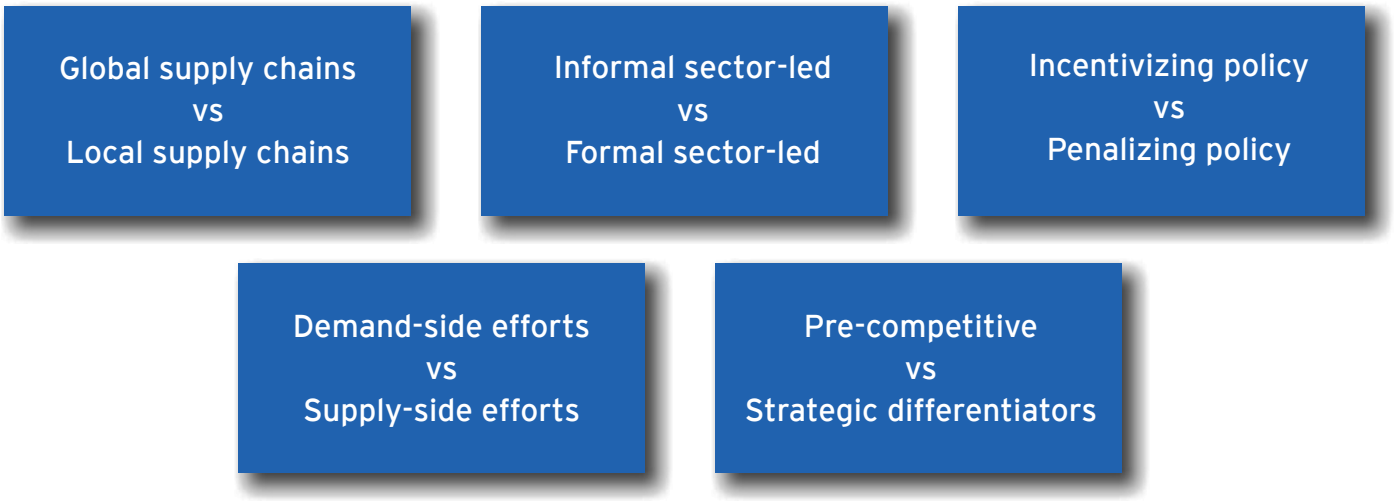
Despite the projected market size reaching $13 billion under existing commitments, substantial opportunities remain unexplored, encompassing wasted embedded value and capacities. Failure to embrace circularity could jeopardise 1-3% of the electronics industry's EBITDA.

This also estimates an incremental ~$20 billion in economic benefits, the generation of ~132,000 jobs, and a reduction of ~0.6 Mn metric tons of waste and ~2.2 Mn metric tons to emissions reduction by 2035.

Key Trade-offs and Imperatives:

India's circular electronics vision confronts five pivotal trade-offs, each demanding careful consideration and strategic balance.

FIGURE 3: FIVE KEY TRADE-OFFS FOR INDIA'S CIRCULAR ELECTRONICS VISION



These trade-offs range from navigating global versus local supply chains to fostering formal sector-led initiatives while preserving the strengths of the informal sector. Prioritizing ease of doing business over stringent regulations and fostering pre-competitive collaboration emerge as critical imperatives to propel India's circular journey forward.

Challenges and Opportunities:

While circularity has gained traction in India, challenges persist, particularly in the dominance of the informal sector, which manages a significant portion of collection and recycling activities. Informal practices often result in negative environmental and social externalities, necessitating urgent regulatory interventions to mitigate risks and promote responsible recycling practices. However, within these challenges lie immense opportunities to leverage the informal sector's strengths while fostering formal sector participation through innovative policy measures. Increasing consumer access and awareness of formal collection, Improving formal sector competitiveness with the informal sector, incentivising commercially viable large-scale recycling (incl. metal recovery), and Strengthening demand for secondary material from WEEE are gateways to bring circularity in electronics waste.

9 Game-changing Policy Interventions:

Nine bold policy interventions, spanning downstream, use-phase, and upstream pathways, hold the key to unlocking India's circular electronics potential. From launching auditable standards to incentivizing high-capacity recycling facilities, each intervention aims to address specific bottlenecks and catalyze systemic change. By enhancing formal sector participation, streamlining supply chains, and promoting circular design principles, these interventions lay the groundwork for sustainable growth and environmental stewardship.

1. Launch 3rd party auditable standards and material flow database for collectors, dismantlers, and recyclers.
2. Explore public-private mechanisms for formal consumer take-back of devices.
3. Develop government-led aggregation and dismantling zones in targeted geographies
4. Incentivise high capacity high yield advanced recycling facilities.
5. Scale up multi-brand formal services through strengthened spare parts supply chain, market linkages and incentives.
6. Define BIS and industry-led refurbishment standards and mandate aftersales protection options.
7. Explore chain-of-custody mechanisms for validating the legality of sourced devices.
8. Prioritise the development of the secondary materials market and adopt an 'ease of doing business lens' in eco-design consultations.
9. Develop a product as a service framework to enable the development of an ecosystem.

Pathways to Systemic Change:

A systemic change approach, characterized by the simultaneous implementation of policy interventions across the value chain, offers a holistic solution to India's circular electronics challenges. By balancing economic, social, and environmental imperatives and fostering synergies between interventions, India can unlock additional economic value, divert e-waste, and create high-quality green jobs. However, realizing this vision necessitates collaborative action, data-driven policymaking, and unwavering commitment from all stakeholders.

India stands at a pivotal juncture in its quest for circularity in the electronics sector. With the right policy interventions and collaborative efforts, India can harness the full potential of circular electronics, driving sustainable growth, job creation, and environmental conservation. As policymakers, industry players, and civil society join forces, this decade holds immense promise for establishing India as a global leader in circular electronics, setting a precedent for inclusive and resilient economic development.

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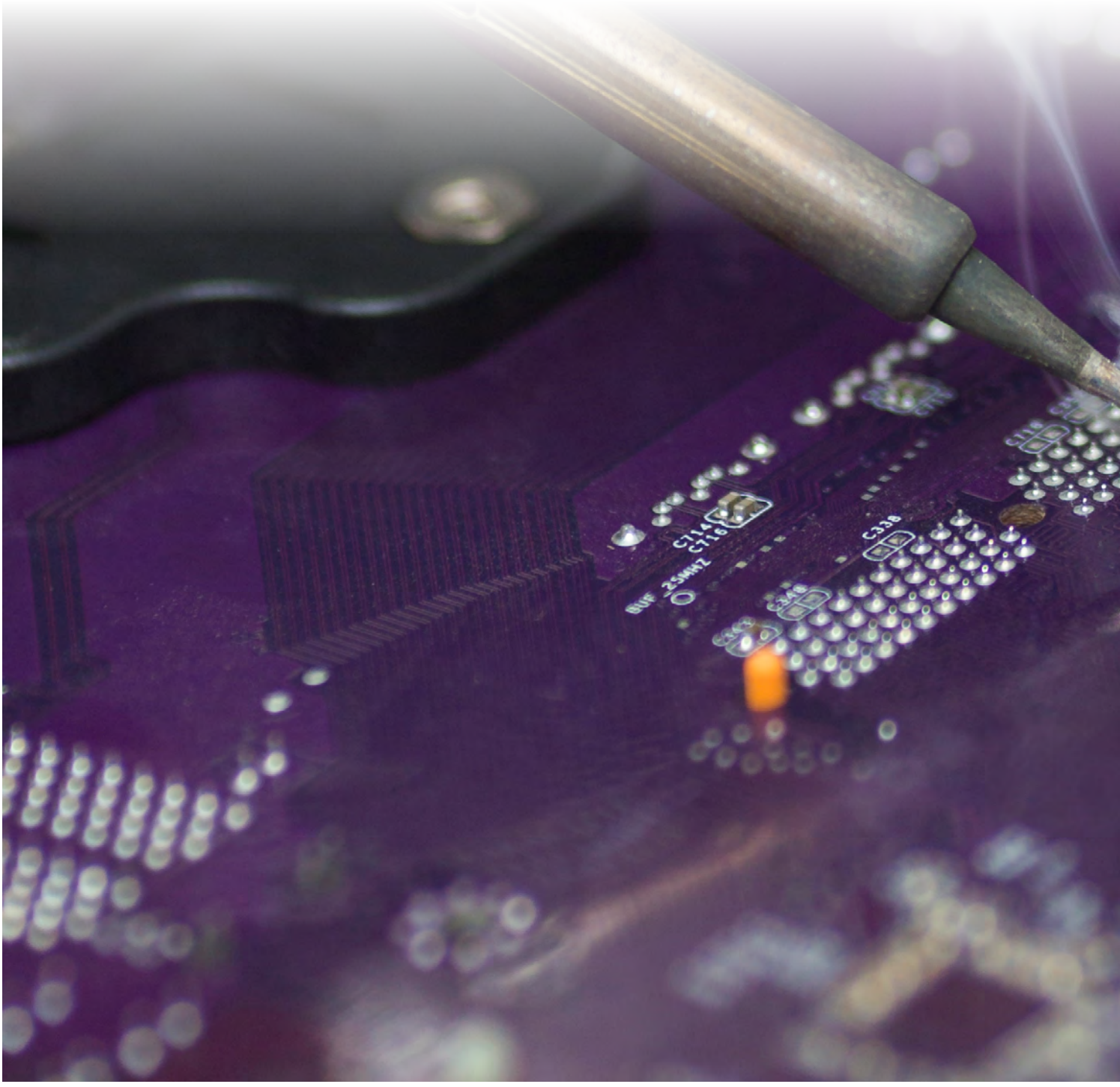

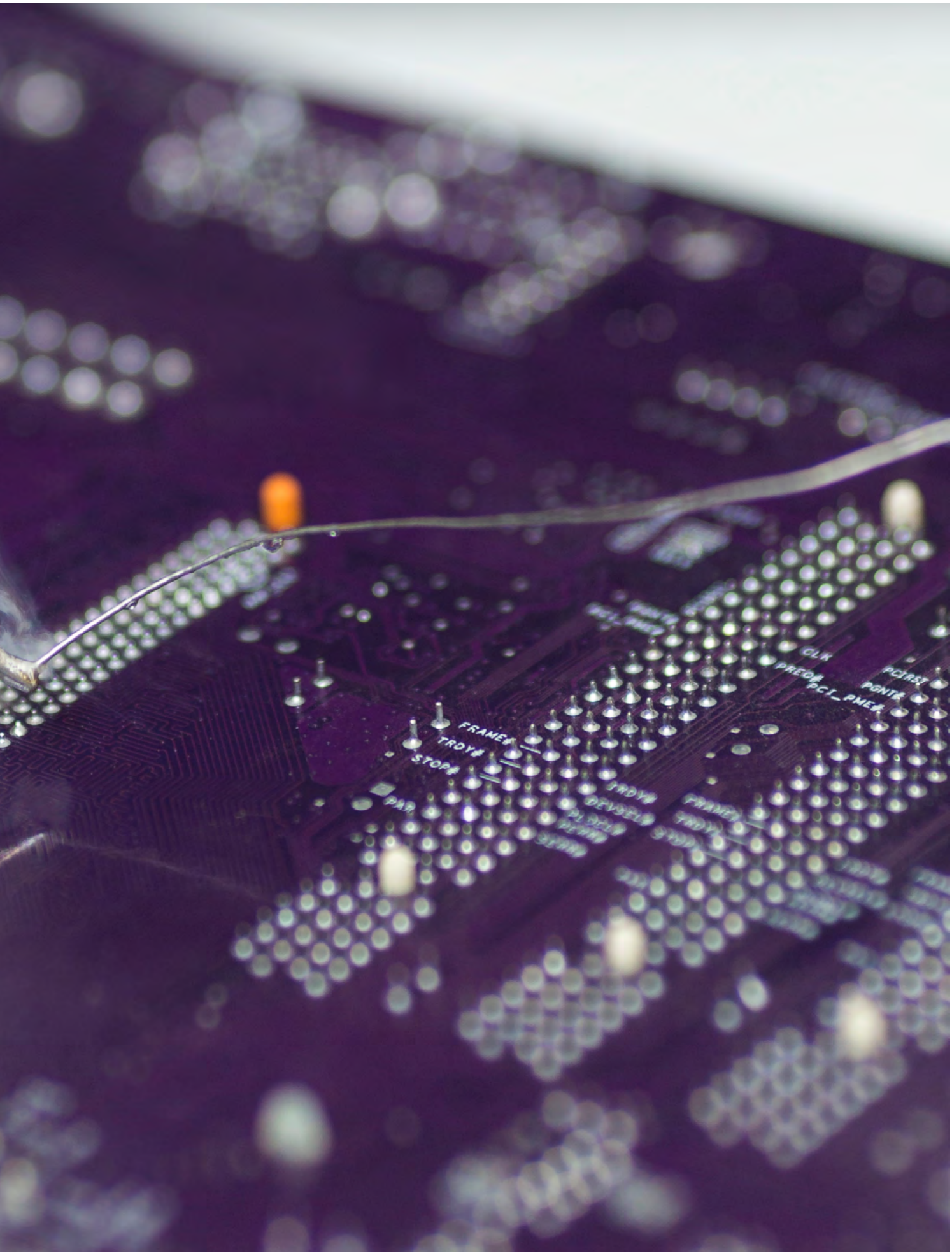
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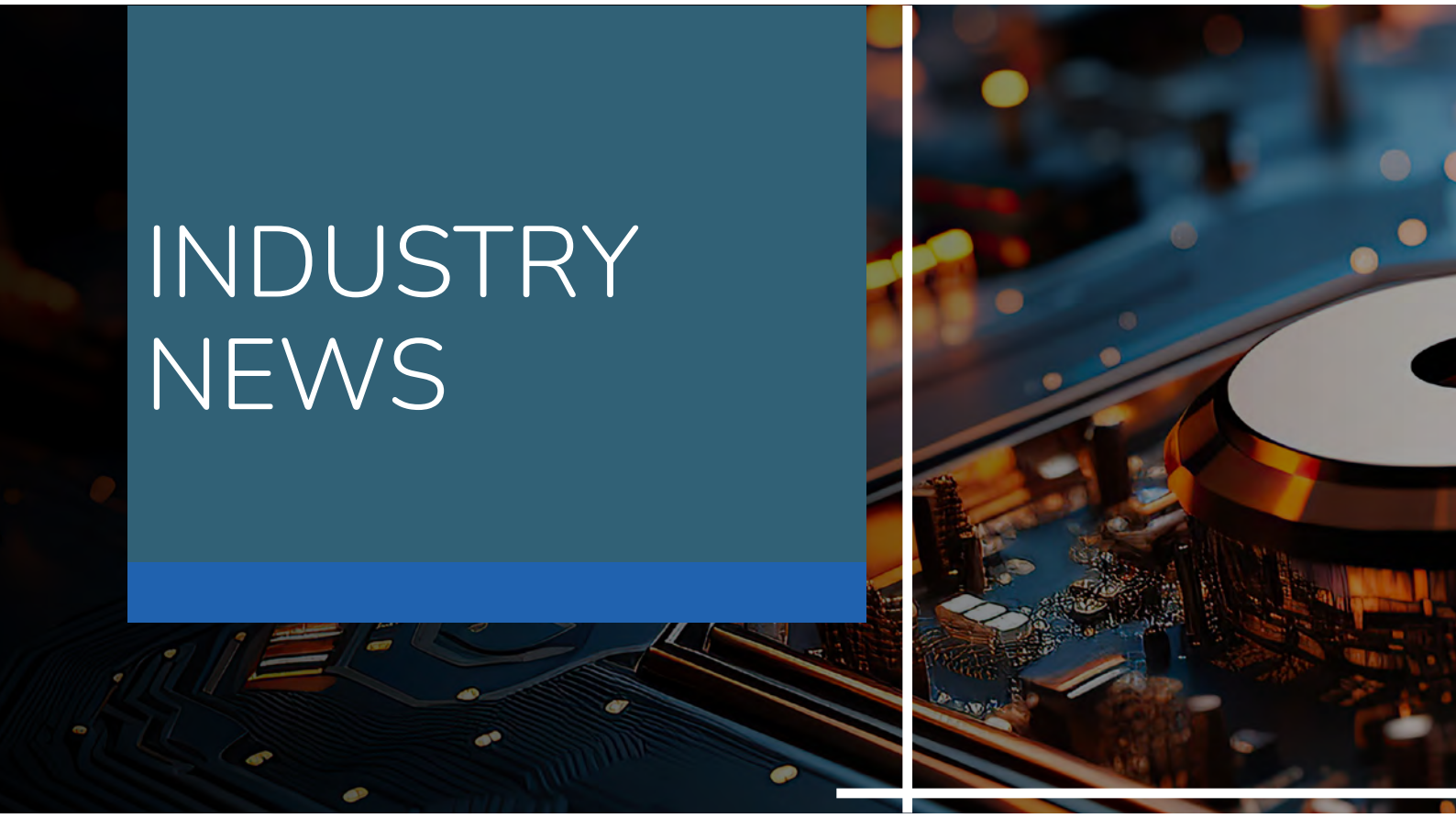
INDUSTRY NEWS



IT HARDWARE

Lenovo Introduces Computers with India-Made Motherboards

Lenovo unveils computers equipped with domestically manufactured motherboards, reflecting its commitment to India's Make in India initiative. The move aims to bolster local electronics production, reduce dependency on imports, and enhance supply chain resilience. This strategic shift underscores Lenovo's support for India's growing capabilities in electronics manufacturing while offering consumers innovative computing solutions.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/lenovo-launches-computers-with-india-made-motherboards/articleshow/105482523.cms

Thomson Computing Partners with Sahasra Group for Laptop and Tablet Manufacturing under PLI 2.0

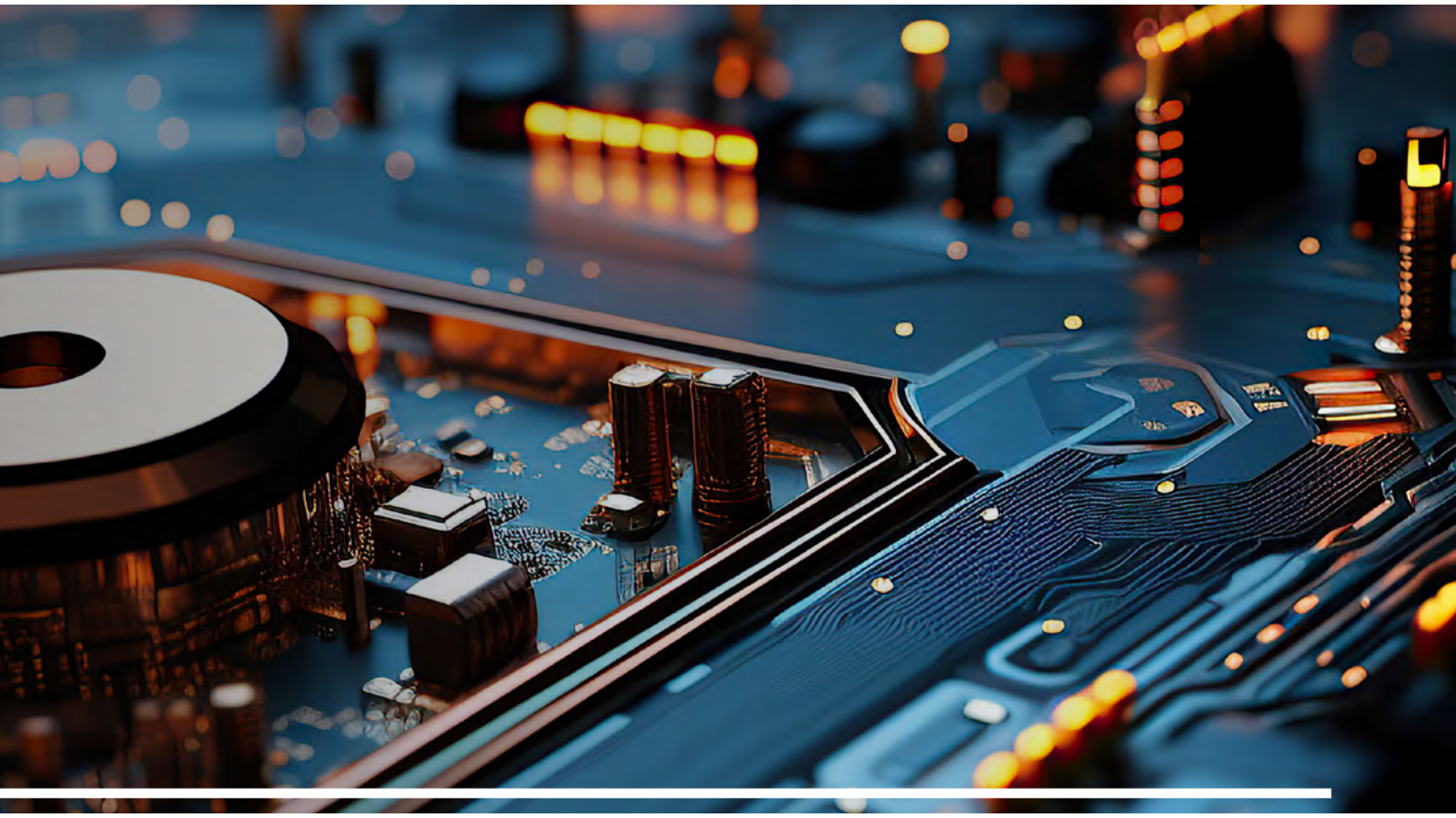
Thomson Computing, a French company, collaborates with India's Sahasra Group to produce laptops and tablets under the Production Linked Incentive (PLI) 2.0 scheme. This partnership signifies a strategic move towards enhancing local manufacturing in India's electronics industry. The initiative aims to leverage India's production capabilities and incentives to meet the growing demand for electronic devices domestically. By joining forces, Thomson Computing and Sahasra Group aim to capitalize on the PLI scheme's benefits and contribute to India's vision of becoming a global electronics manufacturing hub.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/frances-thomson-computing-partners-with-indias-sahasra-group-to-make-laptops-tablets-under-pli-2-0/articleshow/105418857.cms

Government Clears 110 Applications for IT Hardware Imports

The Indian government has approved approximately 110 applications for the import of laptops and other IT hardware products. This decision reflects efforts to streamline import processes and meet the growing demand for electronic devices in the country. The approval of these applications signals a positive step towards addressing supply chain challenges and ensuring the availability of essential IT equipment in the market. This move is expected to support businesses, educational institutions, and consumers in accessing necessary technology products amid increasing digitalization across sectors in India.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/govt-clears-about-110-applications-for-imports-of-laptops-other-it-hardware-products/articleshow/104887137.cms



MOBILE PHONE ECOSYSTEM

Corning Partners with Optiemus for $120 Million Manufacturing Plant in Tamil Nadu

Corning has entered a joint venture (JV) with Optiemus Infracom to invest $120 million in a manufacturing facility in Tamil Nadu. The facility, operated by the JV named Bharat Innovative Glass Technologies, will produce front cover glass for mobile phones and phone parts makers in India. This venture marks Corning's first manufacturing plant at SICPOT-Pillaipakkam Industrial Estate in Kancheepuram district, Tamil Nadu, India. The development marks the formal entry of another Apple supplier into India.

Source: https://www.business-standard.com/companies/news/corning-signs-120-mn-worth-jv-with-optiemus-for-manufacturing-plant-in-tn-124012300475_1.html

Google to Manufacture Pixel Smartphones in India

Google announces plans to manufacture Pixel smartphones in India, marking a significant stride in the country's electronics manufacturing sector. Ashwini Vaishnaw expresses delight over the decision, highlighting the move's potential to boost local production, create employment opportunities, and strengthen India's position in the global smartphone market. The initiative reflects Google's commitment to India's Make in India initiative and underscores the nation's attractiveness as a manufacturing hub for leading tech companies.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/google-to-manufacture-pixel-smartphones-in-india-ashwini-vaishnaw-says-extremely-delighted/videoshow/104563392.cms

Motorola Aims to Double Exports from India

Motorola unveils plans to double exports from India, signaling a significant expansion in its global market presence. The initiative reflects the company's confidence in India's manufacturing capabilities and its commitment to leveraging the country's skilled workforce. By boosting exports, Motorola aims to strengthen its position in the global electronics industry while contributing to India's economic growth and positioning itself as a key player in the country's thriving electronics manufacturing sector.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/motorola-plans-to-double-exports-from-india/articleshow/106001034.cms

Foxconn Commits Additional $1.7 Billion Investment in Karnataka

Foxconn announces plans to invest an additional $1.7 billion in Karnataka, India, signaling its continued

commitment to the state's electronics manufacturing sector. The investment underscores Foxconn's confidence in Karnataka's business environment and its potential for growth. This move is expected to further boost job creation, technological innovation, and economic development in the region, strengthening Karnataka's position as a key hub for electronics manufacturing in India.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/foxconn-to-invest-additional-1-7-billion-in-karnataka/articleshow/105941256.cms

Apple Expands Make in India Plans, Targets Building One in Four iPhones in India

Apple plans to manufacture over 50 million iPhones in India annually within the next two to three years to reduce its dependency on China and diversify its supply chain. This ambitious plan reflects Apple's commitment to local production and its recognition of India's growing importance as a manufacturing hub. By scaling up production, Apple seeks to capitalize on India's skilled workforce and favourable business environment while meeting the rising demand for iPhones in the Indian market. The move is poised to boost job creation, promote technological innovation, and strengthen India's position in the global electronics industry.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/apples-make-in-india-plans-get-bigger-aims-to-build-every-one-in-four-iphones-in-india/articleshow/105833993.cms

Tata Plans New iPhone Factory to Accelerate Apple's India Expansion

Tata Group unveils plans for a new iPhone factory to expedite Apple's expansion in India. This strategic move underscores Tata's commitment to bolstering India's electronics manufacturing sector and supporting Apple's endeavours in the Indian market. The proposed factory aims to enhance local production capacity, create employment opportunities, and contribute to India's growing role in global electronics manufacturing.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/tata-plans-new-iphone-factory-to-hasten-apples-india-expansion/articleshow/105824942.cms

Apple Instructs Component Suppliers to Source 16% of iPhone Batteries from India

Apple has directed its component suppliers to procure 16% of iPhone batteries from India. This move underscores Apple's commitment to enhancing its manufacturing footprint in India and supporting the country's electronics industry. It also signifies a significant step towards boosting local production and reducing dependency on imports for key iPhone components.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/source-iphone-16-batteries-from-india-apple-tells-its-component-suppliers/articleshow/105773405.cms

Padget Opens New Manufacturing Facility with Rs 256 Cr Investment to Produce Xiaomi Phones

Dixon Technologies' subsidiary, Padget Electronics, has inaugurated a cutting-edge smartphone manufacturing facility in Noida, UP, investing Rs 256 crore. With an annual capacity of 25 million units, the facility commenced smartphone production for global tech giant Xiaomi in Q3 2023. The facility's launch is expected to enhance Padget's production capabilities, generate employment opportunities, and bolster the country's position as a key player in the global smartphone market.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/padget-electronics-new-smartphone-manufacturing-facility-inaugurated/articleshow/105625853.cms

iPhone Maker Hon Hai Plans $1.6 Billion Expansion in India

Hon Hai Precision Industry, the manufacturer of iPhones, announces plans for a $1.6 billion expansion in India. This significant investment underscores Hon Hai's commitment to India's electronics manufacturing sector and highlights the country's growing importance in the global supply chain. The expansion initiative is poised to create job opportunities, boost local production capacities, and strengthen India's position as a key hub for electronics manufacturing.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/iphone-maker-hon-hai-plans-1-6-billion-in-india-expansion-bid/articleshow/105537633.cms

Imports Decline for Apple, Samsung, and Other Electronic Giants over 5 Years due to Local Focus

Imports for electronic giants like Apple and Samsung have seen a significant decline over the past five years due to increased emphasis on local manufacturing and production in India. This trend underscores the country's growing self-reliance in the electronics sector and reflects efforts to boost domestic manufacturing capabilities. The decline in imports signals a shift towards supporting indigenous

production, fostering job creation, and strengthening India's position as a key player in the global electronics market.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/apple-samsung-and-other-electronic-giants-imports-fall-in-5-years-on-local-play/articleshow/105521697.cms

Lava Prepares Rs 500 Crore Plan for Research and Marketing

Lava announces a comprehensive Rs 500 crore plan for research and marketing, signalling its commitment to innovation and market expansion. The investment underscores Lava's focus on enhancing research and development capabilities to bring innovative products to consumers. Additionally, the marketing aspect of the plan aims to strengthen Lava's brand presence and competitiveness in India's electronics industry. This strategic initiative reflects Lava's determination to stay ahead in the highly competitive market and cater to evolving consumer needs with cutting-edge technology and effective marketing strategies.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/lava-readies-rs-500-cr-rd-marketing-plan/articleshow/105518973.cms

Foxconn's Indian Arm, Bharat FIH, to Invest Rs 400 Crore in Rising Stars Hi-Tech

Foxconn's Indian entity, Bharat FIH, plans to invest Rs 400 crore in its subsidiary, Rising Stars Hi-Tech, aiming to boost electronic and electrical product manufacturing capabilities. This long-term commitment will enhance Rising Stars Hi-Tech's working capital and general corporate functions, raising its total issued share capital to Rs 450 crores post-investment.

Source: https://www.business-standard.com/companies/news/foxconn-s-indian-arm-bharat-fih-to-invest-rs-400-cr-in-rising-stars-hi-tech-123120700379_1.html

WEARABLES AND HEARABLES

Boult Set to Decrease Dependency on Chinese Supply Chain for Wearables Manufacturing

Boult, a domestic wearables brand, anticipates a significant reduction in its reliance on the Chinese supply chain as component manufacturing accelerates in India. It expects a local value addition of around 15%, which was previously zero. Although some components like batteries are presently sourced locally, most of the component supply chain remains in China. Boult is aiming to shift towards sourcing components locally to ensure greater quality control and is currently in talks with battery manufacturers in India for local sourcing.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/boult-set-to-cut-supply-chain-dependence-on-china/articleshow/105379093.cms

Fire-Boltt Maintains Market Leadership with a 23.6% Share in the Indian Smartwatch Market

Fire-Boltt continues to dominate the Indian smartwatch market, holding a substantial 23.6% market share. This achievement solidifies Fire-Boltt's position as a key player in the smartwatch segment, reflecting its popularity among Indian consumers. The company's market leadership underscores its ability to deliver innovative products and effectively cater to the evolving demands of the Indian market.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/fire-boltt-retains-market-leadership-position-with-23-6-market-share-in-indian-smartwatch-market/articleshow/105288412.cms

CONSUMER ELECTRONICS

Thomson Plans Global Expansion with India-Made Products

Thomson, a consumer electronics company is considering exporting smart TVs and other consumer products manufactured in India to foreign markets. The company which re-entered India in 2018, is expanding its presence from smart TVs to appliances such as washing machines and air conditioners. Super Plastronics Pvt Ltd -the brand licensee, intends to invest Rs 300 crore to set up a fully automated plant in India to increase its manufacturing capacity for TV units. Furthermore, they are exploring collaborative opportunities with Thomson to introduce more technology-based products.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/thomson-to-consider-exporting-india-made-products-to-global-mkts-to-enter-domestic-laptop-segment/articleshow/104344989.cms

Vedanta - Innolux Set to Kickstart LCD Production in India

Innolux, in collaboration with Vedanta, plans to initiate LCD display mass production in India within 18-24 months, with an investment of USD 3-4 billion. Leveraging 17 years of OLED evolution, Innolux prioritises LCD as the foundational premium display tech. The project foresees

break-even by 8, requiring 5,000 employees initially, with a focus on training engineers and technicians. This strategic move aligns with India's drive to bolster domestic manufacturing, replace imports, and foster potential exports, positioning LCDs to dominate the display market, and fulfilling national objectives securing a promising future for the Indian electronics industry.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/mass-production-of-lcd-displays-can-start-in-india-in-18-24-months-innolux/articleshow/107856058.cms?from=mdr

LI-ION BATTERY ECOSYSTEM/ BATTERY ENERGY STORAGE SYSTEMS (BESS)

Himadri Specialty Chemicals Ventures into Lithium-Ion Battery Component Manufacturing

Kolkata-based Himadri Specialty Chemicals Ltd is set to establish a commercial plant to manufacture lithium-ion battery components, investing INR 4,800 crore. Over the next five-six years, the plant aims to produce 200,000 MTPA of lithium iron phosphate (LFP) cathode active material, catering to global and domestic demand. This material is crucial in the production of lithium-ion battery cells. The company anticipates generating revenue approximately four times the capital expenditure upon full plant utilization. Most of the capital expenditure will be funded through internal accruals and debt financing. The plant will be located in Odisha.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/daewoo-enters-indian-consumer-electronics-appliance-market-through-kelwon-electronics/articleshow/104705889.cms

TDK Corp to Manufacture iPhone Battery Cells in India

TDK Corp, a Japanese electronic parts maker, is set to manufacture lithium-ion battery cells for Apple's iPhones in India. The company will establish a manufacturing facility in the northern state of Haryana, creating several thousand new jobs. The cells produced at this facility will be supplied to Apple's lithium-ion battery assembler Sunwoda Electronics. This move by Apple is seen as part of its efforts to diversify production away from China, with India being touted as a significant growth driver.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/japans-tdk-corp-to-manufacture-iphone-battery-cells-in-india/articleshow/105719374.cms

ELECTRIC VEHICLES/ AUTO ELECTRONICS/ AUTO COMPONENTS

Nexzu Mobility to Develop India's First Smart EV Park in Gujarat

Nexzu Mobility, a provider of sustainable urban transportation solutions, has signed an MoU with the Government of Gujarat to create a Smart EV Park, a hub for electric vehicle (EV) manufacturing, testing, R&D, training, and incubation. The company will invest INR 5,000 crores over the next 10 years and generate employment for over 5,000 people. The project aims to support the 'Make-in-India, Make-for-the-World' initiative and accelerate the adoption of clean and green mobility in the country. The Smart EV Park will leverage the skills and policies of the state of Gujarat, which is a leader in the EV sector.

Source: https://auto.economictimes.indiatimes.com/news/industry/nexzu-mobility-signs-mou-with-gujarat-government-to-set-up-indias-first-smart-ev-park/106185962

NavIC Integration Revolutionizes Indian Automotive Industry

The Indian government plans to mandate NavIC-enabled chips for India's automotive industry, aiming to enhance vehicle tracking and safety. Accord Software Systems, a local startup, has integrated NavIC into its 28-nanometer chips, now sold to Indian automotive companies. This move signifies a shift towards self-reliance and technological innovation in the sector. With NavIC, trucks and commercial vehicles will soon boast improved navigation and real-time tracking capabilities, fostering efficiency and safety on Indian roads.

Source: https://economictimes.indiatimes.com/industry/auto/auto-components/from-war-to-business-to-economy-why-navic-is-the-tech-for-a-rising-india/articleshow/103750217.cms

Delhi Government Notifies Motor Vehicle Aggregator Scheme to Decarbonize Mobility

The Delhi government has introduced the Motor Vehicle Aggregator Scheme aimed at decarbonizing mobility within the city. The scheme mandates that service providers operate a minimum of 40% electric vehicles by 2026 and 100% electric vehicles by 2030. Additionally, it enforces strict standards for service quality, including driver behaviour, vehicle condition, and customer safety. By

promoting the adoption of electric vehicles and improving service standards, the scheme aims to create a more sustainable and environmentally friendly transportation ecosystem in the capital city.

Source: https://www.thehindubusinessline.com/news/national/decarbonising-mobility-delhi-govt-notifies-motor-vehicle-aggregator-scheme/article67591036.ece#:~:text=The%20scheme%20mandates%20service%20providers,strict%20standards%20for%20service%20quality.

Blusmart achieves carbon credit certification for EV charging stations in India

Blusmart Mobility, an electric vehicle (EV) charging infrastructure provider in India, has achieved carbon credit certification for its EV charging stations. This certification signifies that the company's charging stations offset carbon emissions by supporting renewable energy projects. Blusmart has partnered with the South Pole Group, a leading provider of sustainability solutions, to achieve this certification. The carbon credits generated by Blusmart's charging stations will be used to offset emissions from its own operations as well as those of its customers.

Source: https://energy.economictimes.indiatimes.com/news/power/blusmart-attains-carbon-credit-certification/105096899

SEMICONDUCTOR

Tata Electronics Initiates Construction of the Rs 91,000 Crore Semiconductor Plant in Gujarat

Tata Electronics has initiated the construction of a Rs 91,000 crore semiconductor fabrication facility in Gujarat. Tata Electronics has partnered with Taiwan's Powerchip Semiconductor Manufacturing Corporation (PSMC) to build India's first AI-enabled state-of-the-art Fab. This groundbreaking move is crucial for India's semiconductor industry. The new semiconductor Fab will manufacture chips for sectors such as such as automotive, computing and data storage, wireless communication and artificial intelligence. This Fab will have a manufacturing capacity of up to 50,000 wafers per month and the first chip will come out from the facility before the end of 2026.

Source: https://www.businesstoday.in/tech-today/news/story/tata-electronics-breaks-ground-for-rs-91000-crore-semiconductor-plant-in-gujarat-421357-2024-03-13

Tata Semiconductor Assembly and Test Pvt Ltd ("TSAT") to set up a semiconductor unit in Morigaon, Assam.

Tata Semiconductor Assembly and Test Pvt Ltd (TSAT) will set up a semiconductor unit in Morigaon, Assam. This unit will be set up with an investment of Rs.27,000 crore and will have a capacity of producing 48 million chips per day. The segments that will be covered are automotive, electric vehicles, consumer electronics, telecom, and mobile phones.

Source: https://economictimes.indiatimes.com/industry/renewables/microchips-manufactured-at-assam-tata-facility-to-be-used-in-tesla-cars-says-himanta-biswa-sarma/articleshow/108115226.cms?from=mdr

CG Power along with a JV with two foreign firms to establish an OSAT facility in Sanand, Gujarat

CG Power and Industrial Solutions, in partnership with Renesas and Stars Microelectronics, signed a Joint Venture Agreement to establish an Outsourced Semiconductor Assembly and Test (OSAT) facility in Sanand, Gujarat, India. The JV, primarily owned by CG, plans to invest Rs 7,600 crore over five years. Renesas will provide advanced semiconductor technology, while Stars Microelectronics will offer legacy package technology and training. The facility aims to produce a broad range of products for various industries, with a manufacturing capacity scaling up to 15 million units per day.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/cg-power-and-industrial-solutions-to-form-jv-for-osat-facility-in-india/articleshow/108146058.cms?from=mdr

Sahasra to Invest Rs 350 Crore to Enhance Semiconductor Packaging

Sahasra announces plans to invest Rs 350 crore to bolster semiconductor packaging capabilities. This significant investment underscores Sahasra's commitment to advancing semiconductor manufacturing in India. The initiative aims to strengthen the semiconductor ecosystem, promote innovation, and support India's efforts to become self-reliant in semiconductor production. The investment reflects Sahasra's confidence in India's potential as a global hub for semiconductor manufacturing and its dedication to driving technological advancements in the electronics industry.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/sahasra-to-invest-rs-350-cr-to-step-up-semicon-packaging/articleshow/105912375.cms

AMD Design Centre Propels India Towards Top of Chip Value Chain

The establishment of AMD's design centre in India marks a significant step towards elevating the country's position in the global chip value chain. The centre's presence underscores India's growing importance in semiconductor

design and innovation. AMD's investment in India reflects confidence in the country's engineering talent and its potential to contribute to cutting-edge semiconductor technology. This development positions India as a key player in the semiconductor ecosystem, paving the way for technological advancements and fostering growth in the electronics industry.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/amd-design-centre-puts-india-on-way-to-the-top-of-chip-value-chain/articleshow/105598233.cms

Kaynes Plans Rs 2,850 Crore Investment in Chip Unit

Kaynes Technology announces its intention to invest Rs 2,850 crore in a chip unit, highlighting its commitment to bolstering India's semiconductor manufacturing capabilities. This substantial investment underscores Kaynes' confidence in India's potential as a hub for semiconductor production and its commitment to fostering technological innovation. The investment is expected to contribute significantly to India's semiconductor ecosystem, promote job creation, and drive growth in the electronics industry.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/kaynes-set-to-invest-rs-2850-crore-in-chip-unit/articleshow/105077123.cms

L&T Ventures into Fabless Semiconductor Chip Design with Rs 830 Crore Investment

L&T announces plans to enter the fabless semiconductor chip design sector with an investment of Rs 830 crore to establish a new unit. This strategic move highlights L&T's commitment to diversifying its portfolio and tapping into the growing semiconductor industry. The investment underscores L&T's confidence in India's potential as a hub for semiconductor design and innovation, aiming to contribute to the country's technological advancement and economic growth in the electronics sector.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/lt-to-foray-into-fabless-semiconductor-chip-design-to-invest-830-crore-to-set-up-unit/articleshow/104863769.cms

Qualcomm and Tatas Collaborate for Local Packaging of New AI PC Chips in India

Qualcomm Inc is partnering with the Indian government and Tata Group to explore local packaging of its latest AI PC chip. The development of the Snapdragon X Elite PC chip involved significant contributions from Qualcomm's engineers in India. Additionally, Qualcomm is actively involved in the development of 6G standards and use cases globally, with plans to work closely with Indian telecom companies for 6G network deployment. The strategic move into PC chip manufacturing aligns with Qualcomm's legacy in building powerful computing devices, aiming to deliver powerful AI experiences in PCs without compromising battery life.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/qualcomm-tatas-may-locally-package-new-ai-pc-chips-in-india-says-cfo-palkhiwala/articleshow/104722683.cms

Chinese researchers develop the world's first all-analog photoelectronic chip

Chinese researchers from Tsinghua University unveil the world's first all-analog photoelectronic chip, ACCEL, for computer vision and AI. ACCEL stands for "All-Analog Chip Combining Electronic and Light Computing." The chip integrates light (photons) and electricity (electric currents) in an all-analog manner, eliminating the need for energy-consuming analog-to-digital conversion. Tests show ACCEL outperforms GPUs, processing high-resolution images over 3,000 times faster while consuming 4,000,000 times less energy.

Source: https://www.theweek.in/news/sci-tech/2023/11/10/chinese-researchers-develop-world-s-first-all-analog-photoelectr.html

AGRITECH

Smart Farming with Sensor Technology

The Indian government is set to introduce sensors in farms to monitor water, fertilizers, chemicals, and pesticides for enhanced resource management efficiency. Aimed at promoting smart farming practices, these sensors, based on Internet of Things technology, will provide real-time data to farmers on crop needs, reducing the excessive use of inputs like water and chemicals. The initiative anticipates a 50-70% improvement in resource utilization, contributing to sustainable farming practices.

Source: https://economictimes.indiatimes.com/news/economy/agriculture/soon-farms-to-have-sensors-to-track-efficient-use-of-resources/articleshow/105664863.cms

STRATEGIC ELECTRONICS

Advancements in Aero-Engine Technology

The Defence Secretary inaugurated a new facility at HAL's AERDC in Bengaluru, enhancing India's capabilities in aero-engine design and testing. The centre is developing strategic engines like the HTFE and HTSE for various aircraft and helicopters. The state-of-the-art facility includes advanced machinery, computational tools, and test beds for critical engine components. This move aligns with the government's aim to achieve self-reliance in manufacturing and adapt to the evolving nature of warfare, particularly in unmanned aircraft technology.

Source: https://pib.gov.in/PressReleasePage.aspx?PRID=1991532

BEL Secures 10-Year Contract for Electronic Fuzes with Indian Army

The Ministry of Defence of India has signed a significant contract with Bharat Electronics Limited (BEL) for the procurement of Electronic Fuzes for the Indian Army. This 10-year contract, valued at Rs 5,336.25 crore, is a part of the 'Aatmanirbhar Bharat' initiative aimed at self-reliance in ammunition manufacturing1. The project will not only minimize imports but also ensure a steady supply of ammunition, crucial for military operations across diverse terrains, including high-altitude areas. Additionally, it will create substantial employment opportunities and bolster the domestic ammunition manufacturing ecosystem.

Source: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1986590#:~:text=As%20part%20of%20the%20'Aatmanirbhar,term%20requirement%20of%2010%20years.

India's Leap in Defence Innovation: iDEX-DIO's 300th Contract for Indigenous GaN Semiconductor Development

The Ministry of Defence in India has signed the 300th contract under the Innovations for Defence Excellence (iDEX) initiative, focusing on the design and development of advanced Gallium Nitride Semiconductors. This technology is crucial for next-generation wireless transmitters in defence applications. The contract aims to foster indigenous design and development capabilities, reducing reliance on imports and enhancing the indigenous design & development capability, including exports. The iDEX initiative, launched in 2018, provides a platform for co-creation and co-development in the defence sector, engages start-ups and develops defence and aerospace set up in the country.

Source: https://pib.gov.in/PressReleasePage.aspx?PRID=1981593

Indian Drone Manufacturer IdeaForge Expands into the U.S. Market

IdeaForge, ranked fifth globally in the dual-use category of civil and defence drones, is entering the competitive U.S. market amidst reluctance to procure drones made in China. Ankit Mehta, CEO of IdeaForge highlighted the capabilities of IdeaForge drones, such as the Netra V 4 Pro, offering extended flying time and payload capacity, which garnered interest during demonstrations in the U.S. He emphasized India's unique terrain and weather conditions, which necessitate drones capable of operating in diverse environments, including high altitudes and extreme temperatures.

Source: https://www.thehindu.com/sci-tech/technology/leading-indian-drone-manufacturer-enters-us-market/article67877645.ece

ELECTRONICS COMPONENTS

CDIL Emerges as First Indian Firm to Manufacture Silicon Carbide Components, Commences Exports to China and US

CDIL achieves a milestone by becoming the inaugural Indian company to manufacture silicon carbide components, initiating exports to China and the US. This development underscores India's advancement in semiconductor manufacturing and export capabilities. CDIL's achievement reflects the nation's growing prowess in high-tech industries and its potential to compete in the global semiconductor market. This accomplishment marks a significant stride towards India's goal of self-reliance in semiconductor production and strengthening its position in the global electronics industry.

Source: https://economictimes.indiatimes.com/industry/cons-products/electronics/cdil-becomes-first-indian-firm-to-produce-silicon-carbide-components-starts-exports-to-china-us/articleshow/104025919.cms

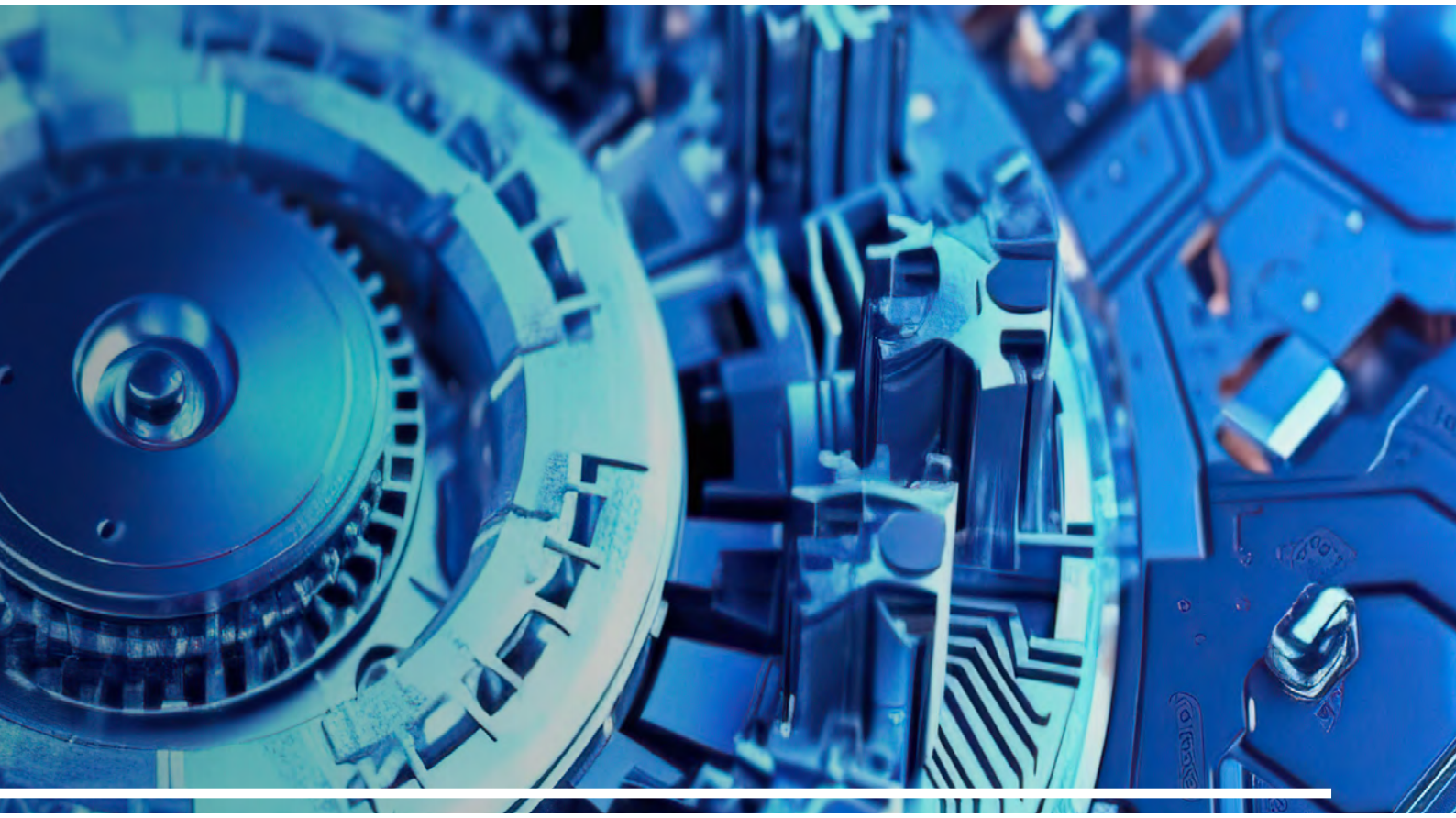
ICEA ACTIVITIES

ICEA CONFERENCE ON IT HARDWARE ECOSYSTEM: FOSTERING SCALE AND BUILDING COMPETITIVENESS

ICEA organised a conference on IT Hardware Ecosystem: Fostering Scale and Building Competitiveness on 15th Jan 2024 in Delhi. The conference was presided over by Shri S Krishnan, Secretary, MeitY as Chief Guest and Shri Sushil Pal, Joint Secretary MeitY. This event was also honoured by the presence of Dr. R.S. Sharma, former CEO of the National Health Authority (NHA), Former Chairman of Telecom Regulatory Authority of India (TRAI) former Director General of UIDAI and Secretary MeitY.

The conference served as a crucial platform for fostering collaboration and discussions vital to achieving India's ambitious electronics production targets. The discussions signal a transformative era, urging India to become a manufacturing hub for global giants.

The strong participation from all key players such as Intel, HP, Dell, Dixon, Flex, Syrma, Sahasra, Kaynes, Tianyin, Sunwoda and many more has showcased Industry's commitment to making India the next powerhouse for IT Hardware manufacturing.



INDO-JAPANESE COLLABORATION: ICEA IN COLLABORATION WITH MEITY & GOVT. OFFICIALS. ORGANISED A B2B MEETING AT THE SIDELINES OF "VIBRANT GUJARAT GLOBAL SUMMIT 2024"

ICEA successfully organized an exclusive B2B meeting between Indian and Japanese business leaders in the electronics and semiconductor domain. This momentous event took place during the Vibrant Gujarat Global Summit 2024 on 10th Jan 2024 at Mahatma Mandir, Gujarat. This highlights ICEA's commitment to fostering global partnerships in the electronics and semiconductor domain.

The interaction was presided over by Smt. Mona K. Khandhar, IAS- Principal Secretary (I/C), and Shri Videh Khare, IAS - Mission Director, Gujarat State Electronics Mission (GSEM), Government of Gujarat and Mr Kazushige Tanaka, Director General, Trade Policy, Minister's Secretariat, Ministry of Economy, Trade and Industry, Govt. Of Japan adding invaluable insights.

The Japanese counterparts, representing renowned companies from the semiconductor domain, engaged in enriching deliberations with their Indian counterparts, paving the way for future collaborations and innovations in the industry. The meeting comprised industry leaders from companies such as Resolute Electronics, SMtronics, Aequs Pvt. Ltd., VVDN, Prolyx Semiconductor, Vedanta Semiconductor, Jindal Display, and SCL.

ICEA was represented by Dr. Aashish Saurikhia and Dr. Neeraj Agarwal.

PANEL DISCUSSION: INDIA'S ELECTRONICS MANUFACTURING ECOSYSTEM

Mr Pankaj Mohindroo - Chairman ICEA was invited as a panellist to an Electronics session organised by the Axis Capital on the 14th Feb 2024 in Mumbai

Mr Pankaj Mohindroo, Chairman ICEA was a speaker at the Axis Capital Conference on February 14, 2024, in Mumbai, alongside industry colleagues Mr Sunil Vachani - Executive Chairman of Dixon Technologies India Limited and Mr J.S. Gujral - Managing Director Syrma SGS Technology Limited. The session was moderated by Mr Neelkanth Mishra, Chief Economist at Axis Bank and Head of Global Research at Axis Capital Ltd.

Mr Mohindroo delved into the burgeoning potential and forthcoming opportunities within India's electronics manufacturing ecosystem.

PANEL DISCUSSION: INDIA - THE NEXT MOBILE MANUFACTURING HUB

Mr Pankaj Mohindroo represented the Indian mobile and electronics Industry at a panel discussion held during the 31st edition of "Convergence India Expo" at Pragati Maidan on 17th Jan 2024 New Delhi.

The panel theme was "India the Next Mobile Manufacturing Hub". The panel comprised notable figures from industry, government, and think tanks. Mr Mohindroo emphasised the Opportune time for India to position itself as the premier investment destination by GVC firms in the electronics domain. With India's current share of Global GDP at 3.5%, there's immense growth potential, which can be leveraged by balancing proactive collaboration and leveraging global opportunities as we navigate the mobile and electronics manufacturing landscape.

PANEL DISCUSSION: INDIA AS A SUPPLY CHAIN ALTERNATIVE: PERSPECTIVES FROM ELECTRONICS INDUSTRY SUCCESS

Mr Pankaj Mohindroo was invited as a panellist organised by Bank of America Securities during their 2023 India Conference held on 6th Nov, 2023 in New Delhi.

The discussion shed light on India's emergence as a pivotal electronics manufacturing hub and its role in diversifying the global supply chain and building a resilient domestic ecosystem. The panel was moderated by Mr Amish, Head of India Research, BofA Securities and the gathering comprised of esteemed industry leaders.

PANEL DISCUSSION: UNLOCKING THE POWER OF TELECOM: SKILLING FOR A CONNECTED WORLD

ICEA organised a panel discussion on "Unlocking the Power of Telecom: Skilling for a Connected World" at the India Mobile Congress 2023 on 29th Oct 2023 in New Delhi. The panellists discussed how the digital landscape has been constantly evolving, and skill sets required to thrive in this environment have been undergoing a radical transformation.

PANEL DISCUSSION: JOURNEY OF ELECTRONIC DEVICES: FROM MANUFACTURING TO DISPOSAL

Dr Aashish Saurikhia - Director of Public Policy ICEA, participated as a panellist in the Youth Eco Summit organised by Bajaj Foundation on the 18th Jan 2024 in New Delhi

PANEL DISCUSSION: QUALITY INFRASTRUCTURE

Dr Aashish Saurikhia - Director of Public Policy, ICEA, in an Industry Bodies Meet organised by the Quality Council of India (QCI) to deliberate on Quality Infrastructure in India, exploring the essential role of standards, technical regulations, and compliance mechanisms.

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About India Cellular & Electronics Association (ICEA)

ICEA is the leading industry body representing the entire electronics ecosystem in India, including components, subassemblies, EMS, and finished goods across various ESDM verticals such as mobile phones, consumer electronics, and IT Hardware. Our members comprise Fortune 500 companies, including lead brands, EMS companies, and technology providers across multiple sectors, including IT hardware, semiconductors, and hearables & wearables.

It is working closely with the Government of India to achieve its vision of establishing a USD 300 billion electronics manufacturing ecosystem by 2025–2026. ICEA has been instrumental in conceptualizing the roadmap of the Phased Manufacturing Program (PMP), a first-of-its-kind program in India's history that has resulted in a 1300% increase in mobile phone manufacturing, from USD 2.5 billion to USD 36 billion in just six years.

It has also pioneered the Production-Linked Incentive (PLI) scheme for mobile phones, which has set the trend for such schemes in multiple sectors in India. We have closely worked with all key stakeholders, including industry and government, to encourage landmark schemes such as the Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme and the Scheme for Promotion of Electronic Components Manufacturing and Semiconductors (SPECS).

The goal of the organisation is to build a robust electronics manufacturing ecosystem with a specific focus on enhancing design and R&D capabilities and establishing India as the Export Hub for different electronics hardware verticals, such as mobile phones and its components, consumer electronics, IoT devices, strategic electronics, auto electronics, wearable and hearable devices, among others.

Key services areas of ICEA are:

ICEA long-term vision is to transform India into an electronics manufacturing hub worth USD 300 billion by 2025- 26, with contributions from exports estimated to remain at USD 120 billion. Electronics hardware exports are estimated to be one of the largest export categories in India over the next few years.

Over the past decade, ICEA has partnered with industry stakeholders to work with various state governments, such as Gujarat, UP, AP, Telangana, and Karnataka, to promote investment and outreach activities in multiple countries such as China mainland, Taiwan, Korea, Japan, USA, Germany, Israel, and others to establish a strong ESDM ecosystem to serve India and the world.

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INDIA'S ESDM QUARTERLY DIGEST