BIF Response to TRAI Consultation Paper on Promoting Networking and Telecom Equipment Manufacturing in India

1. India has witnessed remarkable growth in the telecom services, more particularly in the mobile telephony segment. India now has the second largest subscriber base in the world, next only to China. The proliferation of telecom networks can be noticed even in the remotest parts of the country including hilly regions. Though Indian telecom industry still faces many challenges such as infrastructure shortages, low penetration level in rural areas, lack of skilled manpower, etc., the telecom growth story has remained unperturbed. From 1990 onwards, there has been a remarkable surge in India's (overall) service economy. During this period, the services sector has grown at a much faster rate than that of agriculture and industry. Today, services sector commands nearly 55 percent of India's gross domestic product (GDP) and has earned the reputation of 'engine of economic growth'.

2. In contrast, the share of local manufacturing of telecom & networking equipment has been negligible as compared to the growth of telecom services. A number of reasons are ascribed for the same viz.

    a. Domestic manufacturing suffers from a cost disadvantage of approx. 5-6 % from the existing global manufacturing hubs viz. in Malaysia and other regional hubs
    b. High cost of capital
    c. Lack of ready availability of components and sub-assemblies at globally competitive prices
    d. Key infrastructural challenges viz. availability of land, power, high incidence of taxes and levies, etc.

3. Despite high growth in telecom services, the manufacturing of telecom equipment received the least priority over the years. While a liberal trade policy enabling import of equipment with low or no duty kept both service providers and consumers happy, the lack of capacity building for domestic production poses a serious challenge to India's continued success in the telecom sector. Realizing this, the latest telecom policy of Government of India, the National Digital Communications Policy (NDCP 2018) has laid an overwhelming emphasis on the need for developing a domestic base for telecom equipment manufacturing.

4. There is no doubt that equipment manufacturing can play a crucial role in the overall success of the Indian telecom sector and therefore domestic manufacturing must be promoted. Apart from economic reasons, the security considerations also suggest that India should aim at achieving self-sufficiency in telecom equipment production.

With the above background, we are providing response to all the Questions from the Consultation Paper as below

Detailed responses to the Questions provided in the Consultation Paper: -

Q1. Is the PLI scheme in its current form effective enough to address the needs of promoting NATEM in India? Are any amendments or extensions required to the current PLI scheme to make it more effective? Please provide details.

BIF RESPONSE

At the outset, BIF lauds the Authority for coming out with an excellent and timely consultation paper to boost the manufacturing of networking and telecom equipment in the country. BIF also lauds the Government of India for implementing Productivity linked Incentive (PLI) Scheme for manufacturing of networking and telecom equipment , the salient highlights of which are :

a) Incentivising sales up to 20 times minimum cumulative yearly investments for availing of benefits.
b) Boosting of local manufacturing worth 2.4 lakh crores over 5 years with annual investment of about 3000 Crores.
c) Identification of both MSMEs and non-MSMEs, with over 1000 Crores marked as incentives exclusively for the MSME sector alone
d) Incentives provided for both new manufacturing units as well as expansion of existing manufacturing units-both local and foreign. Eligible companies **should be a company incorporated in India under the provisions companies act 2013.** Instead of current definition.

While the policy has several positives, we feel by inclusion of a few more points as suggested below, would make it even better and more conducive to attract long term investment in the crucial manufacturing sector.

i. **Yearly capping of Incentives:** The scheme currently caps the maximum incentive to 20%, 40%, 70%, 100%, 100% of twenty times the investment in the five years respectively. This assumes that companies will start with modest production and ramp up over the years. Given the nature of the industry, geo-political shifts and the need for critical mass of production, the industry's plan is for a very aggressive ramp up and these caps limit our plans and run counter to the scheme's objective of maximizing throughput/production. **We hereby suggest that caps be kept at 100% of 20 times the incentive from the year one.**
ii. a) **Implementation Timelines:** Request for extension of starting date by one year from 1st April 2021 to 1st April 2022 i.e. to commence from FY 2022-2027 instead of FY 2021-2026.
iii. **Reform PMI to boost exports – The market access to local producers/manufacturers of networking and telecom equipment should be equal to all- domestic as well as global OEMs. Local value addition should take into account the investments made into R& D and software development by Global OEMs. However, the current PMI policy needs to be reviewed to ensure proportionate and equitable market access**

to all and no one side is disadvantaged, despite committing additional resources /investment into domestic manufacturing The possible areas of the PMI scheme that needs to recognize or factor some of the uniqueness of the Telecom product sector are as below:

- The current value addition norms stipulated by DoT expects 50% or more value addition in India. It does not seem to have factored in the nascent component eco system in India and gives undue weightage to hardware & software to the tune of 20 to 55%. PLIS should be complete **end to end hardware product** development for Remote radio unit, Small cell, WIFI 6, CU, DU, FTTX, and MIMO

In this regard, we wish to make two specific suggestions:

- The PMI policy should **grant OEMs "points" equivalent to the total value of exports** made from the country. These OEMs can then utilize these "points" to qualify as a class 1 supplier for other products which may not be manufactured in India – these products that are not manufactured in India could be termed as 'Deemed Domestic'. This model will be highly effective in leveraging India's domestic market to expand on exports, thereby creating a win-win situation and expanding the scope and role of Atmanirbharta in the bargain.

- **Adopt the MEITY norms for value addition for Telecom products**- MEITY's definition of Value Addition (VA) factors in the lack of component eco-system. It provides the full value of all components that go into a PCB as long as the PCB assembly is done in India. We urge the same may kindly be adopted in Telecom also, till such time the local component ecosystem is built up.

iv. **Linkage of PLI-PMI Policy.** Now that PLI Incentives have been announced, Market Access to Local Markets must be liberalised so that domestic manufacturers can leverage the domestic markets for exports. Current Value Addition (VA) norms are too stiff and need to be liberalised to permit 'deemed manufacturing' status or Level1/Level 2 status to be provided to domestic manufacturers.

v. Start-ups play a vital role in enabling and accelerating deployment of next generation technologies in the country. The start-ups are mostly in hardware space are negligible. The major reason is that huge Capex and longer gestation periods demand access to large funds, which are difficult to arrange. Further even after developing a prototype, products need longer time to market and mass production becomes a challenge. Start-ups thus require favourable policies and support to meet their cost disabilities. Start-ups investing in R & D expenditure should be considered without any capping for the products which are designed from 2019 onwards.

vi. An issue faced by start-ups is regarding 'Access to Trial'. Telecom Operators expect carrier-grade products for their network, and thus start-ups do not get opportunity for their unproven products. One of the possibilities can be to facilitate access of the domestic market to the product start-ups so that they can gain strength and grow.

Start-ups companies are those Indian registered organisation whose design for 5G ecosystem products are from 2019 onwards.

vii. Start-up community requires a concerted effort in the early planning stage to meet the challenges faced in the new world order. To infuse confidence and stimulate a telecom product start-up ecosystem, proactive steps in the form of grants for early-stage tech risk sharing are required. Research projects having commercialization potential, require funding and mentorship for initial years. They require support for making them scale to a matured eco-system in say next 5 to 10 years' period. Special financial instruments to support startups at preferential terms can encourage a robust telecom equipment manufacturing start-up ecosystem.

viii. Clarity around **method of disbursement of incentives** -whether it would be a ' set off'' against future input costs/investments/revenues/tax liabilities, or it will be kind of ' cashback'. Clear KPIs on behalf of Government as regards timelines for disbursement of the incentives needs to be there.

ix. **Cost competitiveness for Exports and domestic production** has taken a major setback with increase in duty on components from 5-18% from Government's 1st February, 2021 notification to this effect, which has resulted in an average cost increase by 6% on finished telecom products. This has nullified the 6% incentives to be provided by PLI Policy. We hereby wish to request for the 1st Feb notification reg. duty increase on components to be kindly withdrawn.

x. Additional Suggestions:

- A portion of the existing kitty **of incentives may be reserved for ' telecom Products manufacturing who own design of the product'.** This would help improve Local VA content. Currently telecom components are not covered either in the Telecom PLI or in the Meity PLI Policy.

- To permit new products to be introduced during the 5-year cycle period (2021-2026), Government should permit **self-declaration by the manufacturer**, instead of waiting for the process of Product to be notified before availing the incentives.

Q2. Whether going beyond PLI scheme, a range of financial and fiscal incentives needs to be put in place to promote NATEM in India? Please elaborate your response.

BIF RESPONSE

Yes-While the PLI scheme is a big step towards promoting local manufacturing of Networking & Telecom Equipment, it can also be argued that just a single scheme is not enough as it may not cover different requirements of the industry.

a) For the same, several parallel initiatives need to be taken, inter-alia, including the following:
   i. Steps to promote Research & Development (R&D),
   ii. Providing funds for R&D,
   iii. Developing R&D parks,
   iv. Putting in mechanisms to develop skill sets
   v. Addressing issues related to patent framework like rights and obligations of Standard Essential Patent (SEP) holders including dispute resolution

vi. Promoting incubation centre
vii. Addressing issues related to testing and certification
viii. Ensuring availability of component ecosystem
ix. Setting up cutting edge technology FAB facility
x. providing various fiscal and non-fiscal incentives

b) Under incentivisation though various fiscal and non-fiscal incentives viz.
   i. Creating funds for promoting manufacturing and entrepreneurial activities.
   ii. Creating infrastructure for facilitating manufacturing like Software tech parks
   iii. Extending incentives for creation of such infrastructure/manufacturing facilities
   iv. Addressing issues related to power availability and pricing
   v. Implementation, monitoring and periodic review of PMA policy
   vi. Addressing issues arising out of Free Trade Agreements (FTAs)/Information Technology Agreements (ITAs
   vii. Announcing Incentive Schemes for telecom equipment parts
   viii. Addressing ease of doing business issues including expediting clearances and review of all compliance requirements.
   ix. Promoting deployment of indigenous products in other countries through incentivizing system integrators
   x. Showcase make in India start-ups and their products in international events
   xi. Upgrading the manufacturing PSUs under DoT to effectively harness strategic and operational synergies.

Also, PLI scheme is based on investment thresholds and increase in net sales. This may not serve the needs of small start-ups looking for seed funding or companies who are in the expansion stage or companies in R&D space.

Q3. Does the Electronic Development Fund (EDF) meet the requirements of promoting NATEM in India? What are the limitations in EDF for the NATEM sector and how can its scope be enhanced?

BIF RESPONSE

Setting up of EDF is one of the important strategies that provides risk capital to companies developing new technologies, thereby enabling a vibrant ecosystem of innovation and research and development. EDF was set up to provide risk capital to start-ups in Electronic System Design and Manufacturing and IT, leading to multiple Intellectual Properties creation/acquisition by Start-ups, supporting start-ups and companies working in IoT, Robotics, Drones, Autonomous Cars, Health-tech, Cybersecurity, AI/ML, etc. The objective of the EDF policy is to support Daughter Funds including Early-Stage Angel Funds and Venture Funds in Electronics System Design and Manufacturing (ESDM), Nanoelectronics and IT. The supported Daughter Funds will promote innovation, R&D and product development within the country in the specified fields of ESDM, nanoelectronics and IT. They will also support

acquisition of foreign companies and technologies for 36 products imported in India in large volume. The core focus of the Daughter Funds would be to develop domestic design capabilities which will create a resource pool of IP within the country in the specified fields.

As such EDF does not have exclusive focus for the Telecom sector and may not be sufficient to take care of the need of venture funding required for promoting NATEM in India.

The NATE ecosystem at this point requires streamlined focus and specific funding to become competitive. The provision of grants or seed funding to Start-ups/SMEs would entail significant expenditure for the sector. Although various financing and incentivization schemes exist to promote electronics manufacturing, separate dedicated funds for financing and incentivizing design, development, and manufacturing of new-age NATE for 5G and futuristic technologies with proper administration for disbursal of funds may give a boost to domestic manufacturing. As 5G and futuristic technology infrastructure is going to be largely software driven, a separate fund for development of telecom related software can also be conceptualized for the overall growth of the telecom & networking product ecosystem.

Q4. Is there a need for creation of separate funds on lines of EDF or those earlier recommended by TRAI (like TEPF and TMPF) for promoting NATEM in India? What institutional mechanisms should be put in place to govern the fund(s)? Give justification and elaborate on its possible impact on the sector.

BIF RESPONSE

The Telecom Entrepreneurial Promotion Fund (TEPF) and Telecom Manufacturing Promotion Fund (TMPF) which had been mooted earlier by TRAI are still relevant today, so that issues relating to private sector participation in the manufacturing of indigenous telecom equipment and market access for indigenous telecom equipment can be addressed effectively. For promoting research, innovation, standardization, design, testing, certification and manufacturing of indigenous equipment for 5G and subsequent generation technologies like 6G, broadcasting sector equipment in light of convergence, setting of dedicated funds either similar to EDF or in line with the ones earlier recommended by TRAI viz. Telecom Entrepreneurial Promotion fund and Telecom Manufacturing Promotion Fund may be required.

Q5. What additional measures are suggested for promoting and supporting the Start-up ecosystem in the telecom sector in India.

BIF RESPONSE:

Start-ups companies are those Indian registered organisation whose design for 5G ecosystem products are from 2019 onwards.

Start-ups play a vital role in enabling and accelerating deployment of next generation technologies in the country. The major reason is that huge Capex and longer gestation periods

demand access to large funds, which are difficult to arrange. Further even after developing a prototype, products need longer time to market and mass production becomes a challenge. Start-ups thus require favourable policies and support to meet their cost disabilities.

Another issue faced by start-ups is in 'Access to Trial'. Telecom Operators expect carrier-grade products for their network, and thus start-ups do not get opportunity for their unproven products. One of the possibilities can be to facilitate access of the domestic market to the product start-ups so that they can gain strength and grow.

Start-up community requires a concerted effort in the early planning stage to meet the challenges faced in the new world order. To infuse confidence and stimulate a telecom product start-up ecosystem, proactive steps in the form of grants for early-stage tech risk sharing are required. Research projects having commercialization potential, require funding and mentorship for initial years. They require support for making them scale to a matured eco-system in say next 5 to 10 years' period. Special financial instruments to support startups at preferential terms can encourage a robust telecom equipment manufacturing start-up ecosystem

MeitY has implemented Multiplier Grants Scheme (MGS). MGS aims to encourage collaborative R&D between industry and academic/R&D institutions for development of products and packages. Under the scheme, if industry supports R&D for development of products that can be commercialized at institution level, then the government will also provide financial support that is up to twice the amount brought by industry. The proposals for getting financial support under the scheme are to be submitted jointly by the industry and institutions.

For faster penetration of 5G ecosystem technology to the market, request to have many aggregators partners in India.

Q6.a. Which of the financial instruments related to project financing, contract financing and credit default insurance currently available in India are being used by the stakeholders and to what extent?

In India, Currently company is having working capital limits of more than 5000 Cr from 18 banks including PSU's, private and MNC banks. Currently company is using products like term loans, Capex Loansand, general purpose corporate loans & NCD's for long term funding.

For short term working capital requirements we recommend using Working capital demand loan, Commercial Papers, export packing credit, vendor financing, LC bill discounting, factoring, export insurance based factoring etc. As of now IRDAI has just recently allowed Indian companies to seek credit insurance working capital products. It is still Work in progress Request to consider the same.

BIF RESPONSE

In the telecom sector, apart from others, some of the USOF initiated projects can also fall under this category where the TSPs or their consortium can opt for project financing mode. Development of telecom infrastructure requires favourable investment support through innovative project financing schemes. Some of the financial institutions are already addressing the needs of project financing.

Contract financing provides financial assistance in the form of gap funding to eligible Contractor Firms/Companies for contract works execution. Interest rate is fixed based on credit worthiness of the borrower, risk perception, rating, and other relevant factors. Contract financing is useful when the credit history of a small or medium company is not available, which can block access to conventional bank loans and commercial lines of credit. SMEs are heavily dependent on credit because of fewer financing options, hence are highly affected by the loan contract terms. Contract design can be effective at mitigating commercial risks such as the business cycle, fluctuations in demand, and sometimes inflation risk if payments are linked to prices. The contract specifies milestones and payments based upon the progress toward completing the project Some of the leading banks have products that cater to the contract financing needs.

Working Capital Term Loan for Contract Finance under start-up India scheme is one such Contract Financing Option which provides one-time core working capital assistance to deserving units in the form of working capital term loan, aiding up to maximum of 75% of working capital requirement of business for one cycle of operation. Credit default insurance is a financial agreement, usually a credit derivative, to mitigate the risk of loss from default by a borrower. Banks and debt capital markets are the two most common sources of debt financing for large corporations. Banks have a positive approach to support all bankable manufacturing opportunities in the telecom sector. However, they are often reluctant to lend to MSMEs and start-ups with no established records of profitability. MSMEs suffer from informational asymmetry. Commercial banks fear default risks hence often do not want to provide easy credit to small enterprises with no track record. A lender/borrower risk of investment is reduced by shifting all or a portion of that risk onto an insurance company. National Credit Guarantee Trustee Company Ltd. has been set up by the Department of Financial Services, under Ministry of Finance, to function as a common trustee company to manage and operate various credit guarantee trust funds. The objective is to nurture the start-up ecosystem and give a boost to the small and medium enterprises in the country. The Credit Guarantee Scheme for Micro and Small Enterprises (CGS) was launched by the Government of India (GoI) to make collateral-free credit available to the micro and small enterprise sector.

Q6.b. Are these financing instruments able to cater to the needs of NATEM in India?

BIF RESPONSE

Response provided in Q 6a) and b) above.

Q6.c. Are there any suggestions to further improve these financial instruments or are there any new proposed financial instruments that can cater to the needs of NATEM in India? Please provide full details along with justification

BIF RESPONSE

Credit markets are characterized by market failures and imperfections including information asymmetries, inadequacy or lack of recognized collateral, high transaction costs of small-scale lending and perception of high risk. To address these market failures and imperfections, many governments intervene in credit markets in various forms. A common form of intervention is represented by Credit Guarantee Schemes (CGSs) providing third-party credit risk mitigation to lenders and increasing access to credit for SMEs. This is through the absorption of a portion of the lender's losses on the loans in case of default, typically in return for a fee. The popularity of CGSs is partly due to the fact that they commonly combine a subsidy element with market-based arrangements for credit allocation.

A Credit Guarantee Scheme can be a critical policy instrument for easing financing constraints especially for SMEs/Start-ups. Export Credit Guarantee Corporation (ECGC) scheme was formulated to provide insurance protection to Indian exporters against payment risks by offering several types of insurance covers. Over the years the Export Credit Guarantee Corporation of India has proved to be useful to Indian exporters. It pays 80% to 90% of the loss incurred by Indian exporters. The remaining 10% to 20% of the loss alone has to be borne by the exporters. Since the exports for telecom equipment manufacturing is in a very nascent stage as of now, it can be argued that a dedicated scheme, along above lines, may be helpful to mitigate the risk for exporters of the sector. It can also be instrumental in providing the export-oriented manufacturers the much-needed risk taking ability by safeguarding them against bad debts. For the exporters facing stiff competition in the global market and having constraints in terms of loss bearing capacity, the safety net provided by credit guarantee schemes provides a level playing field.

Q7. Whether the existing schemes relating on CAPEX and interest subvention are meeting the requirement of finance for NATEM in India.? Suggest modifications/ new schemes needed if any with details.

BIF RESPONSE

Capital linked incentives or incentives linked to CAPEX are extremely crucial for industries to strengthen their presence in the market at the very beginning. Telecom equipment are characterised where CAPEX cost is historically high, incentive schemes offered to cater to the initial capital, can improve the strategic position and fuel market growth for the industries. To address this, certain schemes have been implemented by MeitY which were primarily for Electronics System Design and Manufacturing (ESDM). Recently the Cabinet has also approved a package with set of schemes to incentivize development of Semiconductors and Display Manufacturing Ecosystem in India.

Modified Special Incentive Package Scheme (M-SIPS): offer incentive for investments on capital expenditure was formulated as 20% for investments in Special Economic Zones (SEZs) and 25% in non-SEZs. Over and above providing capital expenditure linked incentives, it also included reimbursement of countervailing duty/excise for capital equipment for non-SEZ units and reimbursement of duties and central taxes for some of the projects with high capital investments. The scheme was initially introduced for 29 categories of ESDM products including telecom, IT hardware, consumer electronics, etc. Later the revised scheme included products of 44 categories. The list of applicable telecom products under M-SIPS would need to be expanded in view of upcoming technologies.

Under telecom products it would include the equipment should be installed at 5G or above ecosystem. Optic fibre equipment, Terrestrial Communication equipment, , switches/ Routers, transport systems, Wireless technology equipment up to LTE and LTE Advanced, Radio systems, Antenna systems, CPEs. The incentives were available for a period of 5 years from the date of approval of the application, the scheme was closed for new application in Dec 2018. Keeping 5G adoption and infrastructure demand in view, a similar scheme with specific focus on 5G RAN products, 5G testing equipment, software products, Internet of things, Artificial Intelligence, Robotics and Cloud Computing component-level products etc. might be beneficial to promote the cause of Telecom Equipment Manufacturing. Cabinet has also decided that the Ministry of Electronics and Information Technology will take requisite steps for modernization and commercialization of Semi-Conductor Laboratory (SCL). MeitY will explore the possibility for the Joint Venture of SCL with a commercial fab partner to modernize the brownfield fab facility.

To drive the long-term strategies for developing a sustainable semiconductors and display ecosystem, a specialized and independent "India Semiconductor Mission (ISM)" will be set up. The India Semiconductor Mission will be led by global experts in the semiconductor and display industry. It will act as nodal agency for efficient and smooth implementation of the schemes on Semiconductors and Display ecosystem. Thus, with announcement of this program, for development of semiconductors and display manufacturing ecosystem in India with an outlay of INR 1.54 lakh Crore comprehensive Fiscal Support/ incentives for every part of supply chain including semiconductors, electronic components, sub-assemblies, and finished goods has been put in place by MeitY. Incentive support to the tune of INR 55,392 crore (7.5 billion USD) have been approved under PLI for Larges Scale Electronics Manufacturing, PLI for IT Hardware, SPECS Scheme and Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme. In addition, PLI incentives to the quantum of INR 98,000 crore (USD 13 billion) are approved for allied sectors comprising of ACC battery, auto components, telecom and networking products, solar PV modules and white goods. In total, Government of India has committed support of INR 2,30,000 crore (USD 30 billion) to position India as global hub for electronics manufacturing with semiconductors as the foundational building blocks

Under the interest subvention schemes, a subsidy or rebate in the rate of interest on the loans is extended by financial institutions and subsidy is borne by the Government to promote the industry. Interest subvention schemes support the domestic equipment manufacturer to stay

competitive in the market and enjoy a level playing field against foreign manufacturers. In this regard a prominent example would be the interest subvention scheme introduced by the Reserve Bank of India in 2018 wherein relief is provided up to 2 per cent of interest to the MSMEs on their outstanding fresh/incremental term loan/working capital during the period of its validity. Interest subvention schemes may be helpful to provide relief to local telecom equipment manufacturers reducing the financial burden on account of interest on loan components thereby facilitating growth.

Q8. Whether the existing financial assistance for MSMEs that are into NATEM are sufficiently catering to their requirement or a separate dedicated scheme is required for the sector? Please provide a detailed response along with suggested schemes, if any.

BIF RESPONSE

Medium and Small-Scale Enterprises (MSMEs) are often opined to be the backbone of the manufacturing sector in the country. There are various areas of growth opportunities for MSME in telecommunications. However, their integration with the digital economy and the telecom sector has been low over time. Bridging this gap in component manufacturing would essentially provide a much-needed boost to the sector. Manufacturing components that cater to larger NATE manufacturers can be an emerging opportunity for MSMEs in the sector. MSMEs suffer from lack of funds and face tough competition from large businesses. Credit facility in form of loan with appropriate enabling policy for the MSMEs will enable them to take full advantage of the expanding market and integrate themselves more fundamentally with the equipment value chain both within India and outside.

In addition, there are certain specific schemes available for MSMEs such as SIDBI Make in India Soft Loan Fund for MSME (SMILE)

a. Assistance to re-energize capital investments by SMEs (ARISE)
b. UBHARTE SITAARE programme
c. Covid -19 Special Relief Package etc. These schemes are devised to meet capacity expansion needs of small and medium enterprises and provide customized solutions to meet their financial needs. The loans are available at competitive rates and are structured specific to the requirements.

Q9: Whether any cost disadvantage is experienced by domestic NATE manufacturers as compared to global counterparts due to various limitations discussed above? If yes, what is percentage cost disadvantage to domestic NATE manufacturers vis a vis other country? The details of calculations and methodology adopted for the same may be provided.

BIF RESPONSE

Cost disabilities for manufacturing in India Indian manufacturers reportedly have a local cost disadvantage compared to countries like China, Vietnam, Thailand. Given the limited profit

margins of domestic manufacturers of NATE, cost disabilities impact the overall business viability for them. Certain cost disabilities are as given below

a. Cost of Capital The cost of finance or commercial borrowings in India is very high compared to other exporting countries, creating disadvantage for domestic manufacturing. Manufacturers in major export economies have the advantage of availability of finance at concessionary or lenient terms and have attractive finance packages to support domestic manufacturing. Countries like China, USA, and Japan reportedly offer credits to local manufacturers at 3-4% interest rates. A recent EY report stated that average differential in cost of capital for investing in India compared to developed countries is about 3%.

b. Cost of Infrastructure Manufacturing largely depends on supply of continuous and high-quality power. The industrial electricity and water supply charges are higher than the normal rates in India. Even the land for manufacturing units, if not made available at cheaper rates, can impact the cost competitiveness. The difference in costs of building material and logistics can further add to the woes. For strengthening telecom equipment and making it competitive in the domestic as well as international marketplaces, the cost disadvantage in respect of capital, power, and other infrastructure needs to be compensated.

c. Compliance cost The cost of compliance with respect to related to granting of permits, enforcing contracts, registering property, starting business, Import of Goods at Concessional Rate of Duty (IGCR), Import Export Codes, Direct and Indirect Taxes has been consistently high in India. It further discourages manufacturing viz-a-viz cheaper imports. While promotion of Ease of Doing Business in obtaining permits and clearances can facilitate the rapid expansion of the domestic manufacturing ecosystem, however, in the meantime, this cost continues to hamper the same.

d. Cost of testing and certification Additional cost of testing & certification, multiple standardization agencies and lack of timely testing is another impediment for the manufacturers. Standards contribute predictability and lower risks for both producers and consumers. Manufacturers support Standardization as it allows them to achieve economy of scale in production and eases maintenance requirements. It is essential to streamline the rules of standardization associated with locally manufactured products. Multiplicity of standard setting and testing agencies and time and costs involved in testing and certifications can impact competitiveness of Indian telecom equipment manufacturers and increase their costs vis a vis global players.

A survey report of ICEA suggests that for investments, Vietnam appears to be 1.7 times more attractive, and China is about twice as attractive compared to India. India currently suffers a cost disability of 7.52%–9.8% vis-à-vis Vietnam and 17.32%–19% vis-à-vis China for the manufacturing of these products locally58. The cost disability in India in terms of capital,

power, labour, logistics and other infrastructure is higher by about 10-20% in comparison with the developed countries.

Other competing countries provide fiscal and non-fiscal incentives to cover the cost differentials and promote the manufacturing sector. Incentivization schemes for equipment manufacturers coupled with initial funding and infrastructural support can help to offset the heightened end cost for the products.

Q10. Whether schemes allowing tax holidays/deferment of tax are available for NATE manufacturers? If yes, are they meeting the requirement? If no, what modifications are required? Please justify and provide details.

BIF RESPONSE

A tax holiday is an incentive program run by the government with the objective of attracting investment by reducing taxes on businesses. The tax rate cut offered for setting up new manufacturing firms can act as a key incentive for the expansion and growth of the manufacturing sector in the country, thereby boosting Make in India. As the telecom industry is in the preliminary stages of expansion with constricted market opportunities and severe global competition, taxes add to the overall manufacturing expenditure of domestic equipment manufacturers. The tax relief would therefore encourage private companies to redirect their savings from the saved tax outflow to capital expenditure and in turn help perpetuate business expansions. Suitable tax breaks for companies investing in telecom equipment manufacturing, R&D, skill development for telecom equipment, and additional tax incentive to the manufacturers of finished telecom products developed using indigenously developed electronic components, will facilitate growth of indigenous equipment manufacturing. The finance ministry in the year 2020 announced various measures including the slashing of tax rates applicable to domestic companies and newly incorporated manufacturing companies.

Tax deferral is when taxpayers delay paying taxes to some point in the future. Some taxes can be deferred indefinitely, while others may be taxed at a lower rate in the future. The objective of deferred tax is simply to streamline operational expenditure at the onset of a manufacturing firm. As has been discussed previously, the Covid pandemic has made many global giants re-evaluate their manufacturing strategy and are actively looking for countries to spread their risks. Incentives like tax holidays or deferred tax might be instrumental in shifting their attention to India. There are various schemes allowing Tax deferment that have been enacted by the government. CBIC has issued guidelines on manufacturing and other operations in customs bonded warehouses.

To promote the "Make in India" initiative and as part of the ease of doing business measures, the Scheme enabled businesses to import raw materials and capital goods without payment of duty for manufacturing and other operations in a bonded manufacturing facility for exports, while allowing import duty deferral for the domestic market. Inputs/ raw materials can be imported and deposited in the bonded warehouse without the payment of Basic

Customs Duty and Integrated Goods and Services Tax (IGST). No interest is applicable at the time of payment of duties on the clearance of finished goods manufactured using inputs/ raw materials. Only the duties on inputs/ raw materials are to be paid when the resultant goods are cleared for home consumption apart from GST/ IGST on the finished goods.

Q11. Is the PMA/PMI scheme in its current form comprehensive for promoting NATEM? Are there any suggestions for modifications? How can the challenges associated with implementation of PMA/PMI be addressed? Please elaborate.

BIF RESPONSE

Preferential Market Access (PMA) - Incentives to domestic manufactured products Only creation of a domestic manufacturing industry in India is not sufficient, the manufacturers need a sustainable market to remain relevant. Government's support for products that are made in India can help create a sustained market pull for Indian products. Preferential Market Access scheme is a concerted effort of government to achieve the same.

Department for Promotion of Industry and Internal Trade (DPIIT) issued PPP MII Order 2017 for ensuring preferential access to domestic manufacturers. The objective of the order was to encourage 'Make in India' and to promote manufacturing and production of goods, services and works in India with a view of enhancing income and employment. The Order was made applicable for procurement by the Ministry / Department / attached / subordinate offices, or autonomous body controlled by, the Government of India and includes government companies as defined in the Companies Act.

DoT issued Public Procurement (Preference to Make in India) order in August 2018 in reference to DPIIT order, for a list of telecom products, services and works for their purchase preference in public procurements from local suppliers, fulfilling Local Content (LC) criterion. DoT has identified conditions for the inputs to be qualified as Local Content and the Scheme mandates the preference to Local content in public procurement.

For the local value addition considerations and allowing usage of imported components for telecom equipment, DoT in Aug 2021 has issued a list of 25 telecom product segments, including satellite phones, broadband equipment, optical fibre cable, etc., which will qualify as local products even if they use imported components for domestic manufacturing. The notification enables companies making telecom products to import components in public procurement projects in compliance with PMI order, giving opportunity for foreign vendors also to qualify as local manufacturers even with small amount of local value addition. This was to be reviewed when the semiconductor fab (electronic chip plant) in India becomes operational. Later the August 2021 order was kept in abeyance by DoT as not mandating only 'Make in India' companies to offer equipment was defeating the very purpose of the policy.

Though policy for preferential market access has been notified by DoT and preference to domestic manufacturing has been mandated in public procurements, certain points related to monitoring and implementation of PMA Policy of DoT are given below:

a) In certain public procurements e.g. USOF tenders, element-wise compliance of Local Content as per the DOT notification is not monitored instead low value addition components like tower erection, civil work, installation charges, AMC charges, etc. are construed as local value addition to take benefits under PPP-MII Order 2017 as these infra items are having high value in total site pricing. Therefore, the actual benefit of the PMI scheme for domestic equipment manufacturing is not getting extended. On the contrary, present calculation methodology doesn't capture the local value addition at the Project level. The cost incurred for local sourcing of material for network rollout, spares cost, warranty, AMC, etc. are not getting captured. Main inputs/ stages cost incurred on assembly/ testing/ integration and other necessary requirements for deploying the equipment in the network is not being considered.
b) The scope of the policy should be enlarged to include purchases by State Governments, Purchases by Telecom operators, World bank funded projects for the listed products, Indian projects undertaken in other countries against LOC or Grant in Aid etc.
c) On many occasions buyers ignored the directions of the standing committee for implementation of PPP MII order. Implementation agencies shall be made responsible for policy compliance and ensuring strict compliance both at buyer end as well as sellers end for making wrong declarations and prompt action to be taken against defaulters.
d) Many times, the procuring agencies do not follow the protocol to get a waiver from Standing committee as per DPIIT guidelines to get Make in India policy exemption for domestic manufacturing. Foreign make and models have been sought even if equivalent domestic products are available. Strict enforcement of PMI in all Government tenders needs to be ensured and use of restrictive tender conditions should be avoided.
e) Government's PMI policy in telecom is defined at the product level and not at the manufacturer's level. There are challenges around the existing methodology of calculating local value addition norms as in view of the large number of products and their scalability, telecom manufacturing facilities tend to be in 'nodes' where a few products are manufactured on a global scale and exported to meet global demand. Due to the inability to create scale, no entity can manufacture the entire bouquet of its products in one geography. However, tenders insist on all products from one OEM. Indian MSMEs not having all the subsystems required for a project, are left out from participating.

Large global players who are locally manufacturing in India, have argued that the high threshold of value addition criteria adopted in some of the PMA based Request for Proposals (RFPs), acts as a barrier for them. There may be issues and challenges around calculation of local value addition norms and till the time India develops local component manufacturing ecosystem, realization of high value addition may be difficult. On the contrary, it can also be argued that the major objective of the PMA policy in the telecom sector is to promote progressively increasing value addition based domestic manufacturing in the country and the preference to domestic manufacturing will automatically see development of component

ecosystems in future. Therefore, incentivizing design based manufacturing in India to increase value creation in manufacturing through PMA will certainly drive development of manufacturing technology by domestic companies. Policy is thus a 'nudge' intervention that ensures positive reinforcement and influences the behaviour by way of incentivizing through preferential market access. The scope of the policy may be further enlarged.

Q12. Whether the incentives to Telecom Service Providers to deploy indigenous manufactured products in their network will be helpful in promoting NATEM in India? Please justify with reasons. What incentivization model is suggested?

BIF RESPONSE

Graded incentives beyond PMI/PMA policy can give impetus for deploying more indigenous equipment in the network thereby attracting business, aiding value addition and helping India becoming self-reliant.

The Authority also recommended in 2011 and 2018, the following with respect to Preferential Market Access. PMA policy should be made applicable for all public telecom networks to address the national security concerns.

Government have issued amendments in licence conditions for Service Providers in March 2021, for mandatorily connecting only that equipment in the network which are designated as trusted products from trusted sources under the National Security Directive on Telecom Sector. Making PMA applicable for all public telecom networks, can help in addressing security concerns emanating from imported telecom equipment.

An incentive-based approach deploying a combination of rewards and penalty might be instrumental in ensuring local procurement in the private sector as well. Further development of 5G product manufacturing capabilities will require a focus on creating access to the domestic manufacturers in procurement done by private.

Considering the present market conditions, the major share of wireless subscribers, about 90% of the total number of subscribers are served by the private telecom service providers leaving only 10% of subscribers who are served by PSU telecom service providers. Therefore, the domestic market for telecom products is dominated by the purchasers who are private service providers. Though the Indigenous products get preference in public purchases under the PMI orders of DPIIT, there is no such policy support to either incentivize or mandate private telecom service providers to buy indigenous products. If sufficient market access is not available to the Indian manufacturers, they may not be able to achieve economies of scale and become globally competitive in absence of volumes. Therefore, it can be argued that there is an opening to incentivize the domestic telecom service providers to procure their equipment from domestic manufacturers. This will help the indigenous manufacturers to become competitive in the domestic as well as international market. This demand stimulation can provide positive externality to the growth of the manufacturing sector in India.

Q13. What should be the incentive structure (fiscal and infrastructural) for Telecom Product Development Clusters (TPDC) set up within the EMCs or separately?

BIF RESPONSE

The objective of Telecom Product Development Clusters (TPDC) that are dedicated to manufacturers of technology products and solutions is to provide an environment that will enable development of an ecosystem where the input suppliers and finished product manufacturers are located close to each other. This not only helps in reducing costs, but also helps in reaching economies of scale by each individual business entity.

Realizing the potential of Telecom Clusters in improving the profitability of domestic manufacturers through proximity of related units, better infrastructure facilities and cost benefit through better logistics, The Government should extend suitable incentives to the TPDCs so as to attract talent and investments into these clusters."

TPDCs can be promoted through government support or in Public Private Partnership mode by providing/facilitating pre-identified land, ensuring adequate availability of large quantities of pure water, uninterrupted power, pollution free environment, logistics, waste disposal etc. If India wants to be a global manufacturing hub for telecom equipment, achieving scale and cost competitiveness will be a major focus for manufacturers. For this, creation of thriving self-sustaining dedicated TPDCs added with exemptions/ incentives and infrastructural support may be required.

While formulating the policies for TPDCs, one can draw a leaf and two from the development of Special Economic Zones (SEZs) and Software Tech Parks in India. The TPDCs should incentivize large scale participation of non-government entities or private sector players and should be able to, inter-alia, provide: –

a. Low-cost infrastructure (Land, power, water etc.)
b. Tax exemptions and subsidies
c. Superior communication and technology infrastructure
d. R&D Promotional Schemes. Incubation services
e. Schemes for nurturing MSME and Start-ups.
f. Access to Trial/Testing beds
g. Regulatory Sandboxes 2.66 Incentives, if offered to TPDCs, can serve similar purpose as that for the Special Economic Zones (SEZs). Government has granted several incentives to SEZ units such as Tax incentives, world class physical infrastructure to facilitate the manufacturing sector especially exports of manufactured goods. To attract investment including foreign investment into SEZs, some of the incentives and facilities that are offered to the units in SEZs are mentioned here:
    i. Duty free import/domestic procurement of goods for development, operation, and maintenance of SEZ units. 100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years. (Sunset Clause for Units has become effective from 01.04.2020.)

ii. Exemption from Central Sales Tax, Exemption from Service Tax and Exemption from State sales tax. These have now been subsumed into Goods & Service Tax (GST) and supplies to SEZs are zero rated under the Integrated Goods & Services Tax (IGST) Act, 2017.

iii. Other levies as imposed by the respective State Governments.

iv. Single window clearance for Central and State level approvals. In addition to earning of foreign exchange and development of infrastructure, SEZs have achieved significant local area impact in terms of direct as well as indirect employment, emergence of new activities, changes in consumption pattern and social life. As of Jan 2022, there are 268 SEZs that are operational. Most of these are in IT/ITES sector.

Government has announced in the Union Budget 2022 that Special Economic Zones Act to be replaced with a new legislation to enable States to become partners in 'Development of Enterprise and Service Hubs" for export promotion. The existing Software Tech Parks provides 100% Income Tax holiday, Duty-free import, Excise duty exemption on purchases from within India, 100% depreciation on Capital Goods over five years and Green Card. A green card is a novel initiative of the Software Technology Parks for projects, less than or equal to ₹100 million. This helps the unit to get one-stop priority access to telephone lines, electricity, licenses, and other ancillary services from government agencies.

The Direct Tax and Indirect Tax benefits and Export incentives to manufacturers in the TPDCs may be helpful to attract foreign capital as well. Under Modified Electronic Manufacturing Cluster 2.0 (EMC 2.0) Scheme64 notified in April 2020 by MeitY financial assistance for the setting up of both Electronic Manufacturing Cluster projects and Common Facility Centres (CFCs) across the country is provided. Grant-in-aid is released to State Governments or its agencies for setting up electronic clusters (Central and State Share are 50:50). 20 Greenfield EMCs and 3 Brownfield CFC projects have already been set up under the earlier EMC scheme.

PLIS incentives should include the followings too.

- Request to **include R & D labs infrastructure expense** in DLI as these labs are sophisticated (faraday cage, high voltage environment, **RF protection shield, RF protected environment**, RF protected walls, RF Suits, controlled ambient conditions, temperature, ESD, EPA requirements).
- Research & Development (R&D): human capital spent, International Travel expense cost (Boarding+ Lodging+ Travel tickets + Visa fee + other statutory fees) incurred for type testing.
- Raw material & Consumables used in R & D proto build, T & M in lab, lab expense, conceptual design, integration testing, part & product validation, evaluation modules, tool development, IOT, Pilot run, validation of: tool, part and product.
- Rent incurred for Test and Measuring device, land and Building, consultation fee, SME fee with a capping of 5% on overall investment.
- The concept of allowing **deduction for capital expenditure incurred on R&D and prior to commencement of business is provided for in the Income-tax Act, 1961, under**

several provisions (amongst others refer Section 35 (2AB), 35ABA, Section 35ABB, Section 35(1)(iv), Section 35A and Section 35AD), similar to be allowed in the scheme.

- The applicant product should be available across globe for sale. The DLIS applicant should not develop the product for specific customer or consumption within the organization or internal restricted application.

  The incentive should be 70% of the investment towards R & D expenses. There should not be any capping for the incentive. As the organization invests the incentives are to be provided.

  R & D in hardware is a mandate. Software development organization should not be considered for DLIS.

  The funding mechanism should be successful completion of product available for installation and successful sales to customer and not internal consumption.

As more companies form a geographical cluster, strong positive network externalities on account of larger scale of production can be achieved and logistics cost may fall with higher volumes. Creation of TPDCs and removing infrastructure bottlenecks for telecom products with specially curated taxes, incentives and subsidies will sattract large investments and promote creation of a robust self-sustaining telecom equipment ecosystem that can lead to setting up of global manufacturing hubs.

Q14. Whether NATEM is facing any limitation affecting competitiveness of Local manufacturers due to misdeclaration of HS codes, inverted duty structures, landed cost differential etc.? Please provide specific details. What are the suggestions for improvement? Please elaborate.

BIF RESPONSE

Indian manufacturers are also facing several issues that are affecting their competitiveness not only in the global markets but also against imported products within India. Some of these issues are:

i. Under invoicing/dumping of cheaper goods: Some countries dump low-priced products in India forcing many industrial units to operate at below capacity levels and in some cases to shut down completely. The economic motive of dumping is to remove competition in the Indian market which has proved to be very detrimental for the local ecosystem of telecom equipment. Local manufacturing in the country at present is suffering severely due to lack of protection from cheaper imports which accounts for a vast majority of the market demand. Dumping duty imposed as an additional import duty to offset the effect of dumping and stricter enforcement of anti-dumping and anti-circumvention rules may be beneficial to tackle the issue for promoting telecom equipment manufacturing in India.

ii. Mis-declaration in duty free HS codes: Harmonized System (HS) Code is a standardized numerical combination used to categorize and sub-categorize various

goods being traded across countries. Though the main objective of the Code is to help customs authorities ascertain the right duties and taxes on imports, there have also been instances of misdeclaration of HS Codes. Some stakeholders have informed that equipment is often imported through various duty-free HS Codes which are meant for import of inputs for the manufacture of mobile phones. It needs due surveillance mechanisms and stricter implementation of existing norms to ensure such unlawful import does not hamper the cause of telecom equipment manufacturing in India.

iii. Exploitation of Free Trade Agreements/Information Technology Agreements (ITAs): FTAs are arrangements between two or more countries or trading blocs that primarily agree to reduce or eliminate customs tariff and non-tariff barriers on substantial trade between them. By eliminating tariffs and some non-tariff barriers FTA partners get easier market access into one another's markets. For example, ASEAN has an FTA with India but not with Canada. ASEAN's custom duty on leather shoes is 20% but under the FTA with India it reduced duties to zero. Assuming other costs being equal, an Indian exporter, because of this duty preference, will be more competitive than a Canadian exporter of shoes. Secondly, FTAs may also protect local exporters from losing out to foreign companies that might receive preferential treatment under other FTAs. However, there are several instances of re-routing being reported, where countries that do not have FTAs, are exploiting the opportunities and dumping cheap imports in India through FTA countries. Surveillance and strict compliance can curb such malpractices.

iv. Inverted Duty Structure: An inverted duty structure comes up in a situation where import duties on input goods are higher than duties on imported finished goods. In most of the cases, the issue of inverted duty structure has been addressed by the government by raising the BCD (Basic Custom Duty) on various imported items while at the same time reducing the BCD on the raw materials required for manufacturing items like Mobile Handsets, OFC (Optical Fibre Cable) and other majorly used telecom equipment. Inverted duty structure can be a roadblock in promoting telecom equipment manufacturing because until the supporting ecosystem of semiconductors and other parts is created, import of certain components cannot be substituted. Higher custom duties on basic components raise assembling cost, rendering the domestic product financially unviable.

v. Issues of landed costs parity: A 'landed cost' is the term used when referring to the final cost of products plus all associated shipping and logistics costs required to get the goods delivered through to a final location. There was reportedly about 5%66 cost differential in manufacturing in India for exports vis-à-vis existing global nodes (e.g., Malaysia, China) due to additional landed costs. High landed costs lead to increased total cost to the manufacturer. Suitable reduction in taxes, levies and/or subsidizing certain activities associated with the import process, until all the components and parts are being holistically manufactured within the country, may be helpful in offsetting such costs.

In order to curb dumping and other import related malpractices in India new norms for 'rules of origin' have been made effective from September 21st, 2020. The new enforcement

measures are likely to ensure that products imported under free trade agreements have the correct preferential rate of customs duties applied and inbound shipments can be checked if they are suspected to be low-quality products or goods being dumped by a third country that has illegally routed them through an FTA partner nation. A notification has been given by India's Department of Revenue to the Customs Administration of Rules of Origin under Trade Agreements Rules, 2020, which "shall apply to import of goods into India where the importer makes a claim of preferential rate of duty in terms of a trade agreement".

Q15. Whether the current schemes/ measures or policy support for exporters of Indian manufactured equipment are sufficiently meeting the requirement to promote the global competitiveness of Indian NATE exporters? Are the Schemes/instruments in India consistent with the international schemes for exporters in leading manufacturing countries? Please suggest measures to bridge the gap if any.

BIF RESPONSE

There are two ways to curb the growing trade deficit - import substitution and export promotion. Few measures need to be outlined for promoting competitiveness for exporters of Indian manufactured equipment. The Government of India has already declared and implemented certain schemes/Instruments to promote export. Some of them are

a) RODTEP (Refund of duties and taxes on export products) is a Scheme for Remission of Duties and Taxes on Exported Products. The scheme was introduced with the objective to ensure that the exporters receive the refunds on the embedded taxes and duties previously non-recoverable like VAT, Mandi Tax, Coal cess, etc. thereby reducing their operational expenses. RODTEP is implemented across all sectors uniformly and do not have any threshold limit to it. Hence, all companies big and small, irrespective of size, market capitalization or export limit, manufacturing in the export sector can avail it. It is expected to give a boost to the domestic industry and Indian exports by providing a level playing field for Indian manufacturing sector including telecom equipment in the international market. Schemes by EXIM Banks Term finance is provided to Indian exporters of eligible goods and services which enables them to offer deferred credit for overseas buyers. Exim Bank also provides term loans/deferred payment guarantees to 100% export-oriented units, units in trade zones, computer software exporters in collaboration with International Finance Corporation, Washington. It therefore enables small and medium enterprises to upgrade export production capability.

b) The Interest Equalization Scheme (IES) for pre and post shipment rupee export credit was introduced in 2015 and is currently being implemented by DGFT through RBI. Initially the scheme ensured that interest for all exporters across merchandise export segments was equalized by 3% per annum. That is, loans available from banks to exporters covered under the scheme are charged interest at 3% below the market rate. However, in view of the lack of competitive power of MSME in the export sector the equalization rate has been revisited to 5% for exports manufactured by MSME in 2018.

Export Credit Guarantee Corporation has been implemented to provide insurance protection to Indian exporters against payment risks by offering several types of insurance covers. It creates a safety net for Indian manufacturers helping them step up their exporting abilities.

Q16. Whether the existing incentives/policies issued by DoT and MeitY do meet the requirements for the growth of telecom software products? What additional policy initiatives and enabling regulatory measures are suggested to facilitate integration of telecom equipment and software products that are made in India? What measures are required to enhance exports of such products? Please justify your response.

BIF RESPONSE

As the world is moving towards 5G and other futuristic technologies, software solutions are becoming hardware agnostic and are required to be treated as separate products. Software product companies have R&D and IPR in India and can help create a successful product ecosystem. Considering the shift in Telecommunications industry towards Software-ization, Cloudification, Network Slicing and Virtualization with the evolving technologies from 5G onwards, the country can derive unparalleled advantage with the Software product and availability of competent software developers. This can become one of the driving factors towards 5 Trillion+ economy. Web scale infrastructure commonly called Web scale IT, is a converged architecture technology with scalable and flexible software that can run on compute intensive hardware. This allows to integrate various infrastructure components—computation, storage, virtualization, and networking—into one platform or equipment. Aggregating resources and centralizing management increases efficiency and flexibility and minimizes maintenance. Webscale IT is characterized by use of open-source software and commodity hardware to create infrastructure that can be completely controlled by software. The disaggregation adopted by web-scale internet companies, deployment of servers and switches with open source software and automation has transformed traditional IT infrastructure and is enabling deployment of services with agility, consistency, tolerance, efficiency and cost effectiveness. 5G system architecture enables modularization of network functions and aligns well with the Network Function Virtualization (NFV) and Software Defined Network (SDN) principles. The cloud computing principles being adopted in technologies such as NFV and SDN for 5G, will certainly benefit the telecom industry in the 5G and future technology era.

Open and disaggregated networks can be an opportunity to transform telecoms supply chains, disaggregating the components of the network and providing open software to control a multi-vendor assembly of components. It allows for multiple components to be combined and built into complete solutions. Open-source approach may help operators find interoperable and cost-effective solutions, encourage innovation, improve quality and security. It also broadens the service and manufacturing base. Open architecture has specifically changed the way Radio Access Networks (RAN) work. Traditionally, RAN were proprietary interface and the TSPs were forced to procure entire hardware and associated

software for RAN from global OEM players. Now, with open RAN, TSPs have flexibility to use solutions from multiple vendors. Establishing RAN is a major cost to the Service Providers who can reduce this cost by using open RAN architecture. Specifically, in 5G where the number of sites will considerably increase, open RAN if developed locally can cut dependence on global players and reduce deployment costs considerably.

Software companies require less initial capex to build up and hence they can achieve faster escalation in growth parameters. However, for reaching the end users new companies need hand holding, funds, and incentives to reach to a level thereby needing support and incentives which can help them to scale up. The current PLI and PMI policy issued by DoT are limited for hardware/ physical products manufacturing only and Software has been treated as an overlay sub-product. Treatment of 100% Software solutions as a separate product has not been considered. There may be instances where 100% software solutions will be competing with hardware solutions in the converged world. For example, cloud-based solutions could be competing with physical solutions in 5G. In such a scenario a separate focus for software solutions and products in the various schemes and incentives can benefit software products. India's strength in Information Technology can be leveraged to gain an advantageous position in software products that either supplement or substitute networking and telecom hardware equipment.

MeitY has taken various steps for promoting the software development in the country such as National Policy on software products (2019), Software development and re-engineering guidelines for Cloud ready applications, Policy on adoption of open source software for Government. of India etc. The Software Product Development Fund (SPDF) created by MeitY have been conceptualized for the overall growth of the software product ecosystem. SPDF may help the Indian Software Product Ecosystem by investing in the complete chain of Software Product development through investment not only in start-ups but also in MSMEs and Companies. Extending scope of SPDF for telecom technology products can cater to the needs and preferences for 5G and future technology products, thereby bridging digital divide and promoting access of technology by all.

Q17. Stakeholders are also requested to comment on other relevant issues, if any.

BIF RESPONSE

Referring to **PLIS for promoting Domestic Manufacturing of white goods** (Air conditioners and LED lights)

a) File no P-29014/101/2020-LEI Dated 4th Jun 2021. Issued by Government of India, Ministry of commerce and Industry, Department for Promotion of Industry and Internal Trade

Under Clause 2.2 the applicant eligibility is as follows "**The applicant should be a company incorporated in India under the provisions companies act 2013.** "

Request the DoT authorities to qualify the **Telecom PLIS applicant should meet the following eligibility "The applicant should be a company incorporated in India under the provisions companies act 2013."**

The applicant product should be available across globe for sale. The DLIS applicant should not develop the product for specific customer or consumption within the organization or internal restricted application.

The incentive should be 70% of the investment towards R & D expenses. There should not be any capping for the incentive. As the organization invests the incentives are to be provided.

R & D in hardware is a mandate. Software development organization should not be considered for DLIS.

The funding mechanism should be successful completion of product available for installation and successful sales to customer and not internal consumption.

1. **To include the following investments**
   a. Land & Building (real estate incl. construction cost, infrastructure)
   b. Request to **include R & D labs infrastructure expense** in DLI as these labs are sophisticated (faraday cage, high voltage environment, **RF protection shield, RF protected environment**, RF protected walls, RF Suits, controlled ambient conditions, temperature, ESD, EPA requirements).
   c. Research & Development (R&D): human capital spent, International Travel expense cost (Boarding+ Lodging+ Travel tickets + Visa fee + other statutory fees) incurred for type testing.

Raw material & Consumables used in R & D proto build, T & M in lab, lab expense, conceptual design, integration testing, part & product validation, evaluation modules, tool development, IOT, Pilot run, validation of: tool, part and product.

Rent incurred for Test and Measuring device, land and Building, consultation fee, SME fee with a capping of 5% on overall investment.

The concept of allowing **deduction for capital expenditure incurred on R&D and prior to commencement of business is provided for in the Income-tax Act, 1961**, **under several provisions (amongst others refer Section 35 (2AB), 35ABA, Section 35ABB, Section 35(1)(iv), Section 35A and Section 35AD**), similar to be allowed in the scheme.

2. DLIS for telecom products **should not involve the** following **industry sector** or investment category – component developer, wafer design, chip design as it is already covered under MeiTY DLI. EMS partners, ODM partners, value added service providers, turnkey project executors, Proto builders, third party simulation developers or validators, application team, institutions, consultants, software developers.

R & D expense should **not include the expenses** of the following – Field trial testing, FAT, SAT, membership fee, exhibition fee, market promotion fee