

Make in India Electronics – Opportunities & Challenges

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Industrial IOT

Profit from Connected Machines

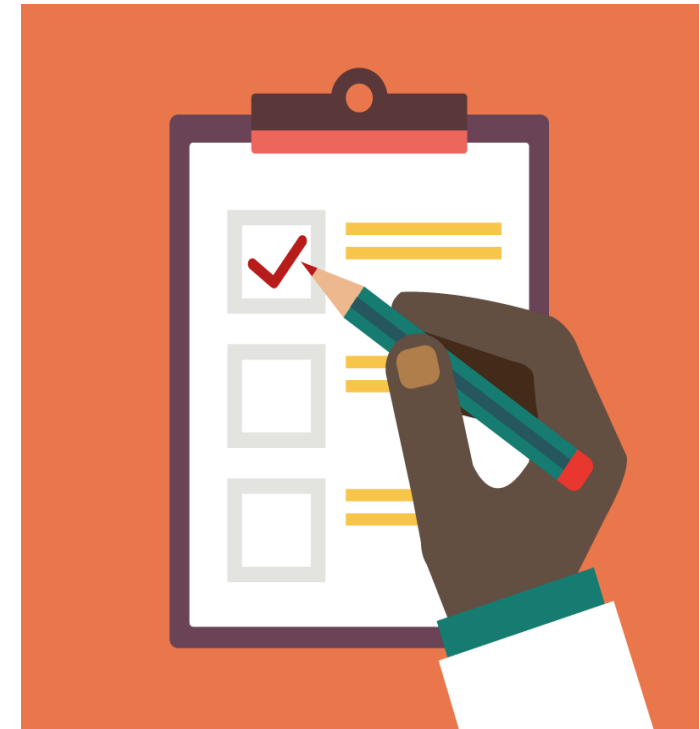


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Agenda

- Backgrounder
- Enablers
- Speed Breakers
- Top 3 Actions
- Q&A
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Backgrounder

World Electronics Export

	Export in USD Billion ('17)
China	599
Hong Kong	282
United States	174
South Korea	163
Germany	149
Taiwan	142
Singapore	124
Japan	106
Vietnam	94
Netherlands	87
Mexico	81
Malaysia	68
France	42
Thailand	34
India	9* (2019)

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Philippines	28
India	9* (2019)

Global Total ('17): \$2.6 trillion
Asia Total ('17): \$1.7 trillion

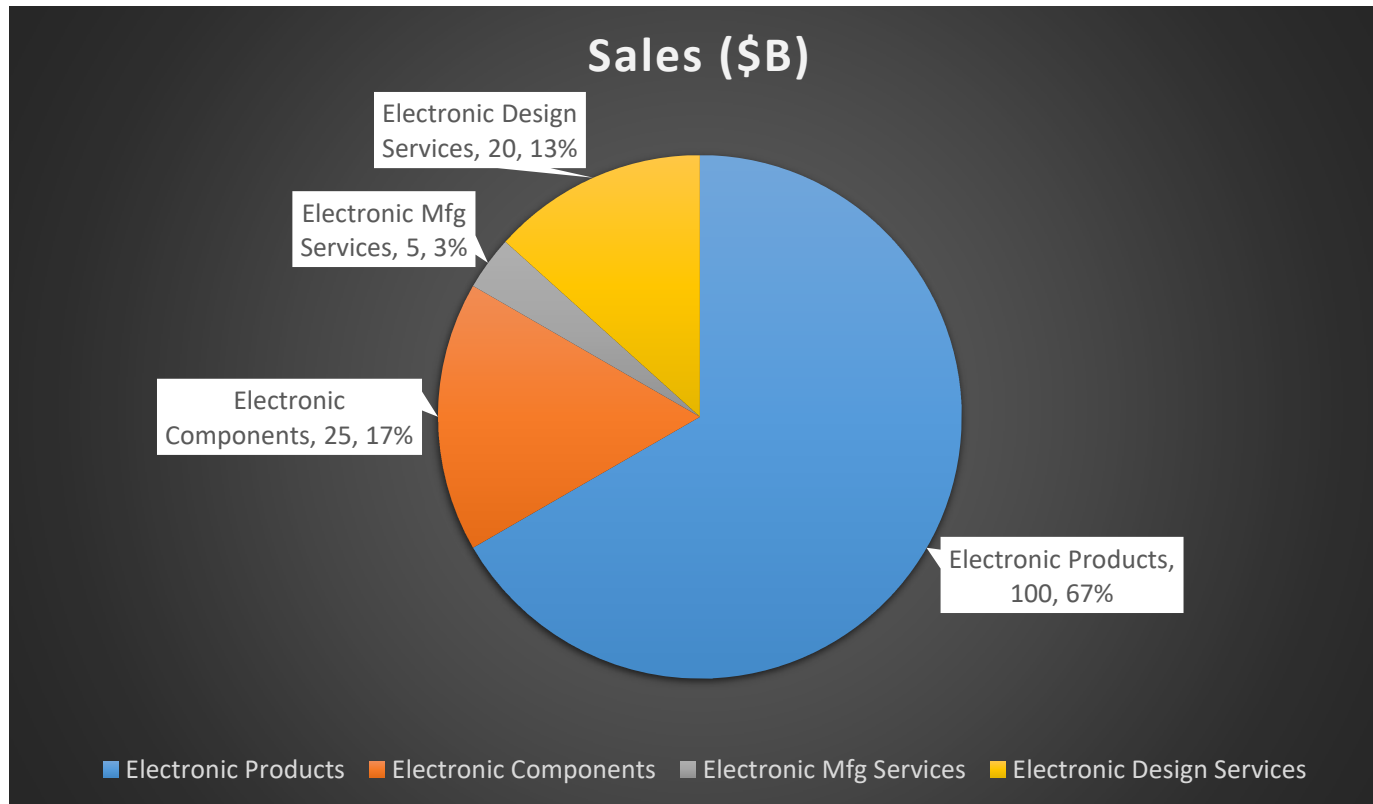
Asia's Global Share: 65%
India's Asia Share: 0.5%

World Electronics Circuit / Components Export (2019)

RANK	EXPORTER	(US\$)	2018-19 % GROWTH
1.	Hong Kong	\$134,483,068,000	+1.9%
2.	China	\$102,187,884,000	+20.7%
3.	Taiwan	\$100,408,126,000	+4.6%
4.	South Korea	\$79,082,276,000	-28%
5.	Singapore	\$76,868,051,000	-7.3%
6.	Malaysia	\$44,794,109,000	-2.3%
7.	United States	\$40,099,507,000	+6.4%
8.	Japan	\$27,791,254,000	-0.9%
9.	Vietnam	\$26,072,054,000	+230.4%
10.	Philippines	\$18,991,451,000	+38.5%
11.	Germany	\$14,851,252,000	-11.2%
12.	Netherlands	\$14,562,051,000	+1.1%
13.	France	\$7,698,973,000	+0.1%
14.	Thailand	\$7,586,771,000	-8.3%
24.	Indonesia	\$742,738,000	+88.1%
33.	India	\$244,030,000	+10.4%

WORLD TOTAL: \$720B
INDIA%: 0.03%

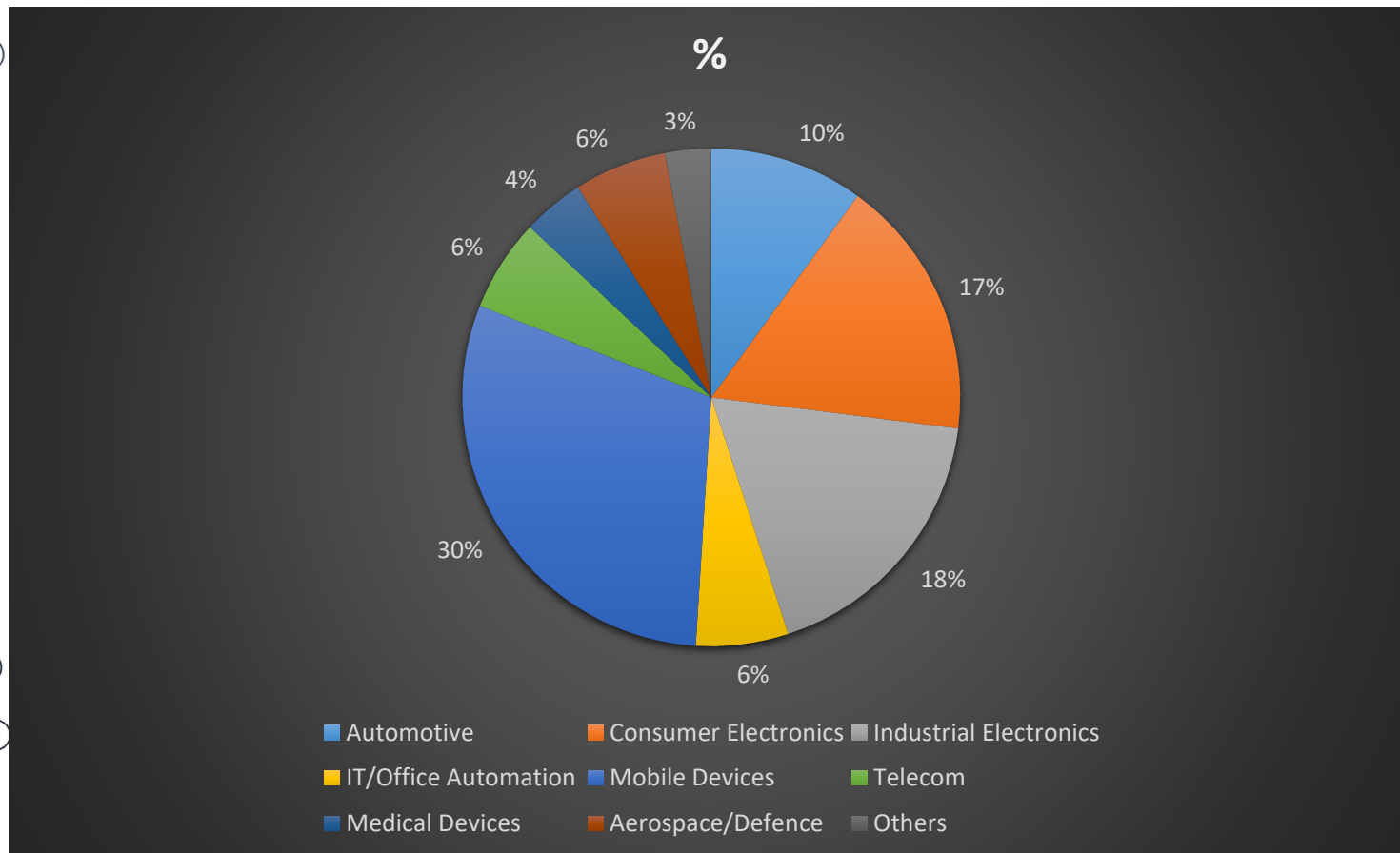
Total Indian ESDM Market (2019 Est)



	Sales (\$B)
Electronic Products	100
Electronic Components	25
Electronic Mfg Services	5
Electronic Design Services	20
TOTAL	150

Imports: \$45B

Electronic Products Breakdown (% of Total India Market)



Product Category	Percentage (%)
Automotive	10
Consumer Electronics	17
Industrial Electronics	18
IT/Office Automation	6
Mobile Devices	30
Telecom	6
Medical Devices	4
Aerospace/Defence	6
Others	3

The Other ESDM Segments

- Electronic Components – active/passive/semiconductors
- Electronic Mfg. Services – Mostly driven by mobile manufacturing.
- Electronic Design Services – 85% is embedded system design



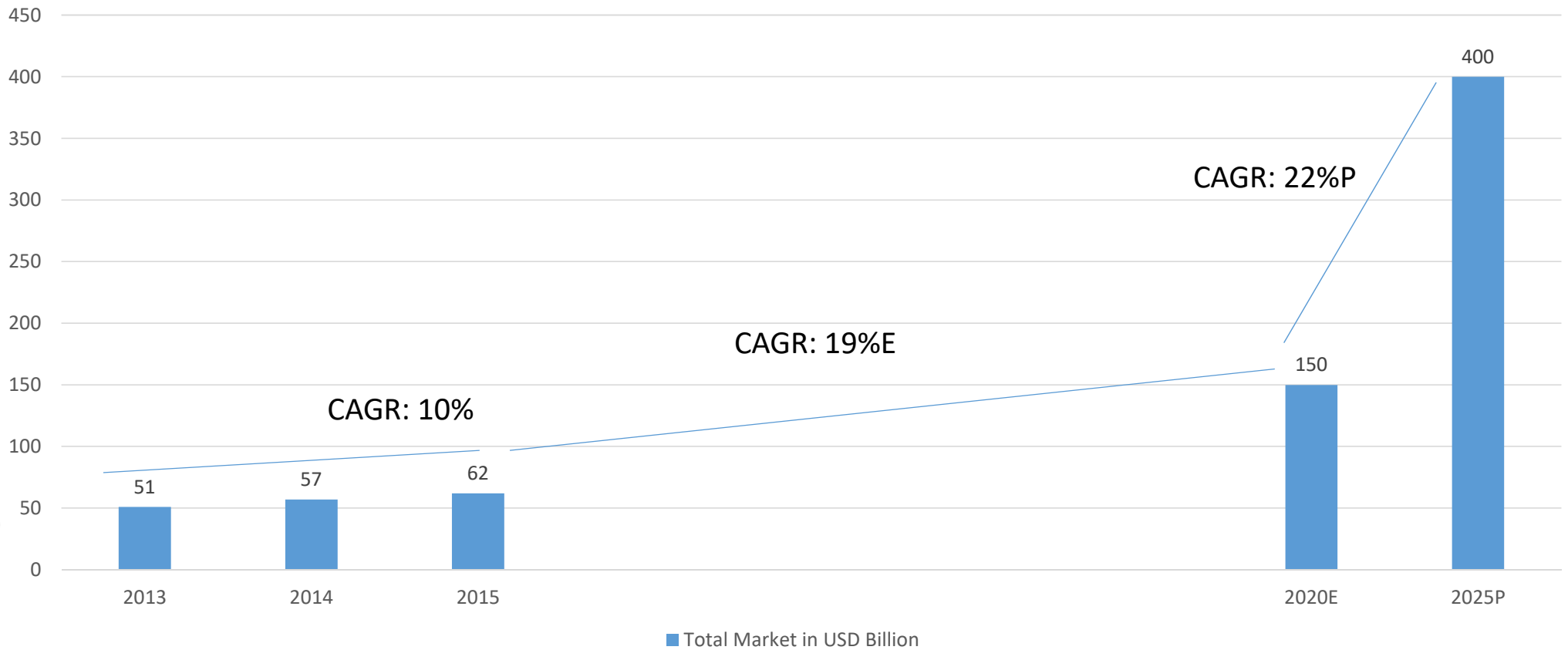
ESDM: Electronic Systems Design and Mfg.

India Electronics Imports – Amongst Top 3

#	Product Groups	USD Billion (2019)	% of Total
1	Mineral fuel and Oil	154	32
2	Gems & Precious Metals	60	13
3	Electronics	45	09

Growth in Total Market

Total Market in USD Billion



■ Total Market in USD Billion

CAGR: Compounded Annual Growth Rate

Our Opportunities!

- India's participation in world electronic export is **< 1% against Asia's 65%**
- Similarly, in **electrical components** it is **< 0.1%**
- China's total export is **60 times** of India
- Some **smaller emerging economies** are substantially ahead
- High level of imports – **3rd in rank** in our import items bill
- % of emerging product areas such as **automotive, telecom, industrial and medical** low
- **Higher growth rate** of India market in the period 2015-2020
- **Import value of electronics** as % of total India electronics market is high



Enablers



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Government Policies

NPE – 2012/2019

Policy 2012 target – USD 400 B (2020), employ 28 million people, import substitution

Policy 2019 target – USD 400 B by 2025, export thrust

M-SIPS

Neutralize cost disadvantages,
Promote investment
20-25% subsidies on capital expense
Reimbursement of excise, CVD

EMCs

50% of project cost for greenfield
75% for brownfield projects

EDF

Fund of funds to support R&D, IP development, innovation
SME focus

Defence Offset

Ensure a level of import value offset by buying locally

PMA

Govt. procurement from domestic manufacturers

Skill Dev

2500 PhDs per annum

NPE – National Policy on Electronics

M-SIPS – Modified Special Incentive Package Scheme

EMC – Electronic Mfg. Clusters

EDF – Electronic Development Fund

PMA – Preferential Market Access

Other Advantages/Drivers

TRADITIONAL DRIVERS

- Competitive labour costs
- Large talent pool
- Demographics
- Rising income levels
- Replacements/Upgrades
- Digital India/Make in India/Smart Cities
- Rural India opening up

NEW NORMAL DRIVERS

- WFH
- Electronic payments
- E-commerce
- Telemedicine
- Online learning
- Remote management
- Industrial and consumer IoT
- Digital transformation...



Speed Breakers



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Notable Challenges

High cost of
business
(Ease,
Infrastructure,
Finance...)

ITA-1
(Zero duty
imports)

Relatively a
small
market

Lack of
robust
supply
chain

Insufficient
R&D and IP
generation



Top 3 Action Areas



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Creating the Environment

Reduce cost
of doing
business

Support
R&D and IP
Generation

Develop
and nurture
talent



If you look at history, innovation doesn't come just from giving people incentives; it comes from creating environments where their ideas can connect.

Steven Johnson

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Thank You

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