



Response from Voice of Indian Communication Technology Enterprises (VOICE), a Society supporting AatmaNirbharta in Telecom Sector with participation restricted to only India based domestic players with Indian IPR, design R&D and solutions.

TRAI Consultation Paper: “Promoting Networking and Telecom Equipment Manufacturing in India”

Government has come out with several policies in the last few years which can create an enabling environment to resurrect domestic manufacturing. Presently need is to ensure proper implementation of these policies and any new policies and design schemes for allocation of additional resources. New policies and new schemes should not result in just spreading limited resources thin which may not be as productive as ensuring sharp focus on implementation of the policies among others like Public Procurement (Make in India) Policy, in the desired spirit. Fine-tuning of the scheme by realignment & accommodating the products that have multiple domestic suppliers. Annex A is strongly recommended to be part of the new DoT Gazette notification on PPP (MMI) and such action can go a long way to achieve desired results.

Response to specific questions is as follows.

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.

PLI is an excellent scheme but giving 6% incentive to foreign designed products for manufacturing in India may upset the applecart especially if the incentives are given in sectors where domestic products are available. Big companies already enjoy economies of scale and with incentives, price advantage to this category of players would make them more competitive and it will eradicate the domestic players. It is a double-edged sword that needs careful handling because big players will become even more competitive, and the scheme has no riders regarding domestic value addition or development of downstream industry. PLI scheme awards have focused

on large scale manufacturing with no additional incentive covering domestic design / value addition. Export is also not a prerequisite for disbursement of incentive. Over enthusiasm of PLI scheme to promote manufacturing by large corporations may kill our domestic manufacturers. Global players have global supply chains and experience has shown that they have not shifted the supply chains to India at all and even the packing materials are imported.

The existing Production Linked Incentive Scheme of Telecom equipment as on date is focused on manufacturing and Assembly, which implies that scheme lacks focus on creation of domestic designs and consequent development and growth of downstream industry. Changes in the scheme are required to address these concerns by encouraging design efforts and backward integration.

Backward integration, creation of domestic designs and development of downstream industry will all lead to increase of domestic value addition in the product and that will come out very clearly from the books of accounts of any company.

One of the suggestions would be to support a design led support in the PLI scheme that provides additional incentives over & above the existing PLI scheme with the following amendments as follows:

- Capital expenditure on Manpower should now be considered as part of R&D expenditure (Not allowed presently).

The indigenous development of 5G products requires huge investment in manpower as Software development is one of the most important components of design & development efforts. The scheme is not very supportive towards companies who are doing product development right from the scratch i.e. R&D, development and manufacturing in India. The expenses made in manpower in line with Indian accounting standards for non-tangible capital expenditure must be considered as part of expenditure.

- Expenditure incurred on Research and Development (R&D) should not have any cap for investment in R&D.

As per the current scheme the R&D expenditure is capped to 15%. The companies who don't plan on indigenous product development and would be only doing assembly/ manufacturing in India which is not more than 10% overall value addition in the equipment cost and they will have more advantage with respect to companies who do R&D and own IPR in India along with manufacturing. Hence the cap of 15% on R&D expenses is too low and capping on R&D investments must be removed.

- The overall incentive given which as on date is 4 – 6 % on the incremental sales from the base year irrespective of percentage of value addition being done in India in the overall product.

New scheme could offer incremental incentive on progressive increase of domestic value addition on sales of 5G products as follows

- 1 % additional incentive if value addition is 40% or above,
- 2 % additional incentive if value addition is 45% or above,
- 3 % additional incentive if value addition is 50% or above,
- 4 % additional incentive if value addition is 55% or above,
- 5 % additional incentive if value addition is 60% or above,

- The Design incentive should be extended at least for domestic companies, startups and MSMEs. Following could be the eligibility of the companies getting qualified:

- Domestic companies need to be defined as those which are owned by resident Indian citizens as defined in the FDI Policy Circular of 2017 or extant norms. A company is considered as 'Owned' by resident Indian citizens if more than 50% of the capital in it is beneficially owned by resident Indian citizens and/or Indian companies, which are ultimately owned and controlled by resident Indian citizens.

- MSMEs need to be defined as per the Gazette Notification by Ministry of Micro, Small and Medium Enterprises, dated 1st June 2020 or extant norms.

- Startups can be defined as per the DPIIT notification dated 19th February 2019 or extant norms.

- The approved applicants that claim incentives under the scheme could retain their domestic status (i.e. more than 50% of the capital in it is beneficially owned by resident Indian citizens and/or Indian companies, which are ultimately owned and controlled by resident Indian citizens) for a period of three years after claiming incentives under the scheme.

- R&D expenses should include expenditure related to manpower salaries, purchase of test equipment and software tools, prototype creation, testing and certification, and production of demonstration units for field trials.

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.

PLI scheme is an excellent scheme, but it must be coupled with the motivation to build domestic downstream industry. This can be triggered by stringent implementation of PPP policy to give boost to purchase from domestic manufacturers meeting 50 and more percentage domestic value addition. This policy must be strictly

enforced and required percentage of domestic value addition for preference in public procurement should increase every year at a steady pace. This coupled with PLI scheme that motivates large scale manufacture, will provide the desired correction. While PLI will motivate more and more manufacturing but to get the required market pull from PPP order manufacturers will be forced to increase higher and higher DVA which in turn will ensure downstream industry development. Both policies running concurrently has both ingredients that will act as a carrot and stick.

Market pulls or demand for products manufactured by industry is the single most important factor to resurrect industry. Ensuring that TSPs adopt domestic products will be a great boost in that direction. All efforts should be put in to ensure that PPP MII order is implemented by as many agencies as possible including purchases made by State Government and projects under PPP mode since they are all funded by Indian public at large. Success of existing manufacturers will motivate new start-ups and new upcoming design houses.

The impact of the PLI scheme in promoting NATEM in India may be further enhanced by introducing the following financial incentives:

- Product Design Incentive: A dedicated R&D corpus may be established to accelerate R&D investments in developing indigenous products with Indian R&D, know-how, know-why and IPR. As announced in this year's budget, "Product Design Incentives" may be granted on a 1: 1 matching basis for R&D investments made by Indian companies for developing any of core telecom products such as those needed for 5G networks.
- IPR Incentives: Indian NATEM companies should be provided special financial support for filing domestic and international patents in the form of reimbursement of up to 50% of the costs on filing and maintaining patents. Adequate funds should be made available for participation in global standards bodies such as ITU, 3GPP, IEEE etc. so that we can drive future standards. Travel grants to the tune of 50% may be given to cover such costs.
- Prior to 2015, all DSIR certified R&D organizations were given a 200% weighted R&D deduction for tax purposes. Considering the strategic importance of domestic R&D in the telecom sector, the incentive should be reinstated for the next 5 years.
- Incentives to Service Providers on deployment of locally designed telecom products and solutions under this scheme should be announced. There will be companies who have built 5G and state of the art products but wait for market access. **Incentive options are already part of Digital Communication Policy 2018, can be used as one of the conditions even at the time of 5G Spectrum auction.**

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?

- i. Electronics Development Fund (EDF) was set up as a “Fund of Funds” by MEITY to participate in professionally managed “Daughter Funds” which provide risk capital to companies developing new technologies in the area of Electronics, Nano-electronics and Information Technology (IT). The fund is fostering R&D and innovation in these technology sectors. EDF enables creation of an ecosystem for providing risk capital to industry to undertake Research and Development in these technology areas. However, EDF does not meet requirements of R&D in Telecom and upcoming technologies like 4G, 5G etc. Earlier TRAI Recommendations had supported creation of Telecom R&D Fund (TRDF), Telecom Entrepreneurship Development Fund (TEDF) and Telecom Manufacturing Promotion Fund (TMPF). These are still relevant and needs to be supported.
- ii. A specialized telecom R&D corpus may be carved out of EDF to promote NATEM in India. Besides supporting R&D activities, there should also be a set-aside for a Sovereign Patent Fund (SPF) similar to one by countries South Korea, France, Japan and China. It should be used to negotiate licenses for essential/ background patents/IPR from global players for 5G and 6G technologies on FRANDS terms. SPF can also be used to reimburse 50% of patent filing costs by Indian NATEM companies.

The Union Budget 2022-23 has earmarked 5% of annual collections from the Universal Service Obligation Fund towards promotion of R&D and commercialization of technologies. Today approximately 60,000 crores are lying in the USO Fund, which translates to a starting corpus of Rs 3000 crores that is available for indigenous R&D immediately. Going forward, with nearly Rs 6000 crores collected yearly, this would translate to an additional Rs. 300 Crore + added to this corpus – and available for R&D.

This could be a new additional option available, but TRAI Recommendations earlier are still very much valid.

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.

The earlier TRAI Recommendations if implemented would have give a positive support for promoting NATEM in India. **TRAI should Reiterate early implementation of its earlier Recommendations for the success of AtmaNirbharta in Telecom sector.**

Companies (large/SME) today are seeking to make strategic investments or M&A through their own funds - either internal or through structured venture funds. Efforts such as EDF or others proposed should include co-investment in such corporate venture funds as well, not just independent venture activity. Further a 30-70 (industry-Govt) contribution for large corporate funds & 50-50 (industry-gov) contribution for SME funds may be considered.

Technology

Radio Access Network (RAN) and Core network design development using software stacks from ground up or a licensed or open-source stack require tremendous engineering efforts. Developing, integrating these stacks with other components, and hardening the software stacks to make them carrier grade is one of the biggest gaps in the sector. It requires large investments. A staggered investment/ funding for design of 5G products at various stages of technology readiness levels is needed.

The R&D Fund should also focus on:

- How to speed up R&D which is already in progress to reach intermediate goals towards market reach through Research Gap Analysis
- How to engage and Fund the right mix of start-ups/ academia/ industry/ sectors
- How to engage PSU/ academia as a hub of viable development regionally, technically, domain wise, sector wise
- How to retain talent pool in priority research areas [Talent Retention]
- What explicit strategies can be adopted to alleviate the risk that government projects suffer from time/ decision delays
- How to establish the success-failure assessment criteria. And to accept failures as a learning and not as an end.

Telecom Product Fund

- **Telecom Product Fund** can establish a corpus to promote indigenous R & D, IPR creation, entrepreneurship, manufacturing, commercialization and deployment of state-of-the-art telecom products and services during the 12th Five Year Plan period. To realize this vision, the Telecom Product Fund will be divided into three distinct schemes, namely, the
 - Telecom R&D Fund (TRDF),
 - Telecom Entrepreneurship Development Fund (TEDF) and
 - Telecom Manufacturing Promotion Fund (TMPF).

A multi-pronged scheme incentivizing Indian R&D is required to address challenges faced by domestic telecom industry so that innovation, incubation and global scale operations can be supported.

INNOVATE

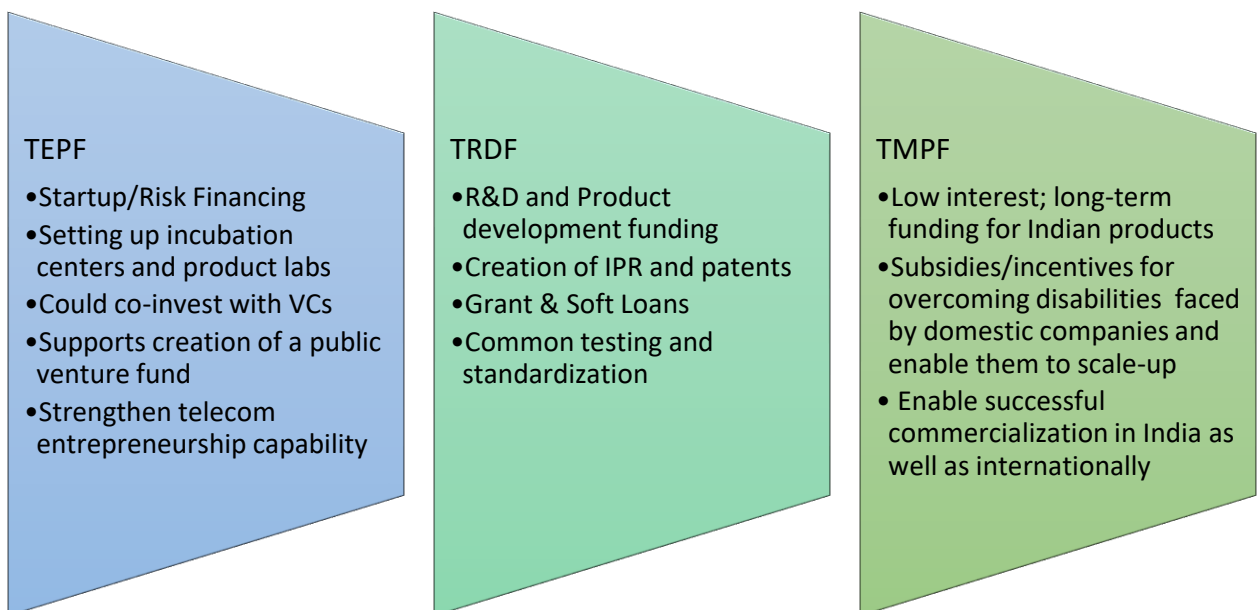
- R&D and Product development
 - Creation of IPR and patents
- Soft Loans & Grants (exceptional cases)
- Common testing and standardization

INCUBATE

- Startup/Risk Financing
 - Incubation Centers, Accelerators, and Innovation labs
- Strengthen telecom entrepreneurship leadership and engineering capability

GLOBAL SCALE

- Low interest, long-term funding for Indian Products
 - Subsidies/incentives to overcome disabilities
 - Promote success in India and also globally
- The implementation of these three schemes could have harmonized and incentivized indigenous development of telecom products and meet the end-to-end funding requirements of telecom R&D starting from the ideation stage to incubation and commercial growth stages.



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- Telecom R&D Fund

- The “Telecom R&D Fund” could support the following:

- To fund commercially viable product development with current/future market potential by Indian telecom companies and R&D labs including early-stage prototype development in high-potential areas such as VLSI chip design, embedded software for telecom gear and secure elements, equipment’s, terminals (including mobile and tablets) and customer premise equipment,
- To fund projects with a clear focus towards development of products/services, including those which may have potential for generation of patents/IPRs, possible inclusion in international standards. This will also include funding acquisition of patents and IPRs at a country level.
- To create common testing and Innovation Lab facilities in public/public-private partnership (PPP) mode.

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- Telecom Entrepreneurship Development Fund

- The “Telecom Entrepreneurship Development Fund” could support the following:

- Establish a conducive and world-class ecosystem for transforming innovative ideas to products and services for telecom start-ups
- Build new and leverage the existing incubation infrastructure (physical and technical) in India to provide world-class support to innovators and entrepreneurs to build global companies that are based in India.
- Leverage the human resources and expertise existing in research/academic institutes in India to create a pipeline of entrepreneurial leadership and telecom engineering talent
- Accelerate Research and Spin-off technologies being developed by innovators into viable enterprises
- Attract the best brains in the country to collaboratively work towards solving problems of mass applications and creating indigenous solutions for areas of strategic importance such as space, energy, internal security and defence.

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- Telecom Entrepreneurship Development Fund

- The “Telecom Manufacturing Promotion Fund” could support the following:
 - i. Stimulate and promote the complete value chain of domestic telecom equipment covering R&D, design, IPR creation, testing and manufacturing of telecom equipment in the country. This shall also cover components and software that is required as a part of telecom equipment.
 - ii. Provides incentives and financing support to create a large and healthy ecosystem of globally competitive Indian telecom equipment companies, by removing fiscal and other impediments that are coming in the way of commercial success of Indian telecom products in India as well as internationally.
 - iii. Achieve increased self-reliance in telecom products (including handsets/tablets and customer access equipment), reduce imports and address national security concerns. Achieve NTP-2012 target of meeting 60% of Indian telecom sector demand with domestic value addition of 45% by 2017, and 80% of the Indian telecom sector demand with domestic value addition of 65% by 2020.
 - iv. Provide a thrust for exporting telecom products from India and make India a global hub for telecom equipment.

Forms of Funding

Telecom Product Funds may be disbursed in the following modes:

- **Soft Loans:** These will be soft-secured loans at concessional interest rates that will be given to Indian Telecom Companies for developing Indian Products. The collaterals will be in the form of physical assets and IPR generated, which can be taken over by the government in case of default.
- **Interest Subsidies:** In the telecom sector, large sums of working capital will be required, at competitive rates, by Indian Telecom Companies for their internal use and for providing long-term financing to customers (telecom operators). For such large requirements, the fund size will not be adequate and therefore these funds may be used to provide interest subsidy, while the actual lending will come from commercial banks.
- **Equity:** In the case of SMEs or telecom startups supported by TEDF, funds will be treated as an investment in the venture. Other variants of equity instruments such as convertible debentures may also be considered. All the investments will be as per guidelines issued by the Securities & Exchange Board of India (SEBI) from time-to-time. The typical investment horizon would be 5-8 years although lower periods would also be considered.
- **Soft Loans/ Grants (in exceptional cases):** R&D institutes and labs, telecom incubators,

societies and section 25 companies with telecom research and development focus could be provided Soft Loans/ Grants (in exceptional cases) for purchase of tools and equipment once the project proposal is approved.

- Post-performance Reimbursement: Indian Telecom Companies will be eligible for full or partial reimbursement of costs under various expense categories specified in the TRDF and TMPF funds.
- Exclusivity of loans: The organisations seeking loans under any of these schemes should not be getting benefits from any other scheme of the government for the same purpose.

Target Beneficiaries

The following attributes can be used for fixing the eligibility of beneficiaries of the Telecom Product Fund

- Companies are incorporated in India
 - More than 50% equity owned by Indian Citizens or Indian entities
 - Board constituted by majority of Indian Residents
 - CEO/CFO/CTO being resident Indian citizens and
 - Global headquarters in India

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Small and Medium Enterprises and other new startup ventures in the telecom sector with a focus on R&D and in the development of “Indian Products” will have a preference.

Product Criteria

- The Research must have an exclusive focus on telecom and digital products in the Key Areas as may be approved by DoT, DST or MEITY.
- The design and IPR should be exclusively owned by the Indian Telecom Company and revenues of global sales and commercial benefits of the Indian Product must accrue to Indian Telecom Company.
- The product should meet the minimum Domestic Value Addition norms specified by DoT for that specific product
- The design of the product, including hardware details and software source code, should be resident in India and be available for inspection by any agency designated by DSIR/ DoT.

Following steps can be considered as part of any funding support option.

New Processes		<i>Ease of Doing Business GST De-monetization</i>
New Sectors		<i>Major FDI reforms and inflows</i>
New Approach		<i>Make in India Digital India Skill India</i>
New Infrastructure		<i>Key Infrastructure and Urbanization</i>
New Innovation and R&D		<i>India – Design & Innovation Start Up India Intellectual Property Rights</i>
New Mind-set		<i>From red tape to red carpet</i>

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

Start-up have two challenges. One they have ideas but need funding. Second challenge is once the product is designed; they need market pull. First problem can be resolved if all grants (except for blue sky research) are disbursed through industry out of which 30% should be earmarked for start-ups. Presently most grants are given only to Academic institutions or Government labs. Industry / Start up in turn will disburse funds to academic institutions based on who will deliver as per the milestones and deliverables. Industry may be asked to put 25% of the project cost. This way Start-ups will get 100% fiscal support of which their risk is only 25%. They will be getting technology support and manpower from the academia. We have several funding agencies already like, DOT, MiETY, DST that are concurrently approving similar projects and very often to same institutions. Funds are largely allocated to Academia and often to the same group by multiple funding agencies. Involvement of Start-ups and Industry will ensure automatic correction. Only commercially viable projects will be approved and there would be interest in product commercialisation. This will ensure that funds go only to such academia who deliver the milestones and commitments to Industry. Academia should get promotions and growth based on commercial success of product deliverables (except for earmarked blue sky or strategic sector research programmes).

Second problem of market pull for the products which can be addressed by strong focus on implementation of PPP MII order in the desired spirit. To site an example, "Video Conferencing solutions" were developed in India. CDoT has developed excellent product, MiETY had launched a hackathon and awards of Rs 1 Crore given to start ups delivered the products and received awards. Many other companies developed such solution, yet Government largely uses foreign Video conferencing solutions. MiETY the ministry who gave the awards to winners of Video Conferencing equipment has on the contrary asked DPIIT to allow purchase of imported Video conference solutions that runs contrary to the objective of promoting domestic manufactured products of start-ups and new entrepreneurs. Such erratic response from different arms of the government will kill the spirit of all start-ups so sensitivity to implementation of PPP MII would be key to the success of start-ups.

Create exclusive Space for development & nurture of domestic solutions where infrastructure or resources are extended only to domestic designs Earmarking small chunks of bands for deployment of private 5G networks based on domestic technologies as an example can create an exclusive space for domestic players to nurture. Similarly creating exclusive space for domestic players for Drone technologies, Robotics, M2M and IOT. These may look marginal but would provide an elbow space for domestic companies to flourish without the threat of being torpedoed by large MNC giants who have global muscle.

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?

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

Q6.c. Are there any suggestions to further improve these financial instruments or are there any new proposed financial instruments?

New policies and insurance schemes have their own limitations and associated costs. Organisations like SIDBI will not fund capital required for purchase of Technology, Software or Services since these are non-tangible assets but are very critical for NATEM. Further SIDBI funds only 50% of the Capex on Dies and Tools which is bare essential to start manufacturing products in India. SIDBI is very conservative in many other ways. Commercial banks have the right mix of ingredients, and they cover their risks by taking collaterals from promoters which genuine entrepreneurs can always arrange for their needs. Ideal and simple mechanisms is if these banks could be extended 5 to 6% of interest subvention in select sectors.

We propose to promote the domestic stakeholders through EXIM bank to finance some of the mission critical or projects of national importance at same LOC terms and interest rates. We also propose to categorise some of such important project as deemed export as well to provide incentive and support to NATEM.

Existing financing instruments are unable to cater to the needs of NATEM in India, NTP 2012 had provisions for setting up a Telecom Finance Corporation, which failed to materialise.

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.

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.

MSME support requires modifications. Over enthusiasm in extending support to MSME may end up allocating Indian resources that may help promote interest of MNC companies while resources under the scheme were intended to help domestic MSME units manufacturing in India. Some of the schemes are counter-productive the way these are implemented presently. Schemes extend concessional credit to MSME, Exemption from payment of EMD, Bank guarantees and price preference to MSME, unmindful of the fact that MSME may be promoting an MNC product whereby Indian resources are indirectly supporting business of MNC products. It is common knowledge that CISCO, DELL, HP don't take projects in their own name and most large MNC companies sell products through Indian distributors or System Integrators who are technically MSME. Even Chinese products like cameras, phones, switches are sold by MSME traders or SI. This way Government budget to support domestic MSME manufacturers ends up helping MNCs market their product in India. Since bulk of

NATEM products are imported and sold through distributors of MNC companies so at a macro-economic level, we are spending more of our resources in helping our competitors. These policies need deep diving and course correction rather than make new policies.

For MSME biggest problem is market access. Most important for industry, is to create demand for their product where strict implementation of PPP MII order in the desired spirit is the key. Each violation of PPP MII order must be taken to a logical conclusion and not closed by merely forwarding the grievances to the buyer organisation responsible for policy violation. This becomes a problem as seller (domestic industry) is victimised by the buyer organisation and buyer department invariably closes the complaint giving some fuzzy logic or by making some commitments regarding setting up a committee that never happens. Innumerable such cases are known to DPIIT.

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.

Indian industry suffers cost disadvantage on account of various factors stated in the paper, largest of which is interest cost. Our interest cost is higher by about 5% compared to international standards. Independent studies by E&Y have clearly established that Indian companies making generic NATE equipment face up to 26% fiscal disability compared to their global peers in high value-added telecom manufacturing. Further, the disability rises to 29% for those product categories where buyer's credit is available on imports for a long period of time.

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.

Prior to 2015, all DSIR certified R&D organizations were given a 200% weighted R&D deduction for tax purposes. Considering the strategic importance of domestic R&D in the telecom sector, the incentive should be reinstated for the next 5 years.

Q. 11 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.

Comprehensive PPP MII policy designed to give preference to domestic manufacturers in public procurement is an excellent policy which can single handedly resurrect domestic manufacturing and encourage start-ups and new design companies. We regularly see large scale policy circumvention by big buyers like NBCC, CPWD, Railways, Dedicated Freight corridors, ONGC, Defense, Purchases by NIC NIXI STPI under Ministry of Electronics. Large projects like Central Vista Project, Central Secretariat redevelopment project have been circumventing the policy on the ground that policy is not implantable in Turnkey projects. There is a need to bring about clarity on methodology of policy implementation in turnkey projects and we are told by DPIIT that Department of Expenditure is not in agreement of making PPP MII applicable on such projects. Scope of policy needs to be enhanced to include state Government projects / world bank funded projects / Lines of Credit.

Rather than create new policies to boost procurement from domestic companies, it would be desirable to ensure proper implementation in the desired spirit and prevent large scale policy violation by large buyers. Multiple grievances have been submitted to DPIIT as well as DOT, yet issues remain largely unaddressed.

There are products that are manufactured in India and sufficient capacity and competition exists yet large-scale imports continue.

GeM

GeM is an excellent tool for consolidation of domestic market demand and this digital platform can be used to ensure / monitor proper implementation of policies designed to promote domestic manufactured goods. Large scale policy circumvention is observed but GeM insists on its limitations in ensuring correct declarations made by buyers as well as sellers. Incorrect and unsubstantiated certificates of domestic value addition are put by suppliers and remain unchecked. Similarly large buyers buy foreign products on GeM by issuing "Proprietary certificate" that defeats the purpose. Grievances are flagged but remain unaddressed for various reasons. Our marketplace GeM continues to place imported products on its shelves, in the name of neutral market and under the garb of "best price discovery" unmindful of the larger objective of the Government to promote domestic products. Buyers continue to flout, and Department of Expenditure supports circumvention of PPP MII order because they only focus on fast delivery of projects without being concerned about larger objective of building Aatam Nirbar Bharat. Need is policy implementation rather than making new or more policies.

Circumvention of PPP MII Policy

Circumvention of PPP MII policy is largely because large buyers tend to interpret various clauses of the policy differently hence industry has been requesting for issue of an FAQ (Frequently Asked Questions) to clarify on interpretation of various phrases used in the policy. Elaborate well-articulated FAQ should minimise disputes on policy circumvention by large buyers. FAQ formats have been prepared submitted to DOT as well as DPIIT in the last two years but that is not issued. It will mitigate the problem of policy circumvention.

Grievance redressal committee to hold regular meetings in DOT to address concerns of the manufacturers. This was very successful in ensuring policy compliance when JS (T) was holding them regularly till July 2020, but this practice was stopped on account of some inter-ministerial conflicts where Department of Expenditure questioned the authority of DOT to conduct such grievance redressal meetings. As per DOE authority to conduct such meetings was with standing committee of DPIIT. It is important to hold meetings in DOT since nodal ministry understands the technical issues involved much better and they can bring each grievance to a

logical conclusion unlike DPIIT who only forwards the grievance to the department responsible for violation which is a poor practice because industry tends to bear the brunt of it.

Security Sensitive Products

Department should declare appropriate telecom products as "security sensitive" and their purchase should be governed as specified in the cybersecurity policy, i.e such security sensitive products should be procured only from Indian technology owners where IPR, Technology, Design should be Indian. If domestically developed products are available, the same should be procured for all security-sensitive and mission-critical applications. Requirements to have many indigenously developed products (multiple bidders) may be relaxed in such cases.

Cost Disadvantage

Indian industry suffers cost disadvantage on account of various factors stated in the paper, largest of which is interest cost. Our interest cost is higher by about 5% compared to international standards.

Misdeclaration of HS codes

Mis-declaration of HS codes to circumvent imposition of customs duty is very rampant and must be nipped. Problem is that DOT asked for imposition of customs duty on functional parameters of product. Issue is regarding non implementation of the 2014 notification, when all items under HS classification 8517xxx were exempt from payment of duty. This notification made an exception from exempting VoIP, Optical, RF and Carrier Ethernet products from payment of duty which effectively meant that import of these products were to be subjected to customs duty from the applicable date. This custom duty was initially 10% and subsequently as per notification dated 11 Oct 2018 (attached) increased to 20%. Objective of the notification was to promote domestic manufacture of these new technology telecom products that were based on technologies that did not exist when ITA 1 agreement was signed by India.

Problem is that notification has levied customs duty based on functional parameters of the product because in the same HS classification there are products with these functional parameters and without these parameters. So, VoIP switches & Carrier ethernet products are imported under 8517 69 30 (router) which is exempt from duty. Similarly, GPON & VoIP phones are imported as 8517 69 50 (subscriber end equipment) which is also exempt from payment of duty.

- **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.**

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

Q: 12 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?

Market pulls or demand for products manufactured by industry is the single most important factor to resurrect industry. Ensuring that TSPs adopt domestic products will be a great boost in that direction. All efforts should be put in to ensure that PPP MII order is implemented by as many agencies as possible including purchases made by State Government and projects under PPP mode since they are all funded by Indian public at large. Success of existing manufacturers will motivate new start-ups and new upcoming design houses.

Government of India should leverage India's large home market demand to help domestic NATEM companies to achieve economies-of-scale. Besides strengthening the implementation and compliance to the Preference to Make in India (PMI) policy in all Government procurements and turnkey projects (on a line-item basis), it is Also important to motivate private sector TSPs with incentives in the form of license fee rebates, for procuring PMI-compliant equipment. This is because over 75% of the domestic spend on telecom equipment is done by private sector TSPs.

Q: 13 What should be the incentive structure (fiscal and infrastructural) for Telecom Product Development Clusters (TPDC) set up within the EMCs or separately?

An important component that can vastly enhance the utility of TPDCs is the creation of common testing infrastructure and testbeds (e.g., IITM testbed for 5G, 6G) within these clusters. Gol should provide access to this shared infrastructure at a reasonable cost to industry with replication at multiple locations and enabling remote access. As we move into the next-generation technologies for 5G advanced and 6G we can extend the Testbed to enable maturation, testing, PoCs, pilots of research ideas to enable development of SEPs based on Indian IPR. This needs to be a platform to foster collaboration, joint development and joint research between Indian Academia, Indian Startups & Companies. The testbed should also provide a pre-trial platform for Indian NATEM vendors and service providers.

Q: 14 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.

Mis-declaration of HS codes to circumvent imposition of customs duty is very rampant and must be nipped. Problem is that DOT asked for imposition of customs duty on functional parameters of product. Issue is regarding non implementation of the 2014 notification, when all items under HS classification 8517xxx were exempt from payment of duty. This notification made an exception from exempting VoIP, Optical, RF and Carrier Ethernet products from payment of duty which effectively meant that import of these products were to be subjected to customs duty from the applicable date. This custom duty was initially 10% and subsequently as per notification dated 11 Oct 2018 (attached) increased to 20%. Objective of the notification was to promote domestic manufacture of these new technology telecom products that were based on technologies that did not exist when ITA 1 agreement was signed by India.

Problem is that notification has levied customs duty based on functional parameters of the product because in the same HS classification there are products with these functional parameters and without these parameters. So, VoIP switches & Carrier ethernet products are imported under 8517 69 30 (router) which is exempt from duty. Similarly, GPON & VoIP phones are imported as 8517 69 50 (subscriber end equipment) which is also exempt from payment of duty.

Q: 15 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.

In order to promote NATE exports, Government of India should create National Champions in the telecom sector by identifying companies that have the potential to reach global size/scale and help nurture the domestic telecom product eco-system. Due to the capex intensive nature of the ESDM sector and the need for economies of scale, there are typically only one or two global sized companies in every country such as Huawei/ZTE in China, Cisco/Ciena in USA, Nokia/Ericsson in Europe, Samsung/LG in Korea hence India too should aspire to create such global leaders in the telecom sector. National Champions should be selected through a transparent process and should be supported in multiple ways-

- a. Matching grants/soft loans for R&D and new product development
- b. Commercialization support in the form of assured business in all government telecom projects
- c. In government tenders, even if there is only one "Indian Product", the same should be procured, rather than being imported.
- d. National Champions should be given an opportunity to supply at "fair" prices, based on already discovered global prices (or imports) and/or based on their cost structure.
- e. Active export promotion through a \$10B G2G lines of credit in bilateral trade so that global volumes can be generated

Q: 16 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.

We propose the creation of a dedicated Rs 1000 cr export promotion fund for telecom equipment and software products which will be used for hosting events, conferences and international "buyer-seller" meets that will showcase domestic companies to national and international customers. This will also enhance branding of India as a "Technology Product Nation".

Q 17: Stakeholders are also requested to comment on other relevant issues, if any.

Inverted duty structure for specific components

To support the domestic Equipment Manufacturing Industry of India, BCD on finished telecom equipment has been introduced by Customs on the Non – ITA products vide notification No 57/2017 dated 30th June 2017 and 75/2018 dated 11th Oct 2018 which is a welcome step for the Industry in line with our nation’s objective to become “Atmanirbhar” nation in the coming years.

However as regards the import duty on the components used in the manufacturing of certain products under 8517, there was an exemption under Not 50/2017 dated 30th June 2017 subject to following condition 9 of the Not 50/2017, namely “If the importer follows the procedure set out in the Customs (Import of Goods at Concessional Rate of Duty) Rules, 2017”.

Vide Notification 03/2021 dated 1st Feb 2021, the S. No 8 (v), (vi) and (vii) of Not 57/2017 have been omitted which means that for importing components used in the manufacturing of non-ITA products full duty has to be paid. Even though S No 5 of Not 57/2017 still provides exemption to components used in manufacturing of all goods. But such components must fall under tariff Item 85177090. Therefore, items, which are classifiable under 85176290 or any other HS Code, if imported for use in non-ITA products such as POTP equipment, the same would not get the benefit of the Not 57/2017.

This is a big setback for the domestic telecom equipment manufacturing industry. Some components such as transceiver are not general-purpose parts; rather they are very specialized parts which have no prospects of being manufactured in India in the next 5 to 7 years. On one hand while we are promoting domestic manufacturing and inviting even foreign OEMs to bring their manufacturing lines to India under various incentive schemes like PLI, but if there will be no provision for the Indian manufacturers to bring components in India at reduced duty rates, no OEM would have any incentive to do manufacturing in India. And this would go against Government’s focus on making India “Atmanirbhar”.

In view of the above we would like to request, till the time there is no component Industry available in India, no duty should be levied on the components for goods falling under 851762 or 851769, for the domestic manufacturers who own the finished products IPR in India. For the same Government may continue to grant exemption “If the importer follows the procedure set out in the Customs (Import of Goods at Concessional Rate of Duty) Rules, 2017”.

Effective Implementation of PMI in Letter and Spirit

- Strict enforcement of PMI in all Govt tenders- establish a nodal grievance cell in DoT for timely redressal
- Use of restrictive tender conditions must be avoided
 - Unnecessary technical and proven-ness requirements included to eliminate Indian products
- Enable single domestic bidders if they meet competitive reference price, quality and technical specifications
- DOT must take prompt action against the defaulters. There is a committee set up by DOT to evaluate the Local Value Addition based on complaints raised by the domestic manufacturers. DOT must set a process to execute the recommendations made by the committee in time bound manner.
- Majority of the projects in Non – Telecom sectors such as civil, power, railways or other even USOF projects has small portion of active telecom equipment. The PMI policy must state the Local Value Addition in such

projects must be counted for only Active Telecom products without including value addition made in Civil, services or other passive infrastructure (USOF LWE projects, Central Vista, many LOC projects, Power and Railway projects are typical example)

- Incentivize private operators to buy Indian products through a rebate in their annual license fees in proportion to quantum of domestic telecom equipment procurements
 - Private telecom operators account for nearly 75% of the total spending, hence should be incentivized to buy domestic products.
 - This was already recommended by TRAI and covered in NDCP 2019
- Need to plug loopholes where Chinese products are being assembled/imported
 - Strict action for mis-classifying imports to avoid paying customs duties.
 - Strict enforcement of MTCTE and Trusted Source policies

Some additional comments

- Distinction between R&D/ product design and manufacturing must come out much more clearly in our policy making. PLI's primary purpose is to foster manufacturing infrastructure & job creation. As such there is a synergy between talking of product design within PLI, as suggested, in the form of DVA. Promoting indigenous products cannot be viewed through a 'turnover' lens as PLI does. There will have to be stricter filters on IP ownership leading to higher DVA in public and private procurement. Incentives for procurement of products with domestically held IP should be thought of in parallel to efforts to enhance manufacturing capabilities.
- R&D/ Product design are riskier elements compared to manufacturing as such fiscal + regulatory support should take risk-of-failure into account for efforts beyond project-mode school of thought.
- Lastly, everywhere design/ R&D is considered, it should mean both software + hardware R&D; that's the need of the hour.
-
- PRODUCTS / SOLUTIONS that have multiple domestic designers/ manufacturers should be part of DOT's Public Procurement (Make in India) Notification and are given in following Annex I.

ANNEX I

ATMA NIRBHARATA

PRODUCTS / SOLUTIONS

Need to be part of DOT's

Government's Public Procurement (Make in India) Notification

Domestic Designed Products with Multiple suppliers/ Global Innovative products
1. Encryption/ UTM platforms (TDM and IP) (Unified threat management)
2. IP/ MPLS Core routers/ Edge/Aggregation/ Enterprise Router
3. Managed Leased line Network equipment - N*64 Kbps
4. Ethernet Switches (L2 and L3)
5. IP based Soft Switches, IMS, Unified Communication Systems
6.1 Wireline PABXs / IP PBX
6.2 Media Gateways
7.1 CPE (including Wi-Fi Access points and Routers, Media Converters),
7.2 2G/ 3G/ 4G LTE/5G Modems
7.3 Leased-line Modems n* 2Mbps
7.4 NFV/ SDN CPE
8. Set-Top Boxes
9.1 SDH/ NG-SDH
9.2 Carrier Ethernet/MPLS- TP/ Packet Optical Transport equipment/ PTN systems
10. DWDM/ CWDM systems
11.1 GPON equipment (including ONT and OLT)
11.2 XGS-PON,
11.3 NG-PON2
12.1 SDH/ PDH Cross Connects
12.2 Optical/ OTN Cross-connects
13.1 Small size 2 G GSM based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB
13.2 Small size 3 G based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB, C-RAN BBU and RRH
14. 2G GSM based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB, C-RAN BBU and RRH
15.1 Small Size LTE/ LTE-R Based Mobile Systems, with its various derivatives including rural & disaster communications, Macro & Micro eNodeB, Small Cells, EPC, NIB C-RAN BBU and RRH, LTE/ LTE-R/ LTE Advanced based broadband wireless access systems (eNodeB, gNB, EPC, etc.) in all standard LTE bands in the country

15.2 Micro eNodeB, Category 2, TEC ENB GR (TDD/FDD)
15.3 Pico eNodeB, Category 2, TEC ENB GR (TDD/FDD)
15.4 EPC (Enterprise class)
15.5 4G NIB Small cell
16.1 LTE/ LTE-R Based Mobile Systems, with its various derivatives including rural & disaster communications, Macro & Micro eNode B, Small Cells, EPC, NIB C-RAN BBU and RRH, LTE/ LTE-R/ LTE Advanced/ based broadband wireless access systems (eNodeB, EPC etc.) in all standard LTE bands in the country
16.2 5G Based broadband wireless infrastructure systems including gNodeB, 5G Core
17. Wi-Fi based broadband wireless access systems indoor & Outdoor (Including Access Point, Aggregation Block, Core Block), Access Controller
18. Radio systems (IP/ Hybrid), Mobile Front haul BBU and RRH (CPRI, eCPRI, FlexE, RoE, NGFI)
19. Software Defined Radio, Cognitive Radio systems (all bands)
20. Repeaters (RF/RF-over-Optical), IBS and Distributed Antenna systems (indoor / outdoor) including Active & Passive Accessories
21. Satellite based systems
21.1 VSAT Systems
21.2 VSAT terminal Subsystem - IDUs, SCPC, MFTDMA (Mesh, Star)
21.3 VSAT Terminal Subsystem - ODUs, BUC, LNB, Antenna
21.4 VSAT Hub Subsystems
21.5. Disaster Communication Systems etc., including backpack satellite products
21.6. Satellite based IoT Systems including location, resources tracking
21.7.1 Two-way MSS Data Terminals (Satellite Receivers with location data) (Satellite IoT devices for various applications position tracking, messaging etc.)
21.7.2 One Way Receivers (Satellite Transmitters & Receivers)
21.7.3 Hub side Baseband Equipment & Software (Satellite Broadcast receivers, IP receive only terminals, Portable messaging terminals, Location reporting terminals)
21.8 Other satellite equipment (Burst & Continuous Modems/ De-modems, TDM & Burst Modulators, Hub-NMS Software, IP Encryptors)
21.5 Satellite Phones
22. Copper access systems (DSL/ DSLAM), high-speed xDSL (G.fast)
23. Telecom Network Management systems (NMS) including Operation Support System (OSS), Billing Support System (BSS), Trouble Ticketing System (TTS)
24. Telecom OSS with its various derivatives
24. Telecom OSS with its various derivatives
25. Security and Surveillance Communication Systems (video and sensors based) including Perimeter Security Systems
26. Optical Fibre (OH, underground, submarine) & accessories
27. Telecom Power System (Including Solar Power)
28. Telecom Batteries (Lead Acid & Li-ion)
29. IP audio phones / IP video Phones / Analog adaptor
30. SDN Software Controllers, NVF and CNF software

31. Services from Telecom Cloud infrastructure/ Telecom Data centers
32. 2-way Analog/ Digital radio including Walkie-Talkie & Mobile Radio
33. Batteries of 2-way Analog/ Digital radio including Walkie-Talkie
34. Optical Fibre Monitoring System
35. M2M/ IOT Subsystems including NB IoT in different verticals
36. Gateways: GSM, VOIP, Signalling,
37. Remote Piloted Aircrafts (RPA Drones / UAVs (Unmanned Aerial Vehicles))
38. Camera including long range camera, IP camera & Recorders, Night vision cameras
39. Telecom Billing Support System (BSS) with all its derivatives
40. Video Conferencing Applications
41 Terrestrial Communication: Line of Sight (LoS) antennas (Pt-Pt & Pt-Multi Pt)
42 Satellite Communication- Ground/ Earth Station Antennas
43. Lawful Logging Platform - IPFIX, Syslog, CG-NAT, NAT logs, etc.
44. CAP based Early Warning Platform for Disaster situations
45. Cloud Computing
46. GNSS based Time Servers: Time Synchronisation and Standalone GNSS receiver
47. Conditional Access System for Broadcast networks
48. Embedded Transaction Device
49. Digital Rights Management (DRM)
50. USB based security device
51. Light-Fidelity (Li-Fi) Technology based Access points and receiver for Short-range Indoor Communication
52. Secure Chat and Call Platform
53. Quantum Key Distribution (QKD)
54. Time Reference Server
55. DMR (Digital Mobile Radio in UHF & VHF band)
56. AAA & TACACS appliances for smart cities
57. U1 optical amplifier
58. 5G Channel Recorder and Spectrum Analyzer
59. Pre-fab shelter for BTS/Exchanges
60. 5G Core Testing Tool
61. 5G NAS STACK
62 5G Edge networking platform
63. 5G Satcom
64. Integrated back haul 5G relay systems
65. mm Wave Systems
66. Mobile Phone for Broadcast Signals
67. NB-IoT Geo Satellite Systems

68. NB-IoT Skylo Hub
69 Home Automation based on Wi-Fi or sub-GHz solutions including sensors, remotes
70 IoT Modules (Wi-Fi, LoRa, 802.15.4g, NBloT based modules)
71. Towers / Masts / Poles
72. 5G Based Mobile Systems
73. 5G CPE
74. Over-the-Air Technology
75. Drone Communication Management
76. SCADA System for Telecom Networks
77. Cyber Threat Detection, Visibility and Forensics
78. Unified Communications and IP Telephony
79. Customer Premises Media Gateways
80. VoIP and SIP Phones (User Terminals Phones)
81. Power Line Communication Carrier Equipment
82. Secured OTP System to avoid frauds
83. SIM Applets for Subscription Management & Control
84. Remote management platforms for SIM, Subscription and Device enablement
85. Position, Velocity & Time Data and Alarms Management
86. Remote Device Management & Data Acquisition
88. IoT based SCADA Devices
89. Secure Element based Identity and Encryption Systems
90 IP TV
91. Mesh network of Hardware, Cloud, analytics, and Software
92. Telecom & IT Software Solutions
93. Telecom Consultancy
94. Smart City Solutions