



सत्यमेव जयते

GOVERNMENT OF GUJARAT

# Electronic System Design & Manufacturing (ESDM) Sector Profile

# India Scenario

The image features a dark blue background with the text "India Scenario" centered in a white, serif font. Below the text, there is a large, abstract graphic composed of several overlapping, wavy bands of color. From left to right, the colors transition from yellow and orange to a deep purple. The bands are layered, creating a sense of depth and movement, as if they are flowing or rising from the bottom left towards the top right.

# ESDM Industry Scenario

The Indian Electronics System Design & Manufacturing (ESDM) sector was valued at US\$ 82 billion in 2015



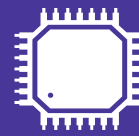
Electronics is the largest and fastest growing manufacturing industry in the world



Demand for electronic goods in India is increasing with a CAGR of 22% and is expected to touch US\$ 400 Billion by 2020



Indian IoT market to reach US\$ 9 Billion by 2020. Growing IoT applications in the automotive and industrial markets are expected to drive the market



Nearly 2000 new chips being designed per year with more than 20,000 engineers working in various aspects of chip design and verification



Potential employment creation of 28 Million by 2020



India has a large pool of skilled manpower and has the third largest pool of scientists and technicians in the world



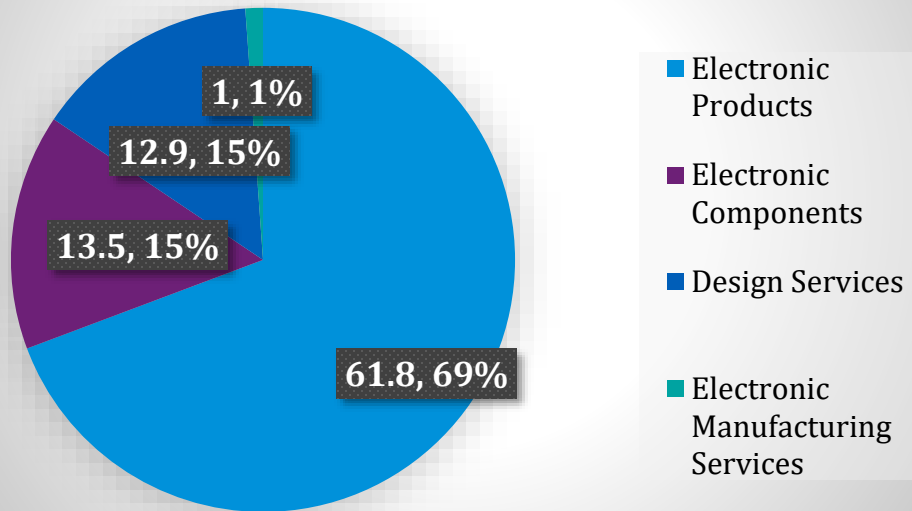
India is the third-biggest television market as per TRAI after China and the US. The television market is expected to cross US\$ 9 Billion by 2021.



India is the second-biggest smartphone market in terms of active unique smartphone users, crossing 250 million users, surpassing the US market.

# Market Overview

Major components of the India ESDM Industry (US\$ Bn, % Share)

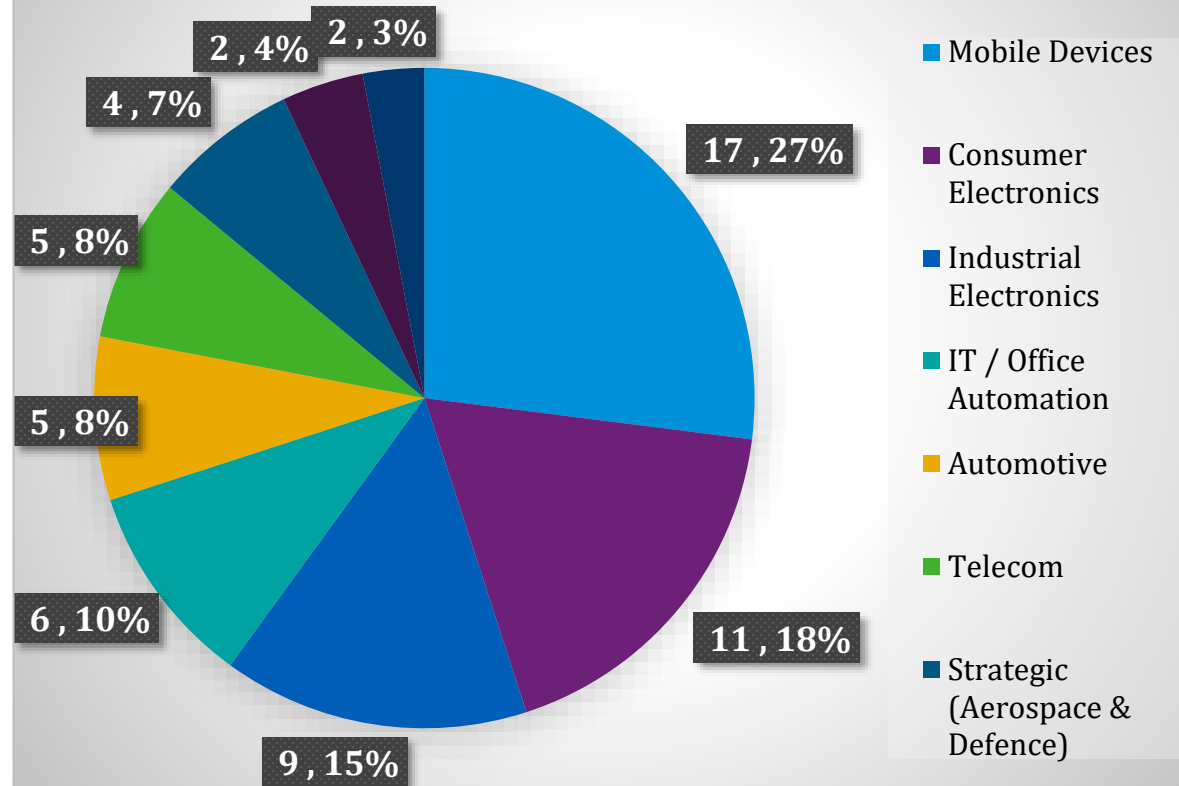


**Electronic Products :** Mobile devices, Consumer electronics, Industrial electronics, Automotive electronics, IT/Office automation

**Design Services:** Embedded systems, Very Large Scale Integration , Printed Circuit Board

**Electronic Components:** Electro-mechanical, Active components, Passive components

Market Demand for Electronic Products (US\$ Bn, % Share)



# Growth Drivers



**Fast growing Global Market:** At US\$ 1.75 trillion, the global electronics manufacturing industry is the largest & fastest growing industry. It is expected to reach US\$ 2.4 trillion by 2020.



**Industry 4.0/IoT:** Robotic technology, artificial intelligence and IoT are driving accelerated adoption as prices are consistently declining. Growing need for energy efficiency and compliance with government regulations is driving need for automation in manufacturing sector.



**Rising Domestic Demand:** Demand for electronic goods in India is increasing with a CAGR of 22% and is expected to touch US\$ 400 Billion by 2020. Demand driven by the rise in income levels leading to higher off-take of electronics products.



**Digital India/Make in India:** Automation demands of corporate sector and Government's focus on e-Governance. Rising digital banking sector like wallet players, payment banks, VSAT-enabled mobile, ATMs & POS machines,



**Adaption of latest technology:** Accelerated data traffic volume is leading to development of high speed communication network even in the rural areas. Sensors are being deployed in the healthcare industry to focus on better patient care, lowering costs and increasing efficiency.

# Government of India Initiatives (1/2)

<b>Semiconductor FAB</b>	<ul style="list-style-type: none"> <li>• Two semiconductor wafer Fabrication (FAB) manufacturing facilities to come in the country</li> <li>• Strong design base with more than 120 units</li> </ul>
<b>Electronics Development Fund</b>	<ul style="list-style-type: none"> <li>• US\$ 2 Billion fund for Innovation, IP and R&amp;D funding</li> </ul>
<b>Electronics Manufacturing Cluster Scheme (EMC)</b>	<ul style="list-style-type: none"> <li>• Provides 50% of the cost for development of infrastructure and common facilities in Greenfield clusters and 75% of the cost for Brownfield clusters</li> <li>• Subsidy up to US\$ 10 Million per 100 acres</li> <li>• Target of 200 clusters by 2020</li> </ul>
<b>Modified Special Incentive Scheme (M-SIPS)</b>	<ul style="list-style-type: none"> <li>• Subsidy of 25% of capital expenditure (20% in SEZs)</li> <li>• Excise/CVD paid for capital equipment is reimbursed.</li> <li>• Central Taxes and Duties reimbursement</li> </ul>
<b>Human Resource Development</b>	<ul style="list-style-type: none"> <li>• 3000 PhDs in in the area of electronics &amp; IT/ITES by 2020. Skill Development for 1 million persons.</li> </ul>
<b>Preferential Market Access Policy</b>	<ul style="list-style-type: none"> <li>• Preference to domestically manufactured goods in Government procurement. Extent of government procurement will not be less than 30%</li> </ul>

# Government of India Initiatives (2/2)



## National Policy on Electronics 2021: Interventions to support MSMEs

Support under the Policy will be provided in the form of reimbursement to the manufacturers in the MSMEs. The scheme for providing financial support as Grant in Aid (GIA) is expected to benefit the manufacturers, domestic industry, exporters in the electronics sector.

The Scheme will provide GIA for the following activities:

- Reimbursement of expenses relating to compliance of electronic goods with “Indian Standards” notified by DeitY. The total GIA for one model is limited to one lakh only for 200 models (maximum).
- Reimbursement of expenses for testing and certification required for export. The total GIA under the Scheme for one model is INR 1.25 Lac, 800 models (maximum).
- Development of Electronic Manufacturing Clusters by MSMEs for diagnostic study, soft intervention and for preparing Detailed Project Reports, etc. The Total GIA available under this Section of the Scheme for Development of Clusters of INR 10 Lac /Cluster (max) would be available for setting up of 20 Clusters.

This is also available for relocation of manufacturing plant from foreign country.

# Gujarat Scenario

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# Gujarat Overview



Gujarat provides ample scope for development of the Electronics System Design & Manufacturing Industry. The state being a gateway to Northern India is uniquely positioned to cater to the markets of the same. The opening up of new markets has thrown up enormous possibilities which can be capitalized by the companies based in Gujarat.



Through competitive policy offerings, the Government of Gujarat intends to promote investments in the Electronics sector by boosting skilled employment opportunities.

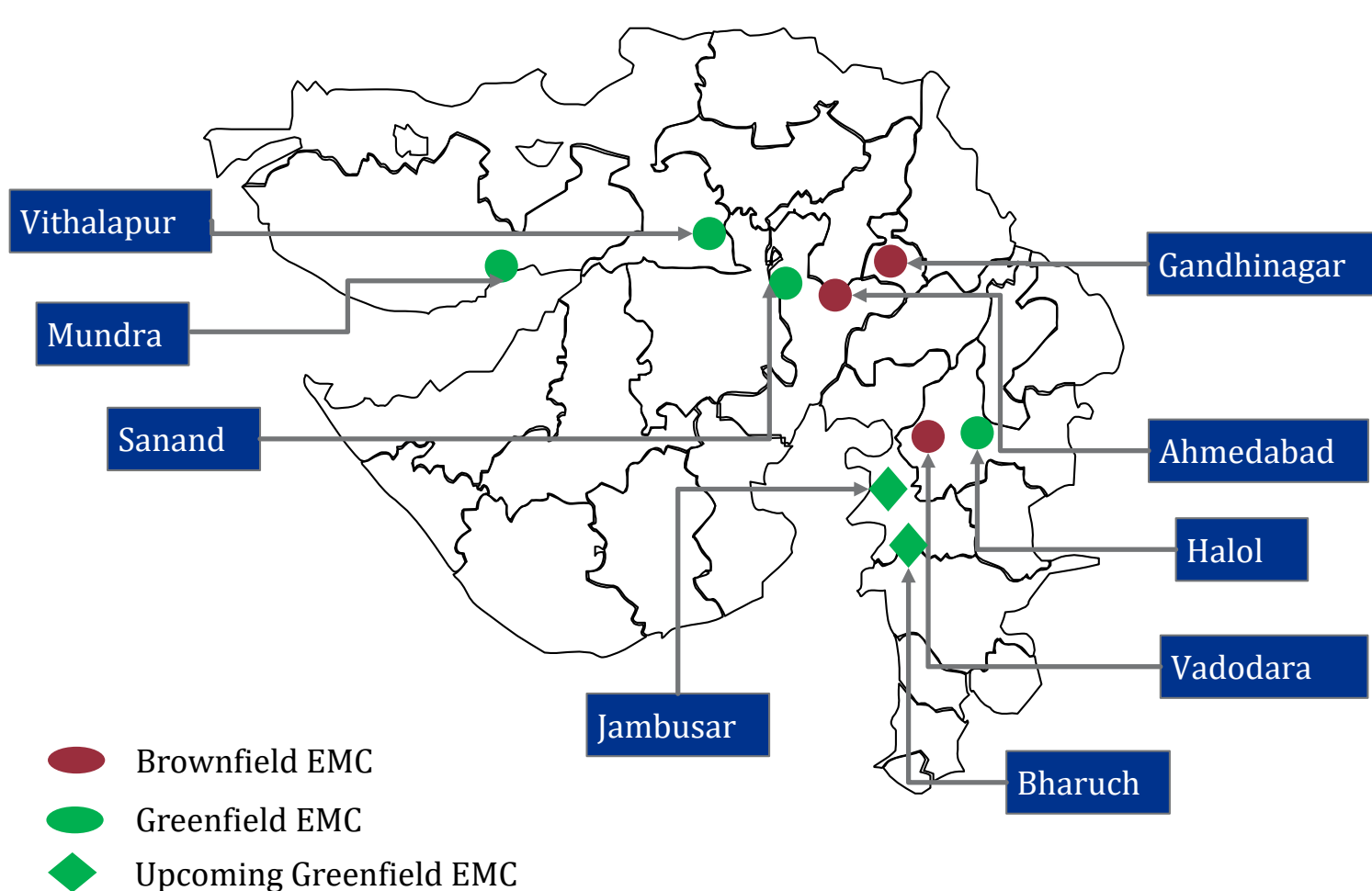


Gujarat has targeted the ESDM industry to reach a turnover of US\$ 16 billion by 2021 with an investment of US\$ 6 billion. This will lead to employment opportunities for 5 lakh people by 2021. It will also create opportunities for earning forex by import substitution and export promotion to the tune of US\$ 5 billion by 2021.



Next Orbit Ventures has signed an MoU with the Government of Gujarat for investing in a semi conductor fabrication unit (wafer fab) in Gujarat.

# Manufacturing Clusters in Gujarat



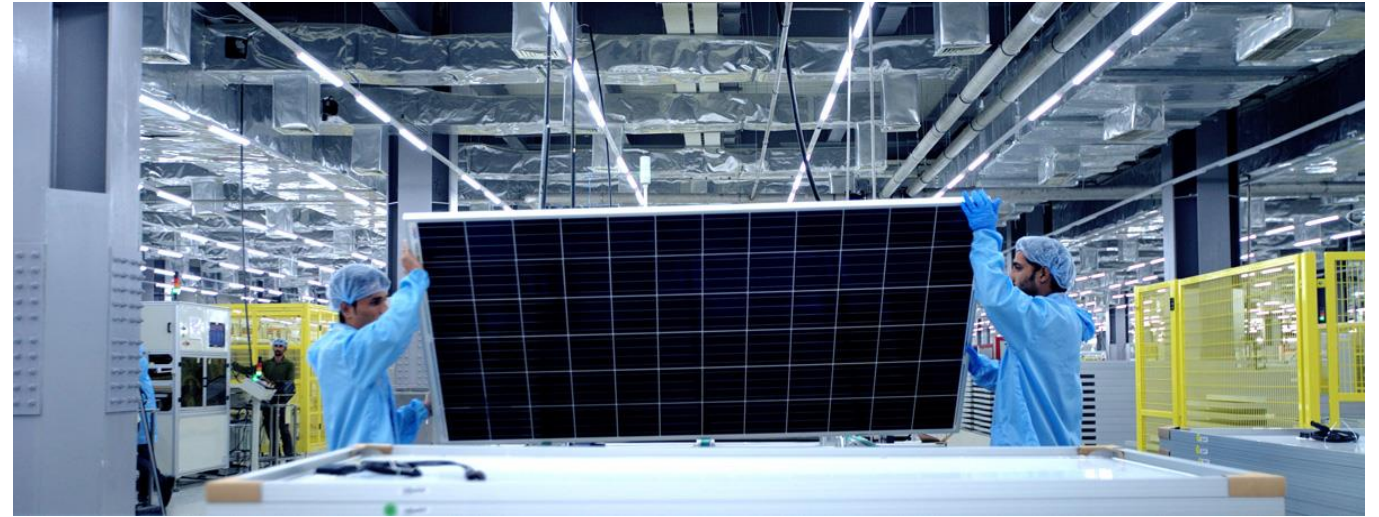
## Clusters across the regions

Ahmedabad, Gandhinagar & Vadodara have been notified as Electronics Manufacturing Clusters under the Electronic System Design and Manufacturing (ESDM) and Modified Special Incentive Package Scheme (M-SIPS) by the Department of Electronics & Information Technology (DeitY), Government of India

GIDC has received in principle approval for establishment of a greenfield electronics manufacturing cluster in Khoraj village near Sanand under the Government of India's new ESDM and M-SIPS scheme

# Business case of Adani Solar PV

Adani Solar-Mundra Solar PV Ltd, the solar PV manufacturing arm of Adani Group, has a 1.5 GW Cell and Module Manufacturing facility in Mundra.



- The unit is located in a Special Economic Zone at Mundra, Gujarat
- The company's vertically integrated businesses offer services across the spectrum of photovoltaics manufacturing. It plays host to the entire solar manufacturing ecosystem from Polysilicon to modules, including ancillaries and supporting utilities.
- The state-of-the-art manufacturing facility with multi-level infrastructure is optimized for scaling up to 3 GW of modules and cells under a single roof.
- The cutting-edge technology, with machines and equipment, aim to help in cost leadership, scale of operations and reliability standards as per global benchmarks.

# Educational Infrastructure

Provisional Intake Capacity of Engineering Colleges in Gujarat was approximately 68,000 seats in 2017 with over 130 colleges.

Leading Institutes	Location	Engineering Specialization			
		Electronics & Communication	Instrumentation & Control	Electrical	Information & Communication
Indian Institute of Technology (IIT)	Gandhinagar	-	-	30	-
Sardar Vallabhbhai National Institute of Technology	Surat	138	-	93	-
DA-IICT	Gandhinagar	-	-	-	115
Institute of Technology - Nirma University	Ahmedabad	120	60	120	-
Pandit Deendayal Petroleum University	Gandhinagar	-	-	120	120





# Partners in our success

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Passion for Sensors  **adani**<sup>TM</sup>

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Innovative People ■ Innovative Solutions

 **eInfochips**

# State Government Incentives



# Gujarat Electronics Policy 2016-2021

## Incentives to the Electronics Manufacturing Clusters (EMCs)

### Assistance of Capital Investment Subsidy

@ 25% of the project cost to Greenfield EMCs subject to a ceiling value

### Power Tariff Subsidy

@ US \$ 0.015 per unit on the billed amount for a period of 5 years

### Assistance for Stamp Duty & Registration Fee

100% reimbursement of Stamp Duty and Registration Fee

### Assistance for Electricity Duty

100% reimbursement for electricity duty paid by EMC for a period of 5 years

# Gujarat Electronics Policy 2016-2021

## Incentives to the ESDM Units

### Capital Investment Subsidy

To eligible ESDM units on basis of its GFCI and overall subsidy ceiling of up to US \$ 1 Billion

### Interest Subsidy

Subject to a ceiling value for a maximum duration of five years

### Power tariff Subsidy

@ US \$ 0.015 per unit on the billed amount for a period of 5 years

### Patent Assistance

50% subject to a ceiling of US\$ 3000 per domestic patent & US\$ 7300 per international patent

### Stamp Duty & Registration Fee

100% reimbursement of Stamp Duty and Registration Fee for the first transaction

### Electricity duty

100 % reimbursement for electricity duty paid for a period of five years from the date of commencement

### Quality Certification Assistance

For 3 industry standard quality certifications, @ 50% of cost of within the overall ceiling of US \$ 8800 in 5 years

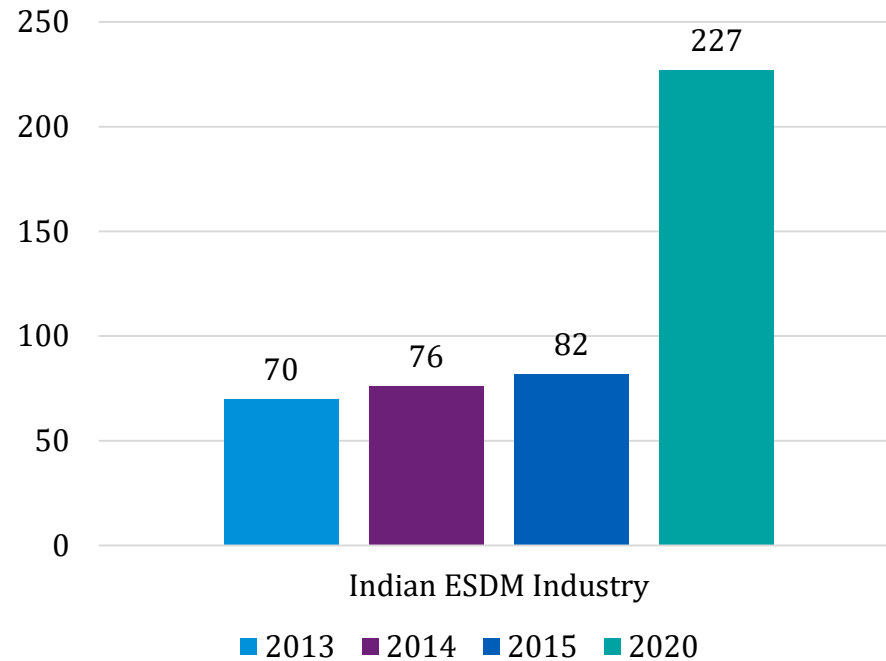
### Employment Generation Incentive

EPF Contribution for a period of five years subject to overall ceiling of US\$ 10 Million per annum

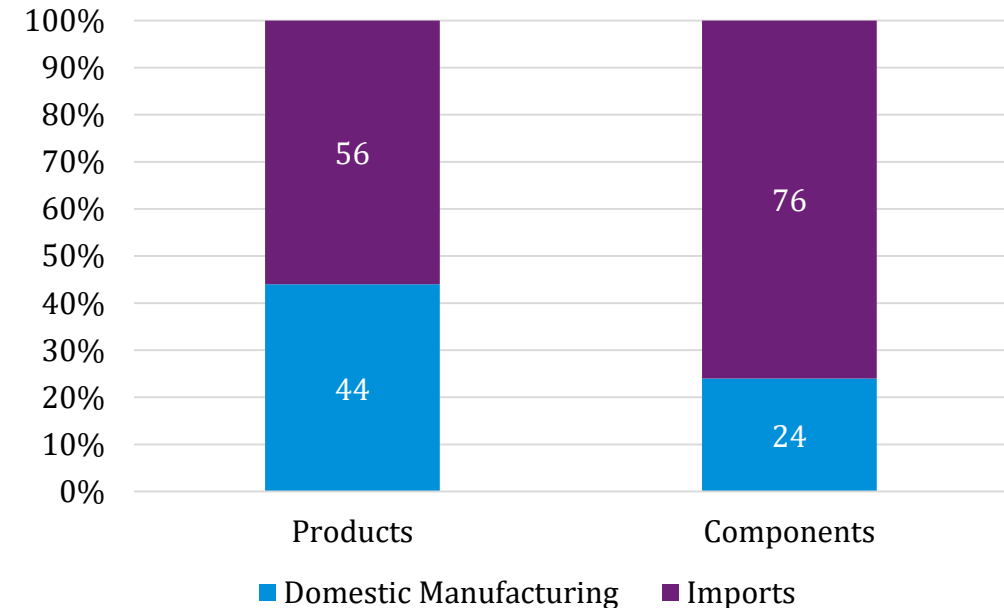


# Investment Opportunities

Estimated Growth projected in India in USD Billion



Domestic Manufacturing Vs Import % Break up (2015)

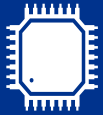


- 100 % FDI is allowed under the automatic route in ESDM sector subject to all the applicable regulations and laws.
- Under Make in India, the Government of India plans to tackle the huge demand supply gap and wants to achieve net zero import by 2020.
- The high demand shortfall in domestic manufacturing presents a huge opportunity for foreign investors.

# Investment Opportunities



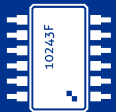
**Mobile Phones:** Import Duty on mobile phones has been raised to 20% in the Union Budget 2018 to promote domestic manufacturing. Number of smart phone users expected to double in next 5 years. Only 250 out of the 650 million mobile users have smartphones. Opportunity for domestic smartphone manufacturing



**Semi Conductor Wafer Fab:** There are over 120 semiconductor design firms in India. Gujarat can provide the necessary infrastructure required to set up a dedicated Fab facility



**LED (Light Emitting Diode):** The government has decided to switch to LED for all street lamps and public space lighting. This has led to a demand surge & there is opportunity to manufacture LED lights



**Wearable Devices:** Market expected to grow to US\$ 48 Billion by 2019. Affordable prices and new functionalities have led to a very high demand surge in India



**Solar Cells and Modules:** India has set an ambitious target of achieving 100 GW of Solar power by 2022. India is the world's ninth largest solar power producer. Opportunity to manufacture Solar Cells and Modules in India to meet the 100 GW target

Thank you

The background features a solid dark blue upper section. Below this, there are several overlapping, wavy, semi-transparent shapes in shades of yellow, orange, and purple. These shapes create a sense of movement and depth, with the purple shape being the most prominent and extending towards the right side of the frame.