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Dated: 27-Nov 2017

Dear Sir,

Sub: Cisco Response to TRAI Consultation Paper on Promoting Local Telecom Equipment Manufacturing

At the outset, we would like to thank TRAI for this important step of a comprehensive consultation on various aspects of Telecom Manufacturing in the country.

We at Cisco welcome this opportunity and are providing inputs based on our experience while establishing and starting manufacturing operations in India over the last one year. We have focused on issues that will make high-end telecom manufacturing scalable, financially viable and competitive with the rest of the world.

Our vision is that telecom manufacturing grows to become a much larger contributor to India's economy, creates jobs and India becomes an important hub of global telecom equipment supply chain.

Please find enclosed our detailed submission on TRAI Questions in the consultation paper.

Look forward to your kind consideration of our inputs and opportunity to discuss further.

Thank You.

Best Regards,

Harish Krishnan

CISCO Response:

TRAI Consultation Paper on Promoting Local Telecom Equipment Manufacturing 18-Sep 2017

It is important to understand the telecom equipment landscape before we examine the various manufacturing issues in detail. We want to highlight that Telecom products market is comprised of several segments – from high-volume handsets and peripherals to low-volume networking/ datacom products. Each product segment has different drivers for a manufacturing location strategy. The issues and challenges for each of these segments need to be addressed to evolve a holistic telecom manufacturing policy roadmap.

For the purposes of this consultation and keeping in mind Cisco's area of expertise, we have limited our response to the high-complexity, low-volume active enterprise telecom equipment such as routers, switches.

We also want to highlight the importance of integrating India into the global supply chain eco-system to gain larger global market share with sufficient scale to make domestic telecom manufacturing a job-creating engine of Indian economy.

The need for large market and scale directly translates into the necessity for increased focus on an **India for the World strategy** for telecom manufacturing instead of just relying only on an India for India strategy.

Consequently, keeping an India for the World strategy at the front and centre of pragmatic policy making - a judicious combination of incentives and market access measures need to be provided to both domestic firms and large MNC manufacturers to thrive and create a self-sustainable eco-system that can grow exponentially in India. The key constituents in the form of talent and competitive labour are already present in India, all that is needed is the right policy mix.

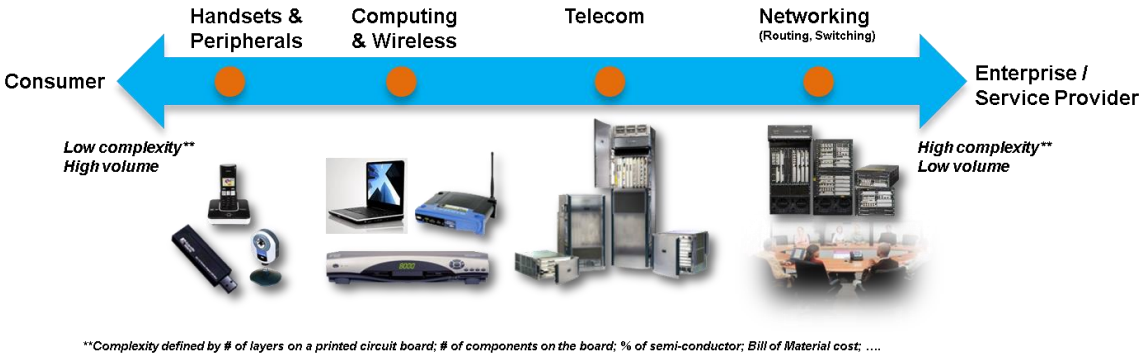
Question 1. Large number of initiatives have been taken by the government to promote electronics

manufacturing, while these initiatives have succeeded in attracting significant investments in other sectors like LED, consumer electronics, mobile handsets, automotive electronics etc., they have failed to attract investments in telecom equipment sector e.g. PMA has worked very effectively in LED sector but did not work so effectively in telecom. Please enumerate the reasons with justifications for the poor performance of local telecom manufacturing industry inspite of numerous initiatives by the government/industry.

Question 2. What policy measures are required to be instituted to boost Innovation and productivity of local Telecom manufacturing in our country? Please provide details in terms of Short-Term, Medium-Term and Long-Term objectives.

We intend to address both these questions together here.

Electronics industry can be decomposed into following spectrum addressing specific industry verticals:



Generally speaking, **consumer products are easier to localize**. Given the high volume and low complexity of such consumer products, one can find more examples of consumer electronics being localized. The manufacturing footprint strategy for consumer products is hinged upon:

- Lowest operating cost – labor, freight, facilities, electricity, etc.
- Proximity to customer base

On the other end of the spectrum are products procured by Enterprise & Service Providers. The **manufacturing for Enterprise / Service Provider products can be characterized as high complexity and low volume.** The manufacturing footprint strategy for Enterprise / Service Provider products is hinged upon:

- Operating cost in balance with operating capabilities – industry maturity; technical talent; new product introduction capabilities; etc.
- Proximity to key suppliers & key customers – esp. for smooth product launches and transitions

Due to high complexity in enterprise telecom manufacturing, it is imperative for companies to establish manufacturing at global locations that can cater to as large a market as possible to achieve economies of scale by maximising volumes. This will also help create a pull-effect for the local component eco-system.

The need for large market and scale directly translates into the necessity for increased focus on an **India for the World strategy** for telecom manufacturing instead of relying only on an India for India strategy. To put the rationale for India for the World strategy in perspective, it is worth noting that India's Domestic Demand for electronic goods was approximately $64 billion in 2014-15. In comparison, the world market in 2014 was $2 trillion.

Following is a table high-lighting the impediments to production scale-up and growth of manufacturing, specially for exports:

	What's stopping exports from India (India vis-à-vis global nodes)	**Characterization**
1	Landed cost parity	~5% landed cost disadvantage • 3% in-bound freight • Conversion cost: At par, with global nodes 2% outbound freight disadvantage
2	PMA implementation	i) Unachievable value-add thresholds for Active Telecom Products - Need to align value-add norms to realistic targets ii) Applies to all products/ models – no consideration for portfolio approach
3	Component ecosystem	Barring few low-end commodities (sheet metals, plastics, wires, …) ecosystem is almost non-existent – Passives Electro-Mechanical Inter-Connectors can be the focus
4	Ease of Doing Business	• Logistics / infra • Tax certainty ….

Elaborating on the Challenges for growth of manufacturing and exports -

1. **Landed cost-parity:** There is about **5% cost differential** in manufacturing in India for Exports.

   There is a cost disparity of exports of India vis-à-vis existing global nodes (e.g. Malaysia, China).

	Landed cost element	**India vs. China / Malaysia / Thailand** (May 2016)
a)	Bill of Material (BoM)	⟷ India comparable • Global pricing list Global pricing for components

	Landed cost element	**India vs. China / Malaysia / Thailand** (May 2016)
b)	Inbound freight for shipping components into India factory	↓ 3% unfavorable (Sized as 2% of Bill of Material cost) Compared to global/regional benchmarks, India is farther away from component factories and the shipping rates are more expensive due to lower volume flowing into India specific transportation lanes vs. the ones going to "mega factories" in Malaysia, Thailand, Mexico, ….
c)	Transformation cost / Conversion (raw material into finished goods)	↔ India comparable India factory lack scale compared to China factories; Advantageous labor rates in India are offset by fully burdened cost of facilities & electricity
d)	Outbound freight for shipping out finished goods	↓ 2% unfavorable (Sized as 2% of Bill of Material cost) Due to low export volumes compared to global benchmarks, the logistics rates are slightly higher. Higher exports volume is needed to offset.

This cost disparity needs to be addressed for India for the World strategy to be successful.

2. PMA Implementation

i) Unachievable Value Addition Norms for active Enterprise Telecom Products:

A. Challenges

✓ The PMA policy, in general, prescribes the following conditions for the government departments for procurement of electronic goods:

- Specified percentage of procurements from domestically manufactured goods
- 25% to 50%+ of the BOM is made of domestically manufactured goods
- Automatic increase of 5% on domestic value addition from year 2 onwards
- Requirement of complete local manufacturing for certain products from year 3 onwards

However, given the industry infancy, the component supply base is practically non-existent in India. Illustrating the BOM table for a set-top box for reference –

An ILLUSTRATIVE Set To Box Bill of Material (BoM)

	Commodity category	Component	Suppliers (incl. global leaders)	Present in India – Y/N	Indicative Sizing
1	Plastics & mechanicals	•Mechanical fabrication (base cover, sheet metal, …) •Plastic fabrication •Cables / wires	•Flextronics, Supreme •Rosti, G-Plast, Nypro •Amphenol, Molex, FCI, Volex	•Y •Y •Y •Y	15% of costed BoM
2	Electro-mechanical (elect.+ specialty)	•Caps & Resistors (thru-hole) •Heat sinks •Batteries & power supplies •Connectors •Printed Circuit Brd. (2-4 lyrs)	•Vishay •Auto ancillary (e.g. Jindal extruders) •Laird Tech, Murata •Tyco, Molex, FCI, Amphenol •AT&S, Epitome, Ascent	•Y •Y •Y •Y •Y	15% of costed BoM
		•Caps & resistors (SMT) •Inductors & magnetics	•Belfuse, Delta, Lineage, Panasonic •Delta, Jan Mao	•N •N	5 % of costed BoM
3	Semi-conductor (aka Silicon)	•Communications module •Diodes •Linear Voltage Regulator •Logic, Memory •Chipsets; Logic devices •Timing devices •Transistor	•Broadcom, Marvell, Maxim •Diodes Inc, Fairchild, ST Micro, … •Maxim, TI, National Semi, Linear Tec. •NXP, Hynix, Samsung, Fairchild, TI •Freescale, Fairchild, Broadcom, PMC •Maxim, Pericom, Kyocera, Analog •Fairchild, Central Semiconductor	N	80% of costed BoM

- ✓ Apart from the plastics, electro-mechanicals and inter-connectors (PEMIC) that contribute only about 15% to Bill of Materials (BoM) for some of the low value products, there is no presence of specialty electronics and semi-conductor products which contribute about 80% to BoM. The current system of computing value addition for PMA or every product may not be feasible as the prescribed levels of value addition may not be achievable given the depth and breadth of manufacturing in India.

- ✓ The current PMA qualification threshold will constrain the major electronics manufacturers from qualifying for the PMA. Existing global supply agreements with significant existing investments in supply-chain and yet to develop local electronics supply & manufacturing ecosystem, make the current PMA value addition norms un-achievable for any manufacturer seeking to make serious investment.

ii) Lack of portfolio approach in PMA implementation

Challenges

- ✓ The PMA policy prescribes domestic manufacturing criteria at a 'product' level. Currently manufacturing all the products in India may not be feasible or possible from a technology, infrastructure and commercial parameter for any investor or manufacturer willing to Make in India.

- ✓ Global supply chain implies that no site manufactures the entire portfolio of products and only a set of products are manufactured at each facility based on defined parameters

- ✓ Evolution of the supply-chain & manufacturing eco-system in mature countries allude to the fact that products with high-end technology, complex manufacturing processes and low volume would continue to be imported until the required supply and manufacturing ecosystem is developed and fully evolved to support local manufacture of such hi-end products and demand growth makes manufacturing viable.

Suggestions for growth of active Enterprise Telecom Product Manufacturing

The suggestions are further elaborated below:

1. Removal of cost-disparity for exports

There is a need to offset the cost-disparity in exports from India. The specific interventions need to be deliberated with the government-industry consultation and implemented in the immediate term.

2. Link PMA to Exports and rationalize local value-addition norms

- ✓ Revising the PMA policy by a) incorporating the substantial transformation rules for value-addition as per global norms and b) providing deemed domestic manufacturing credits i.e. allowing $ for $ to qualify for PMA in lieu of exports.

a) Incorporating substantial transformation rules

Current PMA value-add norms are only based on Bill-of-Material (BOM)%.
This needs to revised along the globally accepted norms of substantial transformation.

The Substantial transformation norms for the purpose of this policy are following globally accepted stages and can be physically verified on inspection:

(i) Stage 1: Final Assembly & Test (FA&T);
(ii) Stage 2: Printed Circuit Board Assembly (PCBA); and
(iii) Stage 3: Local sourcing of components (based on cost, delivery, quality parity).

b) Providing Deemed Domestic Manufacturing Credits

An export-oriented strategy would focus on achieving large volume for certain products. The larger volumes from the factory based on exports, generate jobs & create ecosystem. However, manufacturing the entire portfolio of an OEM's products would never make economic sense based on India volumes alone.

The Government needs to incentivise such Manufacturers exporting from India.
We suggest that DoT adds to the PMA policy a framework for allowing hi-tech companies to sell under PMA based on the total portfolio volume being manufactured out of the India factory – both domestic & exports.

The Original Equipment Manufacturers ("OEMS") should be granted a deemed domestic manufacturing credit for 100% of their manufacturing volume – independent of product, export / domestic consumption. The credit can be used for supply of imported portfolio products against PMA contracts.

Question 3. Are the existing patent laws in India sufficient to address the issues of local manufacturers? If No, then suggest the measures to be adopted and amendments that need to be incorporated for supporting the local telecom manufacturing industry.

Patent laws and promotion of manufacturing are separate issues with different drivers and should not be conflated.

It should also be noted that lack of IP creation has not been a limiting factor in countries becoming a manufacturing hub. Ex. – Vietnam, Thailand, etc.

Several large global organisations have made India the home for their R&D and design which can spur the local eco-system and local companies. This investment in local talent, capability build-up for R&D and design should be promoted further

Moreover, in a global company, a product IP is comprised of several components and developed through collaboration of multiple teams in multiple geographies. It may thus be impractical for a MNC to have IP resident in India. <u>But it is important to encourage MNCs to spur investment in R&D capability in India by giving incentives such as PMA credits based on employees/ turnover of their R&D centres.</u>

Question 4. Is the existing mechanism of Standardisation, Certification and Testing of Telecom Equipment adequate to support the local telecom manufacturing? If not, then please list out the short-comings and suggest a framework for Standardisation, Certification and Testing of Telecom Equipment.

Again quoting from the Niti Aayog's Manufacturing paper (May2016) - "Before we rush to forcing our standards in the domestic market, we need to create a business-friendly ecosystem and grow larger. Premature adoption of standards can scuttle the growth of the industry prematurely. One way to see this is to ask whether the adoption and enforcement of a local standard in mobile telephony in the early 2000s would have permitted the phenomenal expansion of mobile phones that we saw in the last decade."

It is critical that for an **India for the World** strategy to succeed, Indian standards, certification and testing mechanism are harmonised with global standards and best practices. Otherwise, standard-setting in siloes will hamper the growth of Indian Telecom Manufacturing.

Furthermore, it is important that government incentivises setting up a good testing lab infrastructure in the country which are capable of certifying to international standards and practices. STQC-International Common Criteria Certification Scheme is one such example where India can grant international Common Criteria certificates on security aspects.

Sometimes, security is cited as the primary reason for need of local testing and certification. It is worth noting that a global MNC like Cisco is responsible for end-to-end supply chain security independent of the location of manufacturing of product/ components.

For reference, in the below typical model of a Cisco supply chain, our rigorous approach assures security by making use of three foundational elements:

- Physical Security Practices – physical aspects of security such as camera monitoring, security checkpoints, locking devices, alarms, electronic access control etc.;

- Logical Security Processes – systematic, repeatable and auditable security processes designed to target areas of security risk and close them. E.g. ensuring that data is transmission via dedicated lines and/or uses encryption, establishing and validating adherence to scrap handling processes, mandating certifications of production and destruction of key counterfeit protection labels etc.; and

- Security Technology – applying technological innovation to enhance counterfeit detection, terminate functionality or identify a non-authorized component or user. Smart chips, data extracting test beds, and proprietary holographic security labels are a few of the technological innovations that we use in our supply chain security.

Question 5. Please suggest a dispute resolution mechanism for determination of royalty distribution on FRAND (Fair Reasonable and Non Discriminatory) basis.

Disputes regarding SEP valuation between licensors and licensees are frequent, and one of the reasons is the absence of an agreed methodology for valuing SEPs (determining what royalty rates are consistent with the commitment patentees voluntarily assume to grant FRAND licenses). With rare exceptions (the IEEE-SA patent policy text revision in 2015), industry efforts to devise such a methodology have been hampered by the desires of companies with business models based on patent licensing to maximize the value of their SEP portfolios.

We also agree that rules that specify that SEP licensing happen at the level of the smallest saleable patent practicing unit (referred to in the TRAI paper as SSPPC) would be helpful in vindicating the principle that a FRAND commitment means that any implementer of a standard must be licensed to the patented inventions that it implements. Better information about what patents are essential to standards would be helpful, especially in light of widespread over-declaration of patents to ETSI / 3GPP in particular, many of which turn out, when tested in litigation, to be non-essential. The use of NDAs by licensors to cloak licensing practices that are discriminatory is a concern, considering the Non-Discriminatory nature of FRAND.

As to a dispute resolution mechanism, there is no substitute for a well-functioning court system that is empowered to interpret the FRAND commitment and to take evidence regarding the value of particular patents. While the parties should be free to agree to arbitration of SEP disputes, that choice should not be forced upon them.

Q.6 Are the current fiscal incentives sufficient to promote the local telecom manufacturing? Please suggest the fiscal incentives required to be instituted along with the suitable mechanism for implementation of these incentives?

1) There is an urgent need to correct the Cost disparity of about 5% for exports for an India for the World manufacturing strategy to succeed through relevant interventions.

   Reiterating the reasons for the disparity below –

	Landed cost element	**India vs. China / Malaysia / Thailand** (May 2016)
a)	Bill of Material (BoM)	⟷ India comparable • Global pricing list Global pricing for components
b)	Inbound freight for shipping components into India factory	↓ 3% unfavorable (Sized as 3% of Bill of Material cost) Compared to global/regional benchmarks, India is farther away from component factories and the shipping rates are more expensive due to lower volume flowing into India specific transportation lanes vs. the ones going to "mega factories" in Malaysia, Thailand, Mexico, ….
c)	Transformation cost / Conversion (raw material into finished goods)	⟷ India comparable India factory lack scale compared to China factories; Advantageous labor rates in India are offset by fully burdened cost of facilities & electricity
d)	Outbound freight for shipping out finished goods	↓ 2% unfavorable (Sized as 2% of Bill of Material cost) Due to low export volumes compared to global benchmarks, the logistics rates are slightly higher. Higher exports volume is needed to offset.

   This cost-disparity needs to be removed for an export-strategy to succeed.

2) Another fiscal incentive that will make large scale manufacturing in India viable is the reduction in import duties on components to zero.

Q.7 Are there any issues under ITA which need to be addressed for making the local Telecom Manufacturing more competitive and robust

The ITA not only removes tariffs on a vast array of technology products – it also promotes innovation, accelerates productivity, creates new jobs, lowers consumer prices and provides unfettered access to best-of-the-breed technology.

Hence, India needs to remain committed to ITA principles while undertaking measures to promote local telecom manufacturing.

Q.8 Should an export oriented/promotion approach be adopted in the telecom equipment manufacturing sector? If yes, Please suggest the steps to be taken to create suitable environment to attract foreign investment players for setting up establishments which in turn can result in technology dissemination, innovation, generation of jobs, skilled labour force, etc.?

Yes, an export-oriented strategy is essential for the high-end telecom manufacturing sector to achieve the necessary volumes to be globally competitive, thereby creating larger number of jobs, building capabilities within the country and creating pull for local component suppliers to establish and grow.

There is a Unique value-addition of advanced global telecom manufacturing coming into the country. The co-location of R&D and high-tech manufacturing leads to a fly-wheel effect, resulting in faster product development and accelerated time-to-market. This builds the eco-system and achieves self-sustainable continuous growth.

Niti Aayog's Manufacturing paper also points out that ".. import substitution is unlikely to lead to rapid enough expansion of our electronic industry. If we want rapid transformation, we must adopt an export-oriented strategy and work towards creating an ecosystem in which the industry can be globally competitive without import protection."

The rationale for the importance of an **India for the World strategy** at the front and centre of policy-making have been detailed in Answers to Question 1 and 2 above which is reiterated below:

> Due to high complexity in enterprise telecom manufacturing, it is imperative for companies to establish manufacturing at global locations that can cater to as large a market as possible to achieve economies of scale by maximising volumes.
>
> The need for large market and scale directly translates into the necessity for increased focus on an **India for the World strategy** for telecom manufacturing instead of relying only on an India for India strategy. To put the rationale for India for the World strategy in perspective, it is worth noting that India's Domestic Demand for electronic goods was approximately $64 billion in 2014-15. In comparison, the world market in 2014 was $2 trillion.

Consequently, keeping an India for the World strategy at the front and centre of pragmatic policy making – enabling cost parity and market-access measures (such as PMA-G) need to be used in a judicious combination to provide the required stimulus for both domestic and foreign-owned manufacturers to exponentially increase production in the country.

The increased production volumes through exports and simultaneous capability build-up will have added benefit of opportunities for component manufacturers and suppliers to local factories. This in-turn will create a fly-wheel effect for sustaining and growing the entire manufacturing eco-system.

Q.9 Does the existing PMA policy require any change? If yes, then please provide complete details with justifications.

We present a high-level overview of the current challenges in the PMA faced by the ESDM sector and potential solutions/enablers:

I. Unachievable High Value Addition Norms:

B. Challenges

✓ The PMA policy, in general, prescribes the following conditions for the government departments for procurement of electronic goods:

- Specified percentage of procurements from domestically manufactured goods
- 25% to 50%+ of the BOM is made of domestically manufactured goods
- Automatic increase of 5% on domestic value addition from year 2 onwards
- Requirement of complete local manufacturing for certain products from year 3 onwards

However, given the industry infancy, the component supply base is practically non-existent in India. See below illustrative BOM table for a set-top box for reference -

An ILLUSTRATIVE Set To Box Bill of Material (BoM)

	Commodity category	Component	Suppliers (incl. global leaders)	Present in India – Y/N	Indicative Sizing
1	Plastics & mechanicals	•Mechanical fabrication (base cover, sheet metal, …) •Plastic fabrication •Cables / wires	•Flextronics, Supreme •Rosti, G-Plast, Nypro •Amphenol, Molex, FCI, Volex	•Y •Y •Y •Y	15% of costed BoM
2	Electro-mechanical (elect.+ specialty)	•Caps & Resistors (thru-hole) •Heat sinks •Batteries & power supplies •Connectors •Printed Circuit Brd. (2-4 lyrs)	•Vishay •Auto ancillary (e.g. Jindal extruders) •Laird Tech, Murata •Tyco, Molex, FCI, Amphenol •AT&S, Epitome, Ascent	•Y •Y •Y •Y •Y	15% of costed BoM
		•Caps & resistors (SMT) •Inductors & magnetics	•Belfuse, Delta, Lineage, Panasonic •Delta, Jan Mao	•N •N	5 % of costed BoM
3	Semi-conductor (aka Silicon)	•Communications module •Diodes •Linear Voltage Regulator •Logic, Memory •Chipsets; Logic devices •Timing devices •Transistor	•Broadcom, Marvell, Maxim •Diodes Inc, Fairchild, ST Micro, … •Maxim, TI, National Semi, Linear Tec. •NXP, Hynix, Samsung, Fairchild, TI •Freescale, Fairchild, Broadcom, PMC •Maxim, Pericom, Kyocera, Analog •Fairchild, Central Semiconductor	N	80% of costed BoM

- ✓ Apart from the plastics & mechanicals and electro-mechanical components that contribute only about 15% to Bill of Materials (BoM) for some of the low value products, there is no presence of specialty electronics and semi-conductor products which contribute about 80% to BoM. The current system of computing value addition for PMA or every product may not be feasible as the prescribed levels of value addition may not be achievable given the depth and breadth of manufacturing in India.

- ✓ The current PMA qualification threshold will constrain the major electronics manufacturers from qualifying for the PMA. Existing global supply agreements with significant existing investments in supply-chain and yet to develop local ESDM supply & manufacturing ecosystem, make the current PMA value addition norms un-achievable for any manufacturer seeking to make serious investment.

The following suggestions would assist supporting India Manufacturing:

C. Enablers:

- ✓ Revising the policy of PMA-G by incorporating the substantial transformation rules for value-addition as per global norms and deemed domestic manufacturing credits i.e. Allowing $ for $ to qualify for PMA-G in lieu of exports.

- ✓ Aligning value-add to the concept of substantial transformation through operational steps of technology assembly basis the stage of eco-system development. The Substantial transformation

norm for the purpose of this policy would mean:

- Goods transformed through final assembly and testing. PMA preference to be provided to companies achieving these stages.

- The OEM commits to develop the manufacturing process over the following three stages spread over a period of 5-15 years dependent on the evolution and maturity of the ESDM ecosystem.
  (iv) Stage 1: Final Assembly & Test (FA&T);
  (v) Stage 2: Printed Circuit Board Assembly (PCBA); and
  (vi) Stage 3: Local sourcing of components (based on cost, delivery, quality parity).

II. Manufacture of select portfolio in India and Import of other products

A. Challenges

- ✓ The PMA policy prescribes domestic manufacturing criteria at a 'product' level. Currently manufacturing all the products in India may not be feasible or possible from a technology, infrastructure and commercial parameter for any investor or manufacturer willing to Make in India.

- ✓ Global supply chain implies that no site manufactures the entire portfolio of products and only a set of products are manufactured at each facility based on defined parameters

- ✓ Evolution of the supply-chain & manufacturing eco-system in mature countries allude to the fact that products with very high end technology, complex manufacturing processes and low volume would continue to be imported until the required supply and manufacturing ecosystem is developed and fully evolved to support local manufacture of such hi-end products and demand growth makes manufacturing viable.

The following suggestions would assist supporting India Manufacturing:

B. Enablers

The product portfolio & technology composition, domestic & global demand, existing global manufacturing base, stage of evolution of the domestic manufacturing ecosystem, global access & export feasibility etc. are factors that would determine the eligible share of product portfolio that can be manufactured in India and those which would have to be imported into India.

- Government of India ("GoI") to take note of the fact that all the products prescribed for PMA may not be feasible to be sourced from the domestic Indian market given the technological, infrastructural and commercial constraints.
- The Original Equipment Manufacturers ("OEMS") should be granted a deemed domestic manufacturing credit for 100% of their manufacturing volume – independent of product, export / domestic consumption. The credit can be used for supply of imported portfolio products against PMA contracts.

Q.10 Any other relevant issues that needs to be addressed to encourage local telecom manufacturing in our country.

Ease-of-business climate in the country is a big limiting factor in decision-making by large manufacturers to enter India. While the government has taken substantial measures to provide fast-tracking and ease-of-business for companies looking to invest in the country, similar focus and urgency is needed to resolve day-to-day operational issues companies face while dealing with the Government.

Some of these issues are –

1) Manual paper-based government processes, yet to move to completely on-line mode. Where even on-line eGovernance systems are implemented, there are often duplicate manual processes still existing.
2) Tax certainty.
3) Infrastructure constraints such as availability and quality of power. Unreliable power leads to fall-back on diesel gensets which is inefficient.