Turning the “Make in India” dream into a reality for the electronics and hardware industry

April 2016
Message

I am happy to know that the ASSOCHAM is organizing 6th International Conference on Electronics Industry on the topic of "Making India a hub for electronics manufacturing" at New Delhi.

Madhya Pradesh is privileged to have India's first electronics manufacturing cluster at Bhopal and Jabalpur. It has also stood first in the country to have announced a lucrative policy for semi-conductor manufacturing. Similarly defence electronics production and manufacturing sector is also expecting heavy investments. The Make in Madhya Pradesh campaign is immensely contributing to Make in India programme.

I am sure the conference would prove instrumental in promoting India as an ideal destination for electronics manufacturing. I wish the conference a grand success.

Regards.

(Shivraj Singh Chouhan)
India's manufacturing sector has a tremendous opportunity to emerge from the shadow of the country's services sector and seize more of the global market. The sector has a potential to touch US$1 trillion by 2025 and account for 25-30 per cent of the country's GDP, creating up to 90 million domestic jobs.

Electronics market of India is one of the fastest growing in the world and is anticipated to reach US$400 billion in 2022 with domestic manufacturing climbing to over US$100 billion. Having said that, we still need fundamental reforms in labour, infrastructure and regulations to capitalize on its low-cost advantage.

Government of India has recognized the potential of domestic electronics manufacturing and has taken steps to promote investment in this sector. Programs such as Digital India, Smart Cities etc. will boost the domestic consumption of electronics hardware. Technology was at the core of a host of policy measures announced in this Union Budget 2016. The government has shown its commitment to 'minimum government, maximum governance', using 'technology' as the catalyst.

Henceforth, there has to be a greater push on strengthening the electronics manufacturing ecosystem to attain the goal of zero dependency on imports.

The Ernst & Young (EY) · ASSOCHAM report highlights challenges faced and recommends policy initiatives to strengthen the ecosystem.

I compliment EY and ASSOCHAM team for collaborating for the report.

Alok Ohrie
Chairman, ASSOCHAM National Council on Electronics and Hardware & President and Managing Director, Dell India
Demand for electronic products in India is poised for significant growth in the next few years, driven by strong economic outlook. The Indian electronics and hardware market grew 8.6% YoY to reach US$75 billion in 2015, driven by rising local demand and growing disposable incomes. In addition, adoption of high-end technology devices, transitions such as rollout of 4G/LTE networks and the Internet of Things (IoT) are driving accelerated adoption of electronic products.

However, India’s local production of electronics products is not sufficient to meet the overall demand. Currently the electronics demand is largely being met through imports and there is a widening demand-supply gap. Hence, the Government of India is focusing on establishing a robust ecosystem to boost local manufacturing. The Government of India has treated the electronics sector as a priority under its “Make in India” program, and also announced several policy initiatives (such as EDF, PMA, skill development and MEIS) and incentives (such as MSIPS) which will act as drivers to boost domestic supply. The Government of India has also taken several steps towards increasing the ease of doing business, which has resulted in increased manufacturing setups by multiple foreign manufacturers in the country.

To further discuss the future roadmap of the growth of electronics industry and to make India as a manufacturing hub, ASSOCHAM, India’s Apex Chamber for Commerce and Industry, is organizing the 6th National Conference on Electronics.

On behalf of ASSOCHAM, I would like to thank the team at EY for preparing a comprehensive white paper on this subject.

We hope that this paper will be read by all the relevant stakeholders and they will benefit from it.

D. S. RAWAT
Secretary General
ASSOCHAM
Ernst & Young (EY), in association with The Associated Chambers of Commerce of India (ASSOCHAM), is pleased to present the report — *Turning the “Make in India” dream into a reality for the electronics and hardware industry.*

The “Make in India” initiative to boost local manufacturing and transform India into a global manufacturing destination has given a strong impetus to the Indian electronics and hardware industry. Moreover, global manufacturers are looking to relocate their manufacturing base at alternate locations such as India, Vietnam and Indonesia due to rising labor costs in China. Hence, Indian electronics industry should capitalize on the fast-growing market opportunity and become a manufacturing-led sector from being predominantly consumption-driven.

This report highlights the key demand-side and supply-side drivers and challenges faced by companies in this sector and presents some of the policy recommendations to strengthen electronics manufacturing in the country.

We hope you find this report both interesting and informative, and will be happy to provide you with more information and guidance around some of these ideas.

**Milan Sheth**  
Partner and National Leader - Technology sector  
Ernst & Young LLP
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Executive summary

Demand for electronic products in India is poised for significant growth in the next few years, driven by a strong economic outlook. The Indian electronics and hardware market grew by 8.6% YoY to reach US$75 billion in 2015, driven by rising local demand and growing disposable incomes. In addition, adoption of high-end technology devices, transitions such as roll out of 4G/LTE networks and the Internet of Things (IoT) are driving accelerated adoption of electronic products. Moreover, the Government of India (GoI) has announced several programs such as Digital India, Smart Cities, cloud initiative, solar power and UIDAI projects and National Knowledge Network initiative, which will boost the domestic consumption of electronics content.

However, India's local production of electronics products is not sufficient to meet the overall demand in the country. Currently the electronics demand is largely being met through imports and there is a widening demand-supply gap. Hence, the GoI is focusing on establishing a robust ecosystem to boost local manufacturing. The GoI has treated the electronics sector as a priority under its “Make in India” program, and also announced several policy initiatives (such as EDF, PMA, skill development and MEIS) and incentives (such as MSIPS), which will act as drivers to boost domestic supply. The GoI has also taken several steps towards increasing the ease of doing business, which has resulted in increased manufacturing setups by multiple foreign manufacturers in the country. All these efforts are expected to enable India to meet its local electronics demand and also cater to overseas demand in the coming years, by positioning India as a global electronics manufacturing hub. Furthermore, rising wage costs in China have increased India’s attractiveness as an alternate manufacturing destination.

In order to realize this dream of local electronics manufacturing, the Indian electronics industry must strengthen its ecosystem and move toward increased domestic value addition from just being involved in last mile assembly. Currently, India possesses limited capabilities across manufacturing value chain activities. There is a limited component supplier base and high dependency on imports for components. This has resulted in low levels of localization amid weak manufacturing ecosystem. Therefore, the Indian electronics industry must focus on increasing the level of local value addition in electronics products by focusing on CKD assembly and setting up testing centers in the country.

Realizing the need to address supply-side challenges, the GoI has come out with several policy initiatives in its recent budget announcements such as rationalizing duty structure for a wide range of products, extending differential duty structure to components, corporate tax exemptions, increasing ease of doing business, focus on start-ups, promoting skill development, R&D and innovation. These announcements have been well-received by industry partners and manufacturers. However, to achieve “Make in India” in the true sense, there are a few gaps that need to be bridged. These include initiatives around developing and supporting local component manufacturing and high domestic value addition, steps to further improve ease of doing business and developing overall infrastructure.

Henceforth, there has to be an increased push from industry partners and the Government on strengthening electronics manufacturing ecosystem to attain the goal of zero dependency on imports for electronics demand.
Global electronics industry and economic outlook

The worldwide electronics industry was valued at around US$1.86 trillion in 2015 amid a weak global economy. The demand for electronic products such as smartphones, tablets and PCs was subdued compared to the growth observed between 2012 and 2014. In 2015, the industry witnessed one of the largest decline in new manufacturing orders, since 2013. This forced manufacturers to cut output and compelled major semiconductor vendors to stay cautious on their capital investment plans. As a result, the global semiconductor sales declined 0.2% YoY in 2015 to reach US$355 billion, after posting record sales growth at 9.9% in 2014.

Global economic growth is projected at 3.4% in 2016, compared to 3.1% in 2015. The global economic outlook is influenced by three factors – (a) gradual slowdown in China’s economy, (b) reduced prices for energy and other commodities (such as metals), and (c) gradual tightening in the US monetary policy as central banks of several other major advanced countries continue to ease monetary policy. Although growth in advanced countries is projected at around 2% in 2016, emerging markets are expected to witness growth at 4.3%. This improvement in global economy is expected to revive the demand for electronics.

In the last decade, China has been the focal point for electronics production for high volume products, in the computing, consumer and communications segments, due to cost advantages and economies of scale. However, the country is now facing increasing pressure due to rising labor costs. Hence, major global OEMs and Electronics Manufacturing Services (EMS) providers are looking to relocate production to alternate locations. Asian countries such as India, Vietnam and Indonesia, are emerging as attractive manufacturing destinations due to multiple factors including low labor costs, substantial domestic demand and government support. Nonetheless, regions such as Western Europe and the US continue to benefit from their leading position in research, design and development.
Although the shift to other manufacturing locations is a positive factor for India; weak macroeconomic conditions have led to a slow growth in emerging markets in the last few years. Moreover, there has been a continued depreciation of currencies in the emerging markets (e.g., China, India and Brazil) against the US dollar.

Additionally, China’s recent devaluation of Yuan continues to put a downward pressure on Asian currencies. This trend is expected to make imports less costly, which will in turn increase cost pressures on domestic manufacturers in import markets such as India.

**Indian economic outlook**

Demand for electronic products in India is poised for significant growth in the next few years, driven by strong economic outlook. India’s GDP is expected to grow at 7.5% in 2016 and 2017, as it is likely to benefit from reduced commodity prices. India’s economy is powered by sustained growth in consumer spending, fostered by moderate inflation, favorable demographics, and strengthening FDI. India emerged as the most favored destination for FDI surpassing China and the US in 2015. Investor confidence in the Indian economy is expected to increase further. Per capita income is expected to expand at a CAGR of 6.6% during 2013-2019 to ~US$2,200 in 2019, thereby driving local electronics demand.
Indian electronics and hardware industry overview

The electronics and hardware sector includes electronic products and components. The Indian electronics and hardware market grew by 8.6% YoY to reach US$75 billion in 2015\(^1\). Rising consumer demand for electronics products can be attributed to growing middle class, rising disposable incomes, declining prices of electronics, and numerous GoI initiatives such as widespread broadband connectivity and e-governance programs. The electronics products segment contributed 82% to the overall market in 2015, and the rest comprised electronic components.

On the supply side, the domestic manufacturing of the Indian electronics and hardware picked up in 2015, as more global and domestic companies expand their manufacturing base in the country. During 2013-15, the domestic manufacturing of electronics has catered to an increasing share of local demand. However, local value addition is still limited as majority of manufacturing is final assembly in the country.

The Indian electronics and hardware industry is expected to grow at a CAGR of 13%-16% during 2013-18 to reach US$112-130 billion by 2018. However, given the local manufacturing state, the dependence on imports is likely to remain similar. Hence, the focus on growing India’s electronics manufacturing capability is increasing due to widening demand-supply gap.

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1 Market definition of electronics and hardware industry for this report includes electronic products and electronic components, and does not include design services and electronic manufacturing services.
Although India’s electronics and hardware industry is growing at a robust rate, majority of the demand is met through imports. Around 50%-60% of the demand for electronic products is fulfilled through imports, while nearly 70%-80% of the electronic components market is imports-dependent. Growing reliance on imports for electronic components and rapidly increasing demand for electronic products is making it indispensable to grow and strengthen India’s electronics manufacturing capabilities.

Realizing the need, GoI is increasing its focus on this sector and aims to transform it from a predominantly consumption-driven market to the one with manufacturing capability to cater to local and overseas demand while focusing on producing high-value add electronic products. The “Make in India” campaign has given a strong impetus to the Indian electronics sector. The GoI has also taken several steps toward increasing the ease of doing business in India and announced policy initiatives to foster the growth of the Indian electronics ecosystem. As a result, multiple foreign manufacturers are setting shops in the country. The electronics exports are also expected to grow with global companies looking to invest in India for manufacturing set-ups.

Increasing end-consumer demand is leading to growth in electronic products

The Indian electronics industry is being driven by macro factors such as growing middle class population and rising disposable income. In addition, declining electronics prices and adoption of high-end technology devices is leading to an uptick in consumption of electronics devices. Furthermore, technology transitions such as roll out of 4G/LTE networks and IoT are driving accelerated adoption of electronics products.

### Major contributing verticals

By verticals, mobile devices segment dominates the sector with approximately 27% share of the total electronic products revenues in 2015. The growth in this segment is being driven primarily by smartphone proliferation.

Other significant segments are consumer electronics (led by set-top boxes and TVs), followed by industrial electronics (driven by increased consumption of LED and smart energy).

### High growth verticals

Between 2015 and 2020, automotive electronics and industrial electronics are estimated to be high growth segments.

Increasing safety, efficiency and entertainment needs will drive the automotive electronics market, while growth in smart city applications, new LED and Solar PV projects will drive demand for industrial electronics.
The electronic products industry in India was valued at US$61.8 billion in 2015, growing from US$50.9 billion in 2013 at a CAGR of 10.1%. With increasing penetration across consumer product segments especially in semi-urban and rural markets, along with Government push for infrastructure development, locomotive and energy, there exists a significant opportunity for rapid expansion of this industry.

The electronic components industry in India was valued at US$13.5 billion in 2015, growing from US$10.8 billion in 2013 at a CAGR of 11%. The market is dominated by electromechanical components (such as PCB and connectors) which form 30% of the total demand, followed by passive components (such as resistors and capacitors) at 27%. Over the next five years, accelerated local manufacturing of electronics products to cater to growing domestic demand will drive the market for electronic components in India.
The Indian electronics and hardware market is currently being driven by mobile phones and consumer electronics, which together contributed nearly 45% of the overall electronics products revenues in 2015.

**Mobile devices**
- Increased affordability and availability of low-cost mobile devices
- Expanding mobile user base with increasing rural penetration
- Increasing consumer buying power driving high replacement frequency
- Shift to 4G networks to drive next wave of handset demand growth
- Emergence of e-commerce channel

**Automotive electronics**
- Increased demand for safety, energy efficiency, connectivity and IoT is leading to increased electronics content in vehicles
- Rising adoption of engine control, infotainment/navigation, anti-lock braking system (ABS), Electronic Stability Program (ESP), advanced driver assistance system (ADAS), powertrain, body and infotainment systems
- Reduction in prices of auto electronics (Electronics Control Unit)
- Increased consumer interest in electric vehicles

**Consumer electronics**
- Highly underpenetrated, significant potential opportunity
- Rising disposable income and improved consumer financing resulting into increased affordability
- Introduction of smart consumer electronics such as smart TVs
- Improved reach of organized retail (both offline and online), and rise of Big Sales days
- STBs, Flat TVs, refrigerators driving the demand

**Industrial electronics**
- Large government infrastructure projects such as smart cities, modernization of railways
- Government focus on environment-friendly, energy-efficient technologies is driving growth of smart energy
- Smart Grid deployment, growth of solar PV
- Government-promoted LED consumption
- Increasing automation in industries with the emergence of IoT

**IT office automation**
- National e-governance initiatives and Digital India campaign to boost the procurement of IT hardware at various levels
- Growth in storage devices across enterprises in BFSI, IT and e-commerce sectors
- Increased adoption of IT by the SMB segment
- Accelerated demand for multi-function printers (MFPs)

**Medical devices**
- Growth in remote patient monitoring leading to demand for handheld, portable health care devices
- Increasing affordability of health care services
- Rising awareness of preventive health care driving consumption of wearable devices
- Innovations and adoption of new technologies
Moreover, GoI programs will also boost consumption of electronics products

The GoI has recently announced various programs, which will drive a substantial demand for electronic products including IT hardware, and networking and communication equipment.

<table>
<thead>
<tr>
<th>Digital India campaign</th>
<th>Smart cities project</th>
<th>Government cloud initiative</th>
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<tbody>
<tr>
<td>The GoI aims to improve access to government services through IT-enabled platforms; provide broadband connectivity to 250,000 villages, Wi-Fi facilities in 250,000 schools and universities and create 400,000 public internet access points. The overall spending in under the Digital India campaign is expected to be around INR1.13 trillion.</td>
<td>The GoI has envisioned a goal to build 100 smart cities (renamed Smart Cities Mission) and rejuvenate another 500 cities in India (named as Atal Mission for Rejuvenation and Urban Transformation (Amrut)), by allocating around INR 1 trillion for a period of five years.</td>
<td>The Government is focusing on “GI Cloud” or “Meghraj” – to drive cloud adoption for effective delivery of e-Governance services. This is also driving the demand for large-scale data centers, which are expected to drive the demand for storage, servers, network components and associated electronic products further.</td>
</tr>
</tbody>
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<tr>
<th>Ultra Mega Solar Power Projects</th>
<th>UIDAI project</th>
<th>National Knowledge Network (NKN)</th>
</tr>
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<tbody>
<tr>
<td>The GoI has set an investment target in the solar power sector at approx. INR6 trillion by FY21–22. The GoI had also proposed to invest INR5 billion in the Union Budget 2014-15 to promote Ultra Mega Solar Power Projects across states with good solar potential and INR4 billion for solar power driven agricultural pump sets and water pumping stations.</td>
<td>The Government’s UID project aims to issue Aadhaar or Unique ID (UID) numbers to all residents of the country. This is a fingerprint-based verification system. The project, aimed at providing a single proof of identity to citizens, is driving a large demand for IT infrastructure and biometric readers in the country.</td>
<td>The Government aims to connect 1,500 top universities, scientific research institutes and central institutions such as IITs and research labs through fiber optics in order to promote R&amp;D. This will be a multi-gigabit, pan-India network providing a unified high-speed network backbone to all knowledge-related institutes in the country.</td>
</tr>
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</table>
“Make in India” campaign was launched in 2014 to attract investments around manufacturing in India. The campaign aims to develop India as a manufacturing hub, eliminating redundant regulations and shortening bureaucratic processes. The initiative is expected to benefit the electronics industry as significant investments are expected in the industry in the next two to three years.

To improve domestic manufacturing capabilities, the GoI has taken significant initiatives such as MSIPS and other incentives under the “Make in India” campaign; improvements around ease of doing business and infrastructure. This has resulted in significant investments in manufacturing set-ups in India. Taxation-related incentives and continued duty rationalization efforts are increasing India’s cost-competitiveness for manufacturers. For instance, duty differential on imports of mobile handsets, tablets as CBUs and now on certain parts and accessories has driven various global and Indian companies to invest in domestic manufacturing.

Hence, there is an increasing focus on growing domestic electronics production
1. **Preferential market access**: In 2013, the GoI introduced preferential market access (PMA) to give preference to locally manufactured electronic products in Government procurement (applicable to all ministries/departments except Defence). The GoI procurement from domestic manufacturers will not be less than 30% of the total procurement value, with specified domestic value addition-related requirements.

2. **Business incentives**: The GoI has brought in various incentives to encourage capital investments in manufacturing set-ups through various financial assistance programs.

   - **Modified Special Incentive Package Scheme (MSIPS)**: The scheme provides capital subsidy of 20% in SEZ (25% in non-SEZ) for units engaged in electronics manufacturing. It also provides for reimbursements of non-creditable CVD/excise for capital equipment for the non-SEZ units. In July 2015, the GoI has extended this scheme till 2020 and included additional verticals. Production Subsidy at the rate of 10% of the production turnover (ex-factory) has been introduced for specified sectors.

   - **Merchandise Exports from India scheme (MEIS)**: This scheme was introduced in April 2015 in the Foreign Trade Policy (2015-2020) and provides incentive for export of notified products and markets.

   - **Further**, recently certain markets have also been added to receive the benefit of this scheme.

   - **Electronics Development Fund (EDF)**: In December 2015, the GoI announced a special EDF worth INR100 billion to help generate an R&D ecosystem in electronics in India.

   - **The fund aims to boost IP generation and large scale manufacturing of electronic goods in the country.**

   - **This fund will be first used for angel investors, early- and growth-stage funds who have attained a minimum ROI of 10%, and have been operational for 5-7 years.**

3. **Low-cost and skilled labor advantage**:

   - **India’s attractiveness for manufacturers is growing due to availability of low-cost labor. Rising manufacturing costs in China and Taiwan are compelling manufacturers to shift their manufacturing base to alternate markets. In 2014, the average manufacturing labor cost per hour in India was US$0.92 as compared to US$3.52 of China.**

   - **Electronics Sector Skills Council of India was set up to develop a sector skill development plan for the electronics industry. The schemes to set up seven new Electronics and IT Academies, and the Special Manpower Development Program for VLSI and Chip Design have been approved.**

As manufacturers look to set up facilities in proximity to cater to growing demand for localized products and with India gaining scale in its manufacturing operations; there is a potential export opportunity to demographically similar and neighboring regions such as Africa, SAARC and the Middle East in the coming years. The growing electronics demand and rising dependence on imports is calling for production expansion initiatives to meet local and export-related demand.
While India has high maturity levels in certain activities of the manufacturing value chain, the country has high scope of improvement to perform high value add across the value chain.

**Figure 5: Electronics manufacturing value chain**

![Electronics manufacturing value chain](image)

India has a competitive edge in design services, since most of such work is outsourced to cost-effective destinations. The country also has high maturity levels in packaging, distribution, repair, sales and marketing functions to meet the geographical standards and cater to local requirements. However, manufacturers in India lack mature R&D set ups due to large capex investments and long gestation period. On the contrary, Europe and the US continue to dominate R&D and IP ownership related work.

Components sourcing and fabrication is an important activity that determines the strength of the country’s native capabilities in manufacturing because components are the building blocks of electronic devices. India has a limited component supplier base with a majority of high value and critical components being imported. Components that are pre-dominantly imported include ICs, PCBs and other active components. These are imported from markets such as China, Japan, Indonesia, Malaysia and Taiwan. Manufacturing of electromechanical and passive components are relatively mature in India as compared to other components. The electronic components produced in India include picture tubes, diodes, transistors, power devices, resistors, capacitors, switches, relays, connectors, and magnetic heads, among others.
The lack of robust manufacturing ecosystem is resulting in low local value addition with primarily last-mile assembly activity. The table below shows the level of localization among the selected high-growth electronic products in India:

<table>
<thead>
<tr>
<th>Product</th>
<th>Level of localization</th>
<th>Key components predominantly imported</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPD TV</td>
<td>Very low</td>
<td>Display, ICs, power components, electro-mechanicals</td>
</tr>
<tr>
<td>Smartphone</td>
<td>Low - no sourcing; only box assembly</td>
<td>Core chips, display, camera module, processors, memory modules and battery</td>
</tr>
<tr>
<td>Tablet</td>
<td>Low - negligible sourcing</td>
<td>Display, battery, memory, processor</td>
</tr>
<tr>
<td>LCD monitor</td>
<td>Low to medium: assembly activity</td>
<td>Display, ICs, power components</td>
</tr>
<tr>
<td>LED lighting</td>
<td>High - some components imported; local assembly</td>
<td>LED, driver, heat sink, lens, reflector, diffusers</td>
</tr>
</tbody>
</table>

Source: IESA-Frost & Sullivan

The below table illustrates the local capabilities and challenges for domestic production of the top four components (from BoM contribution perspective), which are used in high priority and high revenue generating electronic products:

<table>
<thead>
<tr>
<th>Semiconductor chips and devices</th>
<th>Printed circuit board (PCB)</th>
<th>LCD Displays</th>
<th>Transformers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power semiconductor, processor and memory</td>
<td>▶ Absence of semiconductor fabs currently; however, plans to set up two semiconductor fabs will help in making these core chips available locally</td>
<td>▶ India has a significant number of PCB manufacturers in the country</td>
<td>▶ Dominated by small scale indigenous manufacturers as it requires limited infrastructure and inexpensive labor</td>
</tr>
<tr>
<td>Local Capabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strengths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▶ Global hub for VLSI and embedded systems design</td>
<td>▶ Strengths in single, dual layers</td>
<td>▶ Substantial demand</td>
</tr>
<tr>
<td></td>
<td>▶ Strong third party design service providers</td>
<td>▶ Multiple layers PCB for less complex applications</td>
<td>▶ End-use product manufacturing through OEMs and EMS exists</td>
</tr>
<tr>
<td></td>
<td>▶ Huge domestic electronics consumption market</td>
<td>▶ Export market exists</td>
<td>▶ Local design and manufacturing technology skills exist</td>
</tr>
<tr>
<td>Challenges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▶ Very limited IP creation</td>
<td>▶ Low-cost Chinese imports</td>
<td>▶ High cost of local production</td>
</tr>
<tr>
<td></td>
<td>▶ Restricted number of Fabless companies</td>
<td>▶ Ecosystem does not prevail</td>
<td>▶ Reliance on imports for copper</td>
</tr>
<tr>
<td></td>
<td>▶ Inadequate ATMP facilities</td>
<td>▶ High cost of production of panels and technology-intensive nature</td>
<td></td>
</tr>
</tbody>
</table>

Source: IESA-Frost & Sullivan
Several global companies have established a large manufacturing base in India and are manufacturing through a mix of local production and assembly of parts. While currently most of the manufacturing happens in SKD form with limited value addition, high-end products are largely imported in the CBU form. Although volume of domestic manufacturing is limited, domestic manufacturers have capabilities around both sub-system assembly and final product assembly. With growing focus on increasing CKD assembly and setting up testing centers in the country, level of local value addition is expected to rise.

The creation of an integrated value chain is a must for having end-to-end capabilities to bring the real spirit of “Make in India” initiative. In order to capture the highest share of value addition, the focus needs to be on indigenous product conceptualization to manufacturing. While the demand is largely met by the MNCs, various innovations and new product designs are emerging from start-ups. Hence, there is need to boost the start-up and entrepreneurial sector in this market.

### Figure 6: Level of local value addition across various manufacturing methods

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importing CBUs</td>
<td>CKD assembly with testing facilities</td>
</tr>
<tr>
<td>Completely built units (CBUs) directly imported from China, Taiwan and Vietnam</td>
<td>CKD assembly with testing set ups for activities such as performance test, bug test for software, simulations, reliability, durability, environment tests, etc.</td>
</tr>
<tr>
<td>Basic last-mile assembly and packaging done in the country; populated PCB and other sub-assemblies imported</td>
<td>Activities such as surface mounting (to make the populated PCBs), painting, tooling, molding, etc., done in the country; base PCB and other components imported separately</td>
</tr>
</tbody>
</table>

Source: EY analysis
Key challenges faced by manufacturers in Indian electronics market

Critical components for a robust manufacturing ecosystem:

The most critical elements for the development and sustainability of a robust manufacturing ecosystem include:

- A healthy local demand with export potential
- Local availability of raw materials and components
- Infrastructure
- Favorable policy environment
- Availability of necessary skillset
- Local availability of components and raw materials is significant for achieving higher local value addition in any product manufacturing
- Proximity to component supply, leads to rapid turnaround time and reduced production cost

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The Indian manufacturing ecosystem for electronics and hardware industry is still at a nascent stage and faces various demand side as well as supply side challenges.

**Various challenges affecting electronics demand in India:**

- Limited scale of operations and local component demand due to the nascent product manufacturing in India.
- Component demand in India is muted due to very limited value addition as primarily last-mile assembly takes place.
- Norms such as safety regulations for automotive, medical and industrial sectors have driven the uptake of electronic content globally.
- However, manufacturers in India do not add high electronic content in the products due to limited industry-specific standards.
- The current market is dominated by secondary sales and primary sales are limited due to reduced disposable income in semi-urban and rural markets.
- The market penetration for most of the consumer appliances and electronics is currently lagging behind global average by up to 60% in certain categories and there lies huge untapped potential in rural markets (approximately 69% of India’s households).
- Although global markets are witnessing rapid consumer uptake as electronic content increases across verticals (e.g., automotive with applications around safety, connectivity, infotainment, consumer electronics, smart homes, etc.); India has a slower adoption as consumers remain highly sensitive to even a marginal increase in product prices.
Driven by the “Make in India” campaign and various structural policy changes announced by the Indian Government to enhance domestic manufacturing, global as well as Indian companies are looking to tap the opportunity. As a result, the Government of India has received investment proposals worth INR1.2 trillion (as of February 2016) under M-SIPS.

While initiatives across policies, infrastructure development, preferential market access and ease of doing business have resulted in growth of electronics manufacturing in India, the sector still faces challenges across global competition, nascent state of domestic capabilities and weak infrastructure.

Various challenges affecting electronics supply in India:

Nascent local manufacturing ecosystem/supply chain

<table>
<thead>
<tr>
<th>R&amp;D, IP ownership</th>
<th>Design services</th>
<th>Components fabrication &amp; sourcing</th>
<th>Manufacture/system assembly</th>
<th>Configuration and testing</th>
<th>Packaging, distribution and repair services</th>
<th>Marketing &amp; sales</th>
<th>Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>High maturity</td>
<td>Medium maturity</td>
<td>Low maturity</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Infrastructure concerns

**un-operational**
Greenfield EMCs

Port congestion

Limited manufacturing skill set

- **8.9 million** incremental HR requirement by 2022

High cost of capital

- **12%-14%** cost of borrowed capital

Taxation-related concerns

- ~**30%** base direct tax incidence

Difficulties in doing business

- **130th** among 189 countries
Infrastructure concerns:

The basic infrastructure for any industry comprises good roads, power, water, telecommunications, ports and logistics. In India, availability of these facilities is not up to the mark, even in established industrial estates. While the Government has notified Greenfield Electronic Manufacturing Clusters, they still remain un-operational due to infrastructure issues.

The lack of proper roads and sales infrastructure results in distribution challenges for companies catering to markets in small semi-urban cities, rural areas and remote villages.

Additionally, from both import and export perspective, there is port congestion due to unavailability of containers and long documentation process.

Limited manufacturing skillset:

Availability of relevant manpower is crucial to the development of any industry. Since the electronics manufacturing industry has high dependence on skilled manpower, especially for highly specialized activities such as electronics system design, IC design and manufacturing etc., the availability of talent with relevant skill sets assumes considerable importance.

Both SKD and CKD are labor intensive and require delicate handling and process adherence during the manufacturing process. With changing technology, the labor needs to be constantly trained. However, the current labor scenario in India poses certain challenges.

Nascent local manufacturing ecosystem/supply chain:

- **Assembly**: Majority of domestic manufacturing is high-level assembly, resulting in low value addition.
- **Component availability**: Limited availability of components and other raw material at low-cost and good quality leads to low localization. Furthermore, a long supply chain of components results in high inventory-carrying and other import costs.

Global competition from other destinations with existing capacities:

Due to nascent stage of electronics manufacturing in India, scale of operations is low, resulting in reduced cost competitiveness. Traditional electronics manufacturing destinations such as China, Taiwan and South Korea have built significant capacities across manufacturing value chain (SKD assembly, CKD assembly, Semiconductor Assembly & Testing Services). In addition, emerging (Malaysia, Vietnam) destinations have also built capacities. Although labor cost is low in India (compared to China where labor costs are increasing), labor productivity is lower than traditional destinations.

While some of the global component players are evaluating manufacturing in India, large-scale component manufacturing still remain a long-term goal. There are various inhibitors to the growth of component manufacturing in India such as the absence of ecosystem (e.g. fabs), considerable existing capacities in other manufacturing hubs in countries such as Taiwan, China and South Korea, high capital investment requirement and non-availability of raw material such as molding component, lead frames, etc.

The electronic product manufacturing has only recently picked up in the country and companies are setting up facilities to locally manufacture in CKD/ SKD form. Since there is an increase in CKD assembly, local demand for components will increase resulting in domestic manufacturing of components. However, domestic component manufacturing is estimated to take time to mature as scale of operation remains key.
Although India has a huge base of engineering students, their limited exposure to practical on-the-job training reduces their employability index. According to National Skill Development Corporation (NSDC), the incremental human resource requirement in the electronics and IT hardware sector will be 8.9 million by 2022. The lack of training centers that administer courses relevant to the job functions in electronics sector is also a concern. Moreover, the country has strict labor laws including restrictions on overtime work, employee headcount and work timings for women employees, which act as a barrier for growth in the sector.

**High cost of capital:**

The high cost of working capital and capex-related financing (receivables and payables) due to high interest rates is a major challenge faced by domestic manufacturers, since it increases the overall cost of finance. Additionally, there is an increase in the cost of manufacturing (conversion costs) due to inadequate availability/reliability of power, high cost of real estate, etc. The cost of borrowed capital is 12%-14% in India as compared with ~5%-7% global average.

Moreover, with the frequently changing energy efficiency norms, manufacturers need to make significant investments for products with a high rating.

**Taxation-related concerns:**

India’s taxation system is complex, especially where indirect taxes are concerned. While corporate income tax, excise and customs duty are set by the Central Government, states and municipalities also levy their own taxes. Currently, the base direct tax incidence in India stands at around 30%, whereas the corresponding tariff in other Asian countries is between 16% and 25%. Although, the Government has proposed the implementation of Goods and Services Tax (GST) for a state-of-the-art indirect tax system, there are concerns that the industry faces in terms of the clarity on the revenue-neutral rate, non-creditable tax on inter-state movement of goods, status of existing state incentives granted and transition from existing taxation system to GST regime.

**Difficulties in doing business:**

India’s position in the “Doing Business” annual reports published by the World Bank continues to be less than favorable. According to the latest rankings, India is ranked 130th among 189 countries.

Procedural and regulatory clearances are time consuming and complex. According to industry sources, it takes up to a year to set up a manufacturing plant in the country and a new production line could take up to six months to become fully operational.

Moreover, there are several legislations to be complied with, e.g., Factories Act, Industrial Employment Act, Contract Labor Act, Minimum Wages Act, Trade Unions Act, etc. Manufacturing units also have to comply with IPR laws and environmental laws.

Additionally, the refund processes and clearances to avail benefits under tax are highly cumbersome and time-consuming. Procedure to claim concessional duty on many raw materials/parts/components used in manufacturing of electronics products has been recently simplified in the Union Budget 2016-17 by introducing the concept of self-assessment. However, implementation of the same needs to be seen to reduce stock-outs or increased inventory-carrying costs for domestic manufacturers.


<table>
<thead>
<tr>
<th>Parameters</th>
<th>India</th>
<th>Taiwan, China</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of doing business</td>
<td>130</td>
<td>11</td>
<td>90</td>
</tr>
<tr>
<td>Starting a business</td>
<td>155</td>
<td>22</td>
<td>119</td>
</tr>
<tr>
<td>Getting electricity</td>
<td>70</td>
<td>2</td>
<td>108</td>
</tr>
<tr>
<td>Getting credit</td>
<td>42</td>
<td>59</td>
<td>28</td>
</tr>
<tr>
<td>Paying taxes</td>
<td>157</td>
<td>39</td>
<td>168</td>
</tr>
<tr>
<td>Dealing with construction permit</td>
<td>183</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: World Bank
Announcements in the Union Budget 2016–17 for electronics and hardware industry

<table>
<thead>
<tr>
<th>Key takeaways</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Budget 2016-17</strong></td>
</tr>
<tr>
<td>In the Budget 2015-16, the Government had introduced the differential duty structure for mobiles and tablets and the recent Budget has taken it to the next level by including components and parts for chargers, batteries, wired head sets and speakers to promote local value addition.</td>
</tr>
<tr>
<td>A number of duties have been rationalized to promote manufacturing of a wide range of products such as routers, modems, set up boxes, digital video recorder (DVR)/network video recorder (NVR), CCTV cameras and others.</td>
</tr>
<tr>
<td>The introduction of Special Additional Duty (SAD) on populated PCBs for a variety of equipment is expected to increase electronics manufacturing services activity in the country and drive up the demand for components.</td>
</tr>
<tr>
<td>To promote “Make in India”, the budget proposes to grant residency status to foreign investors, beyond the current practice of giving them a five-year business visa. This is expected to increase the emotional connect of foreign investors and make it easier for them to set up manufacturing units in India.</td>
</tr>
<tr>
<td>Basic Customs Duty (BCD) on some of the components, which are not covered under ITA-1 has been re-introduced.</td>
</tr>
</tbody>
</table>
With Budget 2016-17, the Government expresses its intent to make India a manufacturing hub by incentivizing local value addition.

| Corporate tax | ► In this budget, the Government started the process of phasing out corporate tax exemptions but restricted the marginal reduction in corporate tax rates only to small companies.  
► It lowered the corporate tax rate for companies with a turnover of INR50 million or less, to 29% plus surcharge and cess.  
► The Budget introduced a corporate tax rate of 25% for all new manufacturing companies incorporated from 1 April 2016, provided they do not claim any exemptions.  
► The exemptions that are proposed to be phased out include accelerated depreciation and benefits available to special economic zones. |
| Ease of doing business | ► The Companies Act is being proposed to be amended to improve the ease of doing business and also to make the business environment for start-ups more conducive.  
► It is proposed that registration of companies can be completed in a single day. |
| Start-up focus | ► The Budget allocated INR5 billion to promote women entrepreneurship, and entrepreneurship in the SC/ST category.  
► It allowed investment in start-ups for two years to be qualified as long-term capital gains to encourage angel/venture capital infusion.  
► The simplification of norms to form a company along with three-year tax holiday will spur entrepreneurs to establish start-ups.  
► SMEs will be allowed rebates and there will also be 100% deduction of profits to the start-ups. |
| Skill development | ► For skill training, the budget earmarked INR17 billion to set up 1,500 multi-skill training institutes across the country.  
► The Pradhan Mantri Kaushal Vikas Yojna was started to impart skill training to 10 million people over the next three years, from the current 2.4 million.  
► The Government plans to set up a Higher Education Financing Agency (HEFA) with an initial capital base of INR10 billion. |
| R&D and innovation | ► Royalty income from patents developed and filed in India will be taxed at only 10%. |
### Duty reforms

- Exemption from SAD is being withdrawn on populated printed circuit boards (PCBs) for manufacture of personal computers (laptop or desktop) including tablet computer. Such populated PCBs will now attract 4% SAD. All other goods for manufacture of personal computers (laptop or desktop) including tablet computer will continue to be exempt from SAD. A 2% increase in special additional duty (SAD) is proposed on printed PCBs used in making mobile phones and tablets.

- BCD and SAD are being exempted on machinery, electrical equipment, other instruments and their parts (except populated PCBs) for assembly, testing, marking and packaging (ATMP) of semiconductor chips.

- BCD and SAD are being exempted on machinery, electrical equipment, other instruments and their parts (except populated PCBs) for fabrication of semiconductor wafer and LCD fabrication.

- Withdrawal of BCD and CVD exemptions on imports of chargers, adapters, battery, wired headsets and speakers used in mobile phones. With a BCD of 10%, CVD of 12.5% and SAD of 4%, the total duty cost comes to 29.44%, making the duty differential of 27% as the products made locally attracted excise duty of only 2%. On the other hand, input, parts and components, subparts for manufacturing these and other electronics sub-systems have been reduced to 0%.

- Removal of customs duty on magnetron of capacity 1 KW to 1.5 KW from 10% earlier to nil.

- Basic Customs Duty exemption on LCD, LED or OLED panels is being restricted to imports for manufacture of TVs, subjected to actual user condition. For propelling local manufacturing of LCD and LED TV panels, it has also been suggested to remove the “actual user” condition on import of back light unit module, its parts and open cell.

- BCD exemption is being withdrawn on preform of silica for use in manufacture of telecommunication grade optical fiber/cables. It will now attract 10% BCD.

- BCD on specified raw material and specific capital goods used for manufacturing of various fuses such as micro fuses, sub-miniature fuses, resettable fuses has been reduced.

- BCD and CVD are being exempted on parts, components and accessories for use in the manufacture of routers, broadband modems, set-top boxes for gaining access to internet, set top boxes for TV, DVR/NVR, CCTV camera/IP camera, lithium ion battery (other than those for mobile handsets). Further, BCD, CVD and SAD are also being exempted on sub-parts for use in manufacture of parts, components and accessories of these Consumer Premise Equipment.

- Clarification provided on BCD applicability on finished products such as telecom equipment etc., to enhance domestic manufacturing and reduce import dependence. BCD of 10% on soft switches and VoIP equipment namely VoIP phones, media gateways, gateway controllers and session border controllers, optical transport equipment, IP radios, carrier ethernet switch and long-term evolution (LTE) products among others.
While the Government has been working hard to promote India as a global manufacturing base, the country still needs the fundamental reforms in labor, infrastructure and investment regulations to fully capitalize on its low-cost advantage. Below are a number of suggestions from the industry that can lead to an improvement in the level of local manufacturing.

### Key recommendations to combat the local manufacturing challenges are listed below:

<table>
<thead>
<tr>
<th>Area</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
| Incentivize exports   | - Status of “deemed export” should be granted to products/components manufactured and sold in India:  
  - Benefits of drawback, advance authorization and refund of output Excise duty paid by manufacturers (by availing credit of input taxes paid on components imported and made in the country and paid for in cash for value addition)  
  - Domestically manufactured electronic products (DMEP) for the purpose of conferring the status of deemed exports on them to be identified by using domestic value addition norms, where the threshold progressively increases over the years  
  - In the Foreign Trade Policy 2015-20, the Government has introduced Merchandise Exports from India Scheme (MEIS), which provides exports benefits on the basis of country groupings. The industry expects standard incentives to be provided for exports for the product categories/components irrespective of the country of export.  
  - The Government has declared an incentive of 2% on majority of electronic items including computers under this scheme. The industry expects the Government to increase the export incentive to atleast 5% – same as that provided under the previous FTP.  
  - The Government may consider providing tax breaks for domestically manufactured products and merging the benefits in DTA and SEZ areas for better economies of scale. |
| Component ecosystem | The Government needs to incentivize and support local component manufacturing and domestic value addition.  
|► Expand MSIPS to incentivize and support local component manufacturing and domestic value addition  
|► Provide priority sector treatment to component manufacturing and provide privileges and sops such as duty benefits and tax exemptions (e.g., tax holiday for 8-10 years for domestic component manufacturing)  
|► The Government needs to reform inverted duty structure or reduce customs duty on critical components for a few years until local component manufacturing is developed.  
|► Set up duty-free component trading and warehousing zone (component FTWZ) to facilitate ease of raw material supply.  
|► The Government may allow duty-free import of raw materials and components for the initial three to five years when companies are setting up in the country so that they can start with assembly plants. However, once their plants and machinery are equipped and market demand is generated, then imports should be levied duties. |
| Steps to improve running of the business | Interest subvention of 2%-5% of the interest rate should be provided on interest paid on working capital. The extent of subvention provided should increase with growth in domestic value addition. This is likely to help offset high finance cost.  
|► Borrowing interest rates may be reduced and preferential financial loans may be provided in order to reduce high financing costs so that small manufacturers can thrive.  
|► Provision of export freight subsidy for non-port locations  
|► Skill enhancement: There has to be a focus on improving infrastructure and faculty profile in the skill training institutes (such as ITIs) so that practical training can be imparted to students passing out of these institutes that will improve their employability in the industry. The government should consider creating a fund to providing reimbursements to companies for providing skill-gap training to their employees. |
| Ease of doing business | The industry expects improvement in procedural, regulatory and custom approvals, refunds and clearances:  
|► For tax refund processes, there should be nodal offices for one-stop location for all refunds and clearances along with faster recovery system  
|► Simplification of duty drawback scheme and rapid credit transfer  
|► Simplification and faster process of BIS registration and certificate issuance  
|► Relaxation of labor laws: The Government should consider relaxing restrictions on overtime work and allow women employees to work in night shift in the manufacturing sector (in line with the provision in Services sector), without compromising on safety and health aspects. |
The commercial viability of any manufacturing unit is dependent on the local consumer demand. The Government also needs to support the local demand base so that companies look to increase manufacturing, as currently, they have adequate facilities to service demand for the next five to six years. Reduction of interest rates and taxes to increase disposable income in the hands of consumers is one such option, which can lead to an uptake of discretionary spend on electronic goods. In addition, improving penetration of consumer financing options and organized retail across semi-urban and rural markets can also drive demand.

In addition to the above recommendations, the industry strongly demands some incentives for manufacturers procuring local components, since it brings additional cost to finished goods and makes them less competitive in PMA tenders. The industry also demands parity of established companies with new companies looking to set up manufacturing plants in the country by providing a level playing field in terms of land, raw material, labor and other tax and duty benefits. Such initiatives will ensure that the current manufacturers continue to remain competitive in the market and get the same incentives as new players.

### Taxation
- The Government should provide further details on the revenue-neutral rate, non-creditable tax on inter-state movement of goods and transition from existing taxation system to GST regime.
  - There needs to be CST exemption for any inter-state purchase of components or raw material; else the benefit of having a national rate of GST will not be met.
- It should consider providing VAT and CST exemptions for initial years to incentivize new players to set up operations.
- Deferred payment of excise duty: The Government should allow deferred payment of excise duty for some years to manufacturers (threshold value addition).
- In the Union Budget 2015-16, excise duty for mobiles and tablets was reduced from 12.5% to 2% to promote domestic manufacturing. The industry expects that all ITA products (desktops, laptops, servers, hard disks, etc.) be included under this tax rationalization scheme.

### Infrastructure Improvement
- The Government may set up buildings and facilities in specially constructed zones, which can be taken on rent by SMBs. This will support their cost structure as the current high cost of land and construction is a limiting factor for them.
- The Government may consider creating incubators, parks/hubs focused on theme/industry (e.g., IoT, health care)

EY analysis, primary research
Conclusion

In the last few years, the Government has taken steps toward creating business-friendly and more governance-oriented financial and economic environment in India. It has also taken measures to attract foreign investment. The flagship schemes, which have already gained popularity, include “Make in India”. This scheme promotes manufacturing in India to boost job creation and skill enhancement, facilitate investment, foster innovation, protect intellectual property, and build best-in-class manufacturing infrastructure.

The electronics and hardware industry has taken these initiatives in a positive way and various Indian as well as global manufacturers have announced their expansion plans in the country. Nonetheless, they look up to the Government to play a key role in incentivizing companies to set up facilities for designing, engineering, testing and R&D of innovative products to bring the real “Made in India” product and make a mark in the global map as the favorable manufacturing destination.
Glossary

TM (Total Market) – Total consumption of electronics in India purchased locally, imported as part of CKD or SKD, or imported as a complete product by any source in any currency except for components*

*Components TM does not include components imported as a complete product

List of abbreviations and their full-forms:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoM</td>
<td>Bill of Materials</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compounded Annual Growth Rate</td>
</tr>
<tr>
<td>CBU</td>
<td>Completely Built Unit</td>
</tr>
<tr>
<td>CKD</td>
<td>Complete Knock Down</td>
</tr>
<tr>
<td>CST</td>
<td>Central Sales Tax</td>
</tr>
<tr>
<td>CVD</td>
<td>Countervailing Duties</td>
</tr>
<tr>
<td>EDF</td>
<td>Electronics Development Fund</td>
</tr>
<tr>
<td>EMC</td>
<td>Electronic Manufacturing Clusters</td>
</tr>
<tr>
<td>EMS</td>
<td>Electronic Manufacturing Services</td>
</tr>
<tr>
<td>ESDM</td>
<td>Electronic System Design and Manufacturing</td>
</tr>
<tr>
<td>FPD</td>
<td>Flat Panel Display</td>
</tr>
<tr>
<td>GoI</td>
<td>Government of India</td>
</tr>
<tr>
<td>GST</td>
<td>Goods and Services Tax</td>
</tr>
<tr>
<td>ITA</td>
<td>Information Technology Agreement</td>
</tr>
<tr>
<td>LCD</td>
<td>Liquid Crystal Display</td>
</tr>
<tr>
<td>LED</td>
<td>Light-emitting Diode</td>
</tr>
<tr>
<td>MEIS</td>
<td>Merchandise Exports from India scheme</td>
</tr>
<tr>
<td>MSIPS</td>
<td>Modified Special Incentive Package Scheme</td>
</tr>
<tr>
<td>OEM</td>
<td>Original Equipment Manufacturer</td>
</tr>
<tr>
<td>OLED</td>
<td>Organic Light-emitting Diode</td>
</tr>
<tr>
<td>PCB</td>
<td>Printed Circuit Board</td>
</tr>
<tr>
<td>SKD</td>
<td>Semi Knock Down</td>
</tr>
<tr>
<td>SMB</td>
<td>Small and medium business</td>
</tr>
</tbody>
</table>
Evolution of Value Creator

ASSOCHAM initiated its endeavour of value creation for Indian industry in 1920. Having in its fold more than 400 Chambers and Trade Associations, and serving more than 4,50,000 members from all over India. It has witnessed upswings as well as upheavals of Indian Economy, and contributed significantly by playing a catalytic role in shaping up the Trade, Commerce and Industrial environment of the country.

Today, ASSOCHAM has emerged as the fountainhead of Knowledge for Indian industry, which is all set to redefine the dynamics of growth and development in the technology driven cyber age of ‘Knowledge Based Economy’.

ASSOCHAM is seen as a forceful, proactive, forward looking institution equipping itself to meet the aspirations of corporate India in the new world of business. ASSOCHAM is working towards creating a conducive environment of India business to compete globally.

ASSOCHAM derives its strength from its Promoter Chambers and other Industry/Regional Chambers/Associations spread all over the country.

VISION

Empower Indian enterprise by inculcating knowledge that will be the catalyst of growth in the barrierless technology driven global market and help them upscale, align and emerge as formidable player in respective business segments.

MISSION

As a representative organ of Corporate India, ASSOCHAM articulates the genuine, legitimate needs and interests of its members. Its mission is to impact the policy and legislative environment so as to foster balanced economic, industrial and social development. We believe education, IT, BT, Health, Corporate Social responsibility and environment to be the critical success factors.

MEMBERS – OUR STRENGTH

ASSOCHAM represents the interests of more than 4,50,000 direct and indirect members across the country. Through its heterogeneous membership, ASSOCHAM combines the entrepreneurial spirit and business acumen of owners with management skills and expertise of professionals to set itself apart as a Chamber with a difference.

Currently, ASSOCHAM has more than 100 National Councils covering the entire gamut of economic activities in India. It has been especially acknowledged as a significant voice of Indian industry in the field of Corporate Social Responsibility, Environment & Safety, HR & Labour Affairs, Corporate Governance, Information Technology, Biotechnology, Telecom, Banking & Finance, Company Law, Corporate Finance, Economic and International Affairs, Mergers & Acquisitions, Tourism, Civil Aviation, Infrastructure, Energy & Power, Education, Legal Reforms, Real Estate and Rural Development, Competency Building & Skill Development to mention a few.
INSIGHT INTO ‘NEW BUSINESS MODELS’

ASSOCHAM has been a significant contributory factor in the emergence of new-age Indian Corporates, characterized by a new mindset and global ambition for dominating the international business. The Chamber has addressed itself to the key areas like India as Investment Destination, Achieving International Competitiveness, Promoting International Trade, Corporate Strategies for Enhancing Stakeholders Value, Government Policies in sustaining India's Development, Infrastructure Development for enhancing India's Competitiveness, Building Indian MNCs, Role of Financial Sector the Catalyst for India's Transformation.

ASSOCHAM derives its strengths from the following Promoter Chambers: Bombay Chamber of Commerce & Industry, Mumbai; Cochin Chambers of Commerce & Industry, Cochin; Indian Merchant's Chamber, Mumbai; The Madras Chamber of Commerce and Industry, Chennai; PHD Chamber of Commerce and Industry, New Delhi and has over 4 Lakh Direct / Indirect members.

Together, we can make a significant difference to the burden that our nation carries and bring in a bright, new tomorrow for our nation.

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Turning the “Make in India” dream into a reality for the electronics and hardware industry
References


vi) “Indian ESDM market · analysis of opportunity and growth plan,” IESA · Frost & Sullivan report, January 2014


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