

DEFENCE PRODUCTION POLICY 2018

1. PREAMBLE

1.1 Self-reliance in defence production has been the goal of India's defence production strategy since 1960s. Government has also announced a Defence Production Policy 2011. Significant progress in domestic defence production has been made. India's defence production in Defence Public Sector Undertakings (DPSUs) and Ordnance Factory Board (OFB) has progressively increased from Rs. 43,746 crores in 2013-14 to Rs. 55,894 crores in 2016-17. Defence PSUs like Hindustan Aeronautics Limited (HAL) in aerospace, Mazagon Dock Shipbuilders Limited (MDL), Garden Reach Shipbuilders & Engineers Limited (GRSE), Goa Shipyard Limited (GSL) and Hindustan Shipyard Limited (HSL) in naval, Bharat Dynamics Limited (BDL), BEML Ltd, Mishra Dhatu Nigam (MIDHANI) & Ordnance Factory Board (OFB) in land systems and Bharat Electronics Limited (BEL) in electronics have emerged as significant players in the defence production ecosystem in the country. Several platforms like Air Defence Missile System 'Akash', Light Combat Aircraft 'Tejas', Main Battle Tank 'Arjun', Ballistic Missiles like 'Prithvi', 'Agni', Multi Rocket Launcher System 'Pinaka', Central Acquisition Radar have been designed and produced indigenously and several others like Fighter Aircraft Sukhoi Su-30 MKI & T-90 Tank have been produced based on transfer of technology. The Private sector and Public-Private partnerships through Joint Ventures (JVs)/ Foreign Direct Investment (FDI) have also joined the national effort in building the domestic defence and aerospace industry. However, it is also true that despite some salient achievements of our defence and aerospace production ecosystem, a significant part of our defence requirements continue to be

dependent on imports. India has become one of the largest importers of defence goods and services in the world. This needs to change.

1.2 A vibrant domestic defence industry is a crucial component of effective defence capability, and to maintain National sovereignty and achieve military superiority. The attainment of the same shall ensure:

1.2.1 Strategic independence

1.2.2 Sovereign capability in selected areas

1.2.3 Cost effective defence equipment

1.2.4 Collateral benefits ensuing from the endeavours of the defence industry

1.2.5 To reduce the life cycle cost through indigenous sourcing, facilitating life extension and upgrades of platforms and systems

1.3 R&D and innovation are important determinants of defence production capabilities. The technology change in the information arena, the biological arena and the nano-technology arena is not only going to have a profound impact on military operations, but will also require a much more responsive defence industry, especially in light of the decreasing predictability of future needs. However, we continue to manufacture several technological platforms under licensed-production. World over, defence has been a major reason and determinant of technological growth and development. We need to develop cutting-edgetechnologies, including additive technologies, to be able to achieve leadership in defence products and materials.

1.4 India has emerged as a top destination for R&D Centres in the world, ahead of US China in 2015 and the trend continues. The R&D strength of India needs to be channelized for creating domestic IPR for defence needs.

With the launch of Start-Up India program, India has also become the hotspot of start-up activity in the world, having the third-largest start-up ecosystem globally. These strengths need to be leveraged to catapult India as a developer of next level of frontier defence technologies in the world, in the field of aerospace and defence.

1.4.1 New and emerging technologies like Artificial Intelligence and Robotics are arguably the most important determinants of defensive and offensive capabilities for any defence force in the future. Most leading countries are working frantically to achieve leadership in these technologies. Cyber space has opened the fourth domain of warfare, beyond Army, Navy and Air force. India, with its leadership in IT domain needs to use this technology tilt to its advantage.

1.5 Government has as part of its 'Make in India' programme has given a new impetus to development of defence production in the country both for its need and also for exporting to friendly countries. Several initiatives have been taken in the last three years to promote greater participation of industry. These include revision in Defence Procurement Procedures to introduce 'Make-I' and 'Make-II' processes, introduction of Strategic Partnership Model, increase in FDI through automatic route to 49%, restricting licensing requirements for critical items, denotifying several items previously produced only by OFBs for production by industry etc.

1.6 Defence Production Policy 2018 attempts to further build on these initiatives and provides a focused, structured and significant thrust to development of defence design and production capabilities in the country.

2. **VISION**

To make India among the top five countries of the world in Aerospace and Defence industries, from design to production, with active participation of public and private sector fulfilling the objective of self-reliance as well as demand of other friendly countries.

3. **GOALS AND OBJECTIVES**

The policy has the following goals and objectives:

3.1 To create a dynamic, robust and competitive defence and aerospace industry as an important part of the 'Make in India' initiative.

3.2 To create a tiered defence industrial ecosystem in the country.

3.3 To reduce current dependence on imports and strive to achieve self-reliance in development and manufacture of following weapon systems/platforms latest by 2025:

3.3.1 Fighter Aircraft.

3.3.2 Medium Lift, Attack and Utility Helicopters.

3.3.3 Warships.

3.3.4 Land Combat Vehicles.

3.3.5 Autonomous Weapon Systems.

3.3.6 Missile Systems.

3.3.7 Gun Systems.

3.3.8 Small Arms.

3.3.9 Ammunition and Explosives.

- 3.3.10 Surveillance Systems.
- 3.3.11 Electronic Warfare (EW) Systems.
- 3.3.12 Communication Systems.
- 3.3.13 Night Fighting Enablers.
- 3.3.14 Submarines/Submersibles.
- 3.3.15 Unmanned Aerial Vehicles.
- 3.3.16 Training Equipment and Simulators

3.4 To achieve a turnover of Rs 1,70,000 Crores (USD 26 Bn approx) in aerospace and defence goods and services by 2025 involving additional investment of nearly Rs 70,000 Crores (USD 10 Bn approx) creating employment for nearly 2 to 3 Million people.

3.5 To achieve export of Rs 35,000 Crores (USD 05 Bn approx) in defence goods and services by 2025.

3.6 To make India as a global leader in Cyberspace and AI technologies.

3.7 To facilitate inculcation of zero defect zero effect (ZED) manufacturing culture amongst MSMEs resulting in creation of quality conscious and responsible manufacturers.

3.8 To create an environment that encourages R&D, rewards innovation, creates Indian IP ownership and robust and self-reliance defence industry.

4. **STRATEGIES**

The Policy is centered on following pillars:

4.1 Fostering a competitive, innovative and robust defence and aerospace industry.

4.2 Encouraging collaborations to acquire latest technology, manufacturing processes, skill-sets and R&D.

4.3 Providing a boost to MSMEs and Start-ups.

4.4 Strengthening infrastructure, including Quality Assurance/Quality Control/testing labs, both within public and private sector.

4.5 Enabling ease of doing business.

4.6 Enhancing defence exports.

5. **EASE OF DOING BUSINESS IN DEFENCE PRODUCTION**

5.1 To make it easier to do business with defence, particularly for innovators, small and medium-sized enterprises and non-traditional defence suppliers, the following is proposed:

5.1.1 Necessary enabling provisions will be brought in to enable Startups and MSMEs to participate in transparent and fair manner, without having restrictions of turnover, prior experience if they meet technical and functional requirements.

5.2 Undertake ‘Competency Mapping’ of private defence industry including MSMEs, to establish their core competence/ability to absorb various technologies. Towards this, a new Portal will be opened shortly on DDP website to improve engagement with industry and to facilitate collection/updation of requisite inputs directly from the Indian industry/suppliers. The Portal will also be used to flag new procurement opportunities, as well as explaining new policies and processes.

5.3 Defence Investor Cell in Department of Defence Production will provide handholding to MSMEs and other investors in defence production, as also to resolve issues with Central, State and other authorities.

5.4 **Technology Perspective Capability Roadmap (TPCR)**, which lists out the platform/weapon systems being considered for procurement in the next 10 year timeframe by our Services will be hosted on Department of Defence Production website to provide our private industry greater visibility into the likely opportunities in the defence sector. Understanding future capital priorities will allow industry to position themselves in an optimal manner to compete at the appropriate time.

5.5 The Simplified Make-II process of Defence Procurement Procedure(DPP) 2016 will be further streamlined to make it easier for industry to enter in defence production sector.

5.6 Simplified Make-II process provides for proactive suggestions from industry for consideration by services. Services would be encouraged to consider such proposals received from industry.

5.7 Sample survey shall be carried out involving industry units in defence clusters to identify bottlenecks in doing business in defence. Policies will be streamlined based on these feedbacks.

6. **SYNERGY BETWEEN DEFENCE PROCUREMENT AND DEFENCE PRODUCTION**

In order to provide impetus to domestic manufacturing, it is stipulated that the items enclosed at Annexure-I, would not be imported from 2022 onwards.

7. **LICENSING PROCESS**

7.1 Licensing process for defence industries will be liberalised. The list of items requiring licenses will be reviewed and pruned. Except a small list comprising of weapon system/platforms/equipment of combative nature, other items will be taken out of purview of licensing.

7.2 All applications for licenses will be disposed of in time bound manner. NOCs/Comments from all agencies must necessarily be received within two weeks.

7.3 Favourable consideration will be given to the track record of companies for purpose of renewal or additional license.

8. The practice of ex-ante capacity assessment of industrial units will be done away with, in general. Suitable safeguards will be ensured in the Request for Proposal (RFP) through Earnest Money Deposits(EMDs) and performance Guarantees. Only in exceptional cases, involving big value of extremely critical projects, ex-ante capacity assessment will be undertaken.

9. **OPEN COMPETITION**

9.1 Open competition, besides maximising returns on money, is the greatest driver for innovation and productivity, and therefore will remain at the core of defence procurement.

9.2 Revenue procurement and outsourcing of services will be progressively made competitive through increased participation of industry.

9.3 Only niche/core products will be manufactured by OFB. Several non-core items have already been de-notified from the OFB list and Ordnance Factories are competing with industry for supply of these items. This list of items will be progressively reviewed.

10. **FDI**

10.1 FDI regime in defence will be further liberalised.

10.2 FDI up to 74% under automatic route will be allowed in niche technology areas to be notified separately.

11. **OFFSETS**

11.1 New investment linked avenues for discharge of offset obligations will be made available which will also enable certainty and quick discharge of offsets.

11.2 The end-to-end offset process will be made digital to ensure speedy, transparent and efficient management of offset obligations.

11.3 Independent External Monitors (IEMs) will resolve issues arising from claims of offset in a fair, speedy and transparent manner.

11.4 Offsets policy would be further simplified.

12. **TAX**

12.1 Tax regime will be rationalized to make domestic manufacturing attractive by ensuring there is no tax inversion.

12.2 Taxes on import of capital goods and services, inputs and components used in defence production will be rationalized in this regard.

13. **MARKET CREATION**

13.1 Aggregation and standardization of demand over medium to long term will be the accepted broad policy for attracting investment in major defence production areas. Aggregation of such demand will help attract greater investment interest and reduce prices of identified goods and services. Wherever feasible, aggregation of such demand will also be done

across non-defence sectors including the needs of internal security, civil aviation sector, shipping sectors etc.

13.2 Wherever applicable, lifetime support for large platform will be included while inviting bidders to set up production facility. This will enable setting up adequate facilities for spare, repair and maintenance during the life-cycle of the platform.

14. **VENDOR DEVELOPMENT AND OUTSOURCING**

14.1 Ordnance Factory Board (OFB) and Defence Public Sector Undertakings (DPSUs) will focus on system integration, design and development, and will actively engage domestic vendors in the private sector for other assembly work.

14.2 Similarly, private defence majors will also be encouraged to play the role of a System Integrator and setup an extensive eco-system comprising development partners, specialised vendors and suppliers, particularly from the MSME sector.

15. **INFRASTRUCTURE DEVELOPMENT**

Success of the policy is dependent upon a genuine partnership with industry, which helps to build a robust defence eco-system and creates jobs across the country. Towards this, following steps are envisaged:

15.1 **Defence Industry Corridors:** Two Defence industry Corridors will be set up in collaboration with States to provide state-of-the-art infrastructure and facilities for setting up defence production facilities.

15.1.1 These Defence Corridors will be built on existing defence production facilities and will set up new industry clusters to create a synergistic supply chain of MSMEs and Original Equipment Manufacturers (OEMs) with necessary testing and certification

facilities, export facilitation centres, technology transfer facilitation etc.

15.1.2 Subject to approval of the competent authority, Government of India will contribute upto 50% of assistance subject to a ceiling of Rs 3000 Crores to the Special Purpose Vehicle (SPV) set up for development of each defence corridor. The SPV will take up projects for creating necessary eco-system for defence production in these corridors.

15.1.3 In each Defence Corridor, one major cluster of defence production units around an anchor unit will be developed in one of the Nodes of the Defence Corridor.

15.2 **Testing Infrastructure**

15.2.1 The existing testing infrastructure with Defence organizations will be made available for private industry use.

15.2.2 Government will also set up testing facilities for industry use.

15.2.3 Create a scheme for providing upto 75% assistance to industry to set up common testing facilities subject to a ceiling of Rs 75 crores per facility. Detailed scheme will be notified separately.

16. **BOOSTING OFB AND PUBLIC SECTOR**

16.1 Government will support infusion of new technology/machineries in OFB/DPSUs to enable them take up advanced manufacturing/development of futuristic weapons and equipment.

16.2 OFB/DPSUs will be encouraged to increase productivity and timely execution of orders by addressing issues of high inventory handling, greater vendor outsourcing, improving skill levels, overall program management etc. Greater use of IT based systems including systems for supply chain

management customer relationship management, data analytics, etc, will be adopted.

16.3 OFB/ DPSUs will be mandated to outsource a minimum of 50% of their work content by 2025.

16.4 Ordnance Factories will be corporatized to make them competitive and improve their productivity.

16.5 Disinvestment of minority stake in DPSUs will be pursued.

16.6 DPSUs/OFB will explore acquisition of technology through mergers/acquisitions globally.

16.7 DPSUs/OFB will be encouraged to explore partnerships so as to avoid duplication of production facilities and idling of existing facilities.

16.8 Cyber security framework will be put in place for DPSUs and OFBs to prepare them for leveraging capabilities of cyber space in their respective functions.

17. **STANDARDIZATION AND QUALITY ASSURANCE**

17.1 The quality control process will be reviewed and aligned as per international standards and global best practices.

17.2 Simulation based testing will be encouraged and greater emphasis will be laid on acceptance of certification from accredited laboratories. Towards this, Directorate General of Quality Assurance(DGQA)/DGAQA will promulgate a detailed list of environmental tests, which are supportable by certification/simulation, for reference of industry.

17.3 Accredited third-party bodies and self-certification will be promoted for conformity assessment across all platforms and throughout value chain.

17.4 Pool of test beds/firing ranges/Quality Assurance (QA)- Quality Control (QC) labs will be mapped in the country and wherever required new Quality Assurance (QA)/Quality Control(QC) and testing facilities/labs will be setup both in the Govt departments as also the private sector.

17.5 Testing facilities of DGQA/DGAQA will be upgraded by inducting simulators and high end equipment, wherever possible, so as to avoid overloading of their testing facilities and thereby making the same available to the private sector.

17.6 DGQA will be encouraged to adopt statistical tools instead of resorting to 100 % testing of defence equipment even after testing of the item by the vendors as per applicable testing standards.

17.7 For the MSMEs to be more quality conscious, a comprehensive Defence Rating mechanism may be established for which the Zero Defect Zero Effect (Defence) initiative may be leveraged.

17.8 Systems will be put in place to ensure standardization, interoperability and harmonization of weapons systems.

18. **EXPORT PROMOTION**

18.1 Defence Expo and Aero India will be positioned as major global events to showcase India's capabilities in defence manufacturing, as also to encourage exports.

18.2 Subject to strategic considerations, domestically manufactured defence products of both public sector organisations and private industry will be promoted through Govt to Govt agreements and Line of Credit/Funding.

18.3 Indian Offset Partners will be encouraged to take up export of parts and accessories developed as part of offset process.

18.4 DPSUs/OFBs will set up export offices in countries having such potential with the objective of promoting exports actively.

18.5 Defence Export Organisation will be set up jointly with industry to promote export of Indian defence products abroad.

18.6 Defence Attachés will be mandated to promote export of indigenous defence equipment abroad.

18.7 Facilitate Joint Venture with foreign OEMs to meet the demand in their country.

18.8 The end-to-end export clearance process in the Department of Defence Production will be made online and time-bound.

18.9 In consonance with the provisions of Wassenaar Arrangement, Missile Technology Control Regime etc. India will allow free export of defence equipment/items to identified friendly countries. The validity of time period of export will also be liberalised.

18.10 The Industry Capability will be built by encouraging them to set up manufacturing facilities to cater to the global market even in areas where domestic demand is not clearly known at this time. commencing export oriented manufacture in lower end defence equipment.

19. **INNOVATION AND R&D**

19.1 While promoting the public sector based R&D ecosystem developed through DRDO labs, efforts will be made to create an active and healthy innovation and R&D ecosystem for Defence technologies in partnership with the industry and academia.

19.2 A High Level mechanism with involvement of Service organizations and HQIDS will be set up for identifying capability voids and defining critical technologies required for indigenous research/manufacturing in

consultation with industry and academia. They will provide advice regarding technology platforms/equipment/systems, which should be developed in the country in the medium and long term. Wherever required, Government will provide support for development of such platforms/equipment/systems.

19.3 R&D capability mapping will be done to identify defence related technologies. This mapping will cover DRDO labs, other public sector laboratories, academic institutions and industry.

19.4 Support will be given for speedily indigenising components/sub-assemblies from foreign OEMs, which are used for manufacture of final products under licensed production in the country.

19.5 Services/DPSUs/OFs have worked out formal arrangements for research with top end technical institutions in the country. This initiative will be encouraged and will be further spread to other academia/higher learning institutions to spur R&D in select fields as well as to build indigenous capacities to undertake substantial technology upgrades.

19.6 Centres of Excellence with industry participation and with Government support, will be set up in niche areas to enable development of frontier technology areas with active involvement of academia and R&D institutions.

19.7 Competitive funded prototyping will be pursued during the design process to address the multiple challenges of technical feasibility, affordability, producibility and supportability.

20. START-UPS

20.1 Start-ups will be involved in the technology development in aerospace and defence sectors.

20.2 Hackathons will be conducted on specific problem areas. Department of Defence Production and Department of Defence R&D will announce challenges for major defence R&D requirements for institutions to participate with well-defined outcomes. An amount of Rs 1000 crores will be allocated for this purpose for period 2018-2022.

20.3 A scheme titled Innovations for Defence Excellence (iDeX) will be formulated which will set up Defence Innovation Hubs throughout the country to provide necessary incubation and infrastructure support to the start-ups in defence area. Wherever required, private venture capital into the defence sector, especially for start-ups will be encouraged.

20.4 Government will come up with appropriate policy for Start-ups in strategic areas to monetise the newly developed technologies. The policy will, inter-alia, provide Right of First Offer to Government to acquire the technology through appropriate market based acquisition process.

20.5 An Intellectual Property Cell will be set up in Department of Defence Production for promoting creation of Intellectual property in the sector. The Cell will, inter-alia, provide legal and technical assistance for identifying and registering intellectual property in aerospace and defence related sectors.

20.6 Faster processing of intellectual property applications involving security of India defence and aerospace related technologies will be facilitated in accordance with relevant Intellectual Property Law.

21. AEROSPACE

21.1 Department of Defence Production (DDP) will consult all stakeholders and explore possibility of setting up an autonomous National Aeronautical Commission, in line with Nuclear or Space Commissions to bring focus to following important areas:

21.1.1 Leverage mutually beneficial links between military and civil aviation for expansion and, importantly, indigenisation.

21.1.2 Bring together diverse agencies for synergies in technology development, basic and fundamental research and production.

21.1.3 Create a scenario in which the benefits of a competitive environment are felt in all areas of the economy as a whole and the defence economy in particular.

21.2 Automotive component manufacturers and other similarly relevant industries will be encouraged, through appropriate skill development and technology upgradation initiatives, to transition to aerospace component design and manufacturing.

21.3 Financial and fiscal incentives will be provided for promoting MRO in aerospace sector.

21.4 The defence and aerospace contracts will be permitted a negotiated price variation clause and multi-currency bids for deliveries beyond 18 months.

21.5 Leveraging the design and manufacturing capabilities developed in the country for developing various flying platforms, Government will develop civilian aircraft of 80 to 100 seats over the next 7 years.

21.6 Capacities to produce various platforms, including Light Combat Aircraft (LCA), Advance Light Helicopter (ALH), Light Combat Helicopter (LCH), Light Utility Helicopter (LUH), Dornier 228 will be augmented to meet the requirement of forces as well as export. Appropriate models, including joint offshore manufacturing, will be explored for global market.

21.7 Global majors will be encouraged to set up manufacturing capabilities of their platforms in India, both to cater to domestic needs and export from India.

**22. ELECTRONICS, COMMAND CONTROL COMMUNICATION
COMPUTER INTELLIGENCE SURVEILLANCE
RECONNAISSANCE (C4ISR) TECHNOLOGIES AND CYBER
SPACE**

22.1 To leverage India's strength in IT/software area, a program to incentivise development of specific technologies relating to cyberspace will be formulated.

22.2 A Task Force involving experts from Industry, Academia, DRDO, and Government has been set up to chalk out the strategic roadmap for Defence in the area of Artificial Intelligence and Robotics has been set up recently. Necessary mechanism will be set up to implement the recommendations.

22.3 'Regulatory sandboxes' for Defence sector will be setup to encourage domestic design and manufacturing activities and for exploring the potential of emerging technologies such as artificial intelligence in the defence sector.

22.4 Support will be provided to strengthen cyber security infrastructure for defence related systems in the country.

22.5 Secure communication devices, secure microprocessors and secure mobile phone development will be supported.

22.6 Viability of chip-level fabrication (Silicon, GaN, etc.) will be supported in collaboration with similar efforts being taken up in Ministry of Electronics and IT.

22.7 Focus would be given to Middleware technologies to facilitate interoperability between equipment sourced from various sources and new induction.

23. SKILL DEVELOPMENT FOR DEFENCE AND AEROSPACE SECTOR

23.1 Support efforts for augmentation of skill levels amongst qualified workforce for employment in specialized fields and niche technologies in defence and aerospace sector.

23.2 Optimize utilization of captive training facilities and create additional infrastructure for focused skill development.

24. GOVERNANCE

24.1 Defence Planning Committee has been set up to analyse and evaluate all relevant inputs relating to defence planning and draw a roadmap for defence manufacturing ecosystem and strategy to boost defence export.

24.2 Department of Defence Production (DDP), Ministry of Defence will be the nodal department for implementation of the Defence Production Policy 2018. The strategies spelt out in the policy have also been broadly classified into short, medium and long term and are enclosed as Annexure II to this policy.

24.3 Legal framework will be put in place to ensure that technology and other sensitive information shared with industry is safeguarded and put in place. Trusted supply chains will be encouraged in defence production ecosystems.

24.4 All Acceptance of Necessity (AoNs) involving domestic production will be reviewed by Headquarters Integrated Defence Staff (HQIDS) in a time-bound manner and their implementation expedited. Those AoNs where

further progress is not likely, will be appropriately closed and necessary steps to issue fresh AoNs initiated.

24.5 Awards and Recognition are currently available for DPSUs and OFBs. DDP will institute similar awards and recognition for well-performing private industry and start-ups.

24.6 As far as possible, all requirements of forces will be manufactured domestically based on indigenous design and development. Where the capability to manufacture does not exist in Indian industry, transfer of technology or enhanced FDI will be considered to enable domestic production. Imports will be resorted only in exceptional situation.

24.7 The Government e-Marketplace (GeM) will be used for those items, which are repeatedly required for needs of the forces and for which adequate supplier base exists.

24.8 State Governments will be encouraged to come up with State specific aerospace and defence related policies to attract investment in this sector. Some states have already taken the initiative in this regard.

24.9 Department of Defence Production will hold regular interactions with all stakeholders, including industry, to foster a partnership model for growth of aerospace and defence sector in the country.

24.10 All stakeholders; DDP, Services, Department of Defence R&D, DPSUs will conduct regular Outreach Programmes in various parts of the country to interact with industry, especially MSMEs, to spread awareness about the potential opportunities, as also understand the challenges being faced by them. Setting-up of Zonal Liaison/Development Nodes will also be considered.

24.11 Services will also be encouraged to hand-hold defence industry through continuous interaction, sharing of information and arranging visits

to repair establishments/field depots for better understanding/appreciation of the requirements.

24.12 Public Procurement Order will be made applicable for procurement of those items in Defence sector for which tenders are global and domestic production capability exists.

24.13 Institutional data collection mechanism regarding Aerospace and Defence industries in the country, including production, export, import, will be put in place.

Annexure-I	
<u>ARMY (CAPITAL)</u>	
Sl No.	Item - Description
1	Towed and Tracked Artillery Guns
2	Small Arms (Assault Rifles, Carbines and Light Machine Guns)
3	Power Packs for Armoured Fighting Vehicle & Infantry Combat Vehicle (T-72, T-90 and BMP-II)
4	Night Vision Sight
5	Flares & Chaffs for Helicopters
6	Aerostat System
7	Uncooled & Cooled TI Sights
8	IR based Night Vision Devices
9	Minefield Breaching Equipment
10	Minefield Recording Equipment
11	HF & VHF Radio Communication Sets
12	Software Defined Radios
13	Simulators for ATGMs & Air Missiles
14	Camouflage equipment for Personnel, Vehicle & Equipment including Multi Spectral Camouflage Paints
15	Medium Altitude Long Endurance Remotely Piloted Air Craft (MALE-RPA)
16	Short Range RPAs
17	ATGMs (Man pack, Vehicle mounted, ICV, AFV and Heli Launched)
18	Vehicle Based Mine Scattering System
19	Assault Bridges
20	Pilotless Target Aircraft
<u>ARMY (REVENUE)</u>	
21	23 mm HEI/APIT
22	30 mm VOG 17
23	40 mm MGL/UBGL Amn
24	Grad BM-ER Rocket
25	Electronic Fuzes
26	Bi Modular Change System (BMCS)
27	30 mm HEI/T
28	All Tyres & Tubes for B Vehicle
29	All types of batteries for B Vehicles
30	Special Clothing (Rucksack 70 Ltrs, Extreme Cold Weather Clothing Suit, Snow Goggles, HAPO Bag)

	<u>NAVY (CAPITAL)</u>
31	Filters for various systems in Submarines
32	Deep Sea Side Scan Sonar Towing Winch
33	Digital Beam forming Based Satellite TV (DBBST)
35	Night Vision Goggle Adaptation Filters and Image Intensifiers
36	Three phase static inverters for aircraft
37	Detonator N5 MK2 for Charged demolition scare charge 0.5 Kg with VH2 based composition
38	Electronic Fuse for Anti-Submarine Rocket RGB 60
39	Universal Proximity Direct Action and Graze fuses for Gun Ammunition of 76 to 127mm.
40	Detonator 7 Sec Delay for Hand Grenade 36M
41	Expendable underwater targets
42	Upper Air Sounding System
	<u>NAVY (REVENUE)</u>
43	Type II battery for Submarine
44	Secondary battery for practice torpedo
45	High pressure water mist fire fighting system (HPWM-FFS) along with bilge fire fighting system for ships
46	Magazine Fir Fighting System (MFFS) for ships
47	Control System for Talwar Class of Ships
48	Stabilizer System for Talwar Class of Ships
49	PC Based expendable conductivity temperature measuring system at various depth
50	High Tensile steel for Submarine Pressure hull
	<u>AIR FORCE (CAPITAL)</u>
51	Aeronautical Information Distribution System
52	Targeting Pods
53	20mm Gun Ammunition
54	Electronic Fuzes for Aerial Bombs
55	Passive Air Defence System
56	EW Suite for MLH
57	HT Sets
58	Light Combat Aircraft (LCA) Mk 1A
59	Light Combat Helicopter (LCH) Limited Series Production (LSP)
60	Low Level Lightweight Radar (LLLWR)
61	Medium Power Radar (MPR) Arudhra
62	Low Level Transportable Radar (LLTR) Ashwani
63	Bird Detection and Monitoring Radar (BMDR)

64	High Power Radar (HPR)
65	Multipurpose Decontamination System
66	Chaff and Flares
67	Long Range Infrared Search and Track System (IRST)
68	Radar Warning Receiver (RWR) and Advance Self Protection Jammer (ASPJ)
69	Foldable Fibre Mat (FFM) for runway repair
70	125Kg bomb
71	Fuses for aerial bombs
72	70 mm Air to Ground Rocket
73	Long Range Glide Bomb
74	Long Range Air-Air Beyond Visual Range (BVR) missiles
75	Manoeuvrable Expendable Aerial Target (MEAT)
76	Upper Air sounding System (UASS)
	AIR FORCE (REVENUE)
77	Aircraft Tyres (for IL-76, Mig 29, An-32, Jagur, LCA, PC-7 & Hawk)
78	Aircraft Main Batteries (except OEM Supported Fleets)
79	Flight Data Milking & Analysis System
80	Multi Functional Displays
81	Airborne Solid State Flight Data Recorder
82	Training Simulators for Existing Ground Systems
83	Tow Tugs

Defence Production Policy 2018 (Strategies)

S.No.	Strategy	Short Term	Medium Term	Long Term
1.	5.1.1 Necessary enabling provisions will be brought in to enable Startups and MSMEs to participate in transparent and fair manner, without having restrictions of turnover, prior experience if they meet technical and functional requirements.	✓		
2.	5.2 Undertake 'Competency Mapping' of private defence industry including MSMEs, to establish their core competence/ability to absorb various technologies.	✓		
3.	5.3 Defence Investor Cell	✓		
4.	5.4 Technology Perspective Capability Roadmap (TPCR),.	✓		
5.	5.5 Simplified Make II Procedure to further streamline it to make it easier for industry to enter in defence production sector	✓		
6.	5.6 Simplified Make-II process provides for proactive suggestions from industry for consideration by services	✓		
7.	5.7 Sample survey shall be carried out involving industry units in defence clusters to identify bottlenecks in doing business in defence.		✓	
8.	6. Synergy Between Defence Procurement And Defence Production: In order to provide impetus to domestic manufacturing, it is stipulated that the items enclosed at Annexure-I to the Policy, would not be imported from 2022 onwards.			✓

9.	7.1, 7.2 & 7.3 LICENSING PROCESS	✓		
10.	8. The practice of ex-ante capacity assessment of industrial units will be done away with, in general.	✓		
11.	9.1, 9.2 & 9.3 - Open competition, besides maximising returns on money, is the greatest driver for innovation and productivity	✓		
12.	10.1 & 10.2 FDI- Liberalisation and allowance in niche technology areas	✓		
13.	11.1 New investment linked avenues for discharge of offset obligations will be made available.	✓		
14.	11.2 The end-to-end offset process will be made digital to ensure speedy, transparent and efficient management of offset obligations		✓	
15.	11.3 Independent External Monitors (IEMs) to resolve issues arising from claims of offset in a fair, speedy and transparent manner.	✓		
16.	11.4 Offsets policy would be further simplified.	✓		
17.	12. Tax 12.1 Tax regime will be rationalised to make domestic manufacturing attractive by ensuring there is no tax inversion.	✓		
18.	12.2 Taxes on import of capital goods and services, inputs and components used in defence production will be rationalised in this regard	✓		
19.	13. Market Creation	✓		

20.	14. Vendor Development and Outsourcing	✓		
21.	15. Infrastructure Development 15.1 Defence Industry Corridors 15.1.1 Two Defence Corridors will be built on existing defence production facilities and will set up new industry clusters to create a synergistic supply chain of MSMEs and Original Equipment Manufacturers (OEMs) with necessary testing and certification facilities, export facilitation centres, technology transfer facilitation etc.			✓
22.	15.1.2 Special Purpose Vehicle for development of each Defence corridor.		✓	
23.	15.1.3 In each Defence Corridor, one major cluster of defence production units around an anchor unit will be developed in one of the Nodes of the Defence Corridor.			✓
24.	15.2 Testing Infrastructure 15.2.1 The existing testing infrastructure with Defence organizations will be made available for private industry use.	✓		
	15.2.2 Government will also set up testing facilities for industry use.		✓	
	15.2.3 Create a scheme for providing upto 75% assistance to industry to set up common testing facilities subject to a ceiling of Rs 100 crores per facility. Detailed scheme will be notified later.	✓		
25.	16. Boosting OFB and Public Sector 16.1 Infusion of new technologies/machineries in OFB/DPSUs	✓		
26.	16.2 OFB/DPSUs will be encouraged to increase productivity and timely execution of orders by addressing issues of	✓		

	high inventory handling, greater vendor outsourcing, improving skill levels, overall program management etc.			
27.	16.3 OFB/ DPSUs will be mandated to outsource a minimum of 50% of their work content by 2025.			
28.	16.4 Ordnance Factories will be corporatized to make them competitive and improve their productivity.		✓	
29.	16.5 Disinvestment of minority stake in DPSUs will be pursued.	✓		
30.	16.6 DPSUs/OFB will explore acquisition of technology through mergers/ acquisitions globally.	✓		
31.	16.7 DPSUs/OFB will be encouraged to explore partnerships so as to avoid duplication of production facilities and idling of existing facilities.	✓		
32.	16.8 Cyber security framework will be put in place for DPSUs and OFBs to prepare them for leveraging capabilities of cyber space in their respective functions.	✓		
33.	17.1 The quality control process will be reviewed and aligned as per international standards and global best practices.		✓	
34.	17.2 Simulation based testing will be encouraged and greater emphasis will be laid on acceptance of certification from accredited laboratories.		✓	
35.	17.3 Accredited third-party bodies and self-certification will be promoted for conformity assessment across all platforms and throughout value chain.		✓	
36.	17.4 Pool of test beds/firing ranges/ Quality Assurance (QA)-Quality Control (QC) labs will be mapped in the country and wherever required new Quality Assurance (QA)/ Quality Control (QC) and testing facilities/ labs will		✓	

	be setup both in the Govt departments as also the private sector.			
37.	17.5 Testing facilities of DGQA/DGAQA will be upgraded by inducting simulators and high end equipment, wherever possible, so as to avoid overloading of their testing facilities and thereby making the same available to the private sector.		✓	
38.	17.6 DGQA will be encouraged to adopt statistical tools instead of resorting to 100 % testing of defence equipment even after testing of the item by the vendors as per applicable testing standards.		✓	
39.	17.7 For the MSMEs to be more quality conscious, a comprehensive Defence Rating mechanism may be established for which the Zero Defect Zero Effect (Defence) initiative may be leveraged.		✓	
40.	17.8 Systems will be put in place to ensure standardization, interoperability and harmonization of weapons systems.		✓	
41.	18.1 Defence Expo and Aero India will be positioned as major global events to showcase India's capabilities in defence manufacturing, as also to encourage exports.	✓		
42.	18.2 Subject to strategic considerations, domestically manufactured defence products of both public sector organisations and private industry will be promoted through Govt to Govt agreements and Line of Credit/Funding.	✓		
43.	18.3 Indian Offset Partners will be encouraged to take up export of parts and accessories developed as part of offset process.	✓		

44.	18.4 DPSUs/OFBs will set up export offices in countries having such potential with the objective of promoting exports actively.	✓		
45.	18.5 Defence Export Organisation will be set up jointly with industry to promote export of Indian defence products abroad.		✓	
46.	18.6 Defence Attachés will be mandated to promote export of indigenous defence equipment abroad.	✓		
47.	18.7 Facilitate Joint Venture with foreign OEMs to meet the demand in their country.	✓		
48.	18.8 The end-to-end export clearance process in the Department of Defence Production will be made online and time-bound.		✓	
49.	18.9 In consonance with the provisions of Wassenaar Arrangement, Missile Technology Control Regime etc. India will allow free export of defence equipment/items to identified friendly countries. The validity of time period of export will also be liberalised.	✓		
50.	19.1 While promoting the public sector based R&D ecosystem developed through DRDO labs, efforts will be made to create an active and healthy innovation and R&D ecosystem for Defence technologies in partnership with the industry and academia	✓		
51.	19.3 R&D capability mapping will be done to identify defence related technologies.	✓		
52.	19.4 Support will be given for speedily indigenising components/sub-assemblies from foreign OEMs, which are used for manufacture of final products under licensed production in the country.		✓	

53.	19.5 Services/DPSUs/OFs have worked out formal arrangements for research with top end technical institutions in the country.	✓		
54.	19.6 Centres of Excellence with industry participation and with Government support, will be set up in niche areas to enable development of frontier technology areas with active involvement of academia and R&D institutions.		✓	
55.	19.7 Competitive funded prototyping will be pursued during the design process to address the multiple challenges of technical feasibility, affordability, producibility and supportability.	✓		
56.	20.1 Start-ups will be involved in the technology development in aerospace and defence sectors.	✓		
57.	20.2 Hackathons will be conducted on specific problem areas. Department of Defence Production and Department of Defence R&D will announce challenges for major defence R&D requirements for institutions to participate with well-defined outcomes.	✓	✓	
58.	20.3 A scheme titled Innovations for Defence Excellence (iDeX) will be formulated which will set up Defence Innovation Hubs throughout the country to provide necessary incubation and infrastructure support to the start-ups in defence area.	✓	✓	
59.	20.4 Government will come up with appropriate policy for Start-ups in strategic areas to monetise the newly developed technologies.	✓		
60.	20.5 An Intellectual Property Cell will be set up in Department of Defence Production for promoting creation of Intellectual property in the sector.	✓		
61.	20.6 Faster processing of intellectual property applications involving security of India defence and aerospace related	✓		

	technologies will be facilitated in accordance with relevant Intellectual Property Law.			
62.	21.1 DDP will consult all stakeholders and explore possibility of setting up an autonomous National Aeronautical Commission, in line with Nuclear or Space Commissions	✓		
63.	21.3 Automotive component manufacturers and other similarly relevant industries will be encouraged, through appropriate skill development and technology upgradation initiatives, to transition to aerospace component design and manufacturing.		✓	
64.	21.4 Financial and fiscal incentives will be provided for promoting MRO in aerospace sector.		✓	
65.	21.5 The defence and aerospace contracts will be permitted a negotiated price variation clause and multi-currency bids for deliveries beyond 18 months.		✓	
66.	21.6 Leveraging the design and manufacturing capabilities developed in the country for developing various flying platforms, Government will develop civilian aircraft of 80 to 100 seats over the next 7 years.		✓	
67.	21.6 Capacities to produce various platforms, including Light Combat Aircraft (LCA), Advance Light Helicopter (ALH), Light Combat Helicopter (LCH), Light Utility Helicopter (LUH), Dornier 228 will be augmented to meet the requirement of forces as well as export. Appropriate models, including joint offshore manufacturing, will be explored for global market.		✓	
68.	21.7 Global majors will be encouraged to set up manufacturing capabilities of their platforms in India, both to cater to	✓		

	domestic needs and export from India.			
69.	22.1 To leverage India's strength in IT/software area, a program to incentivise development of specific technologies relating to cyberspace will be formulated.	✓		
70.	22.2 A Task Force involving experts from Industry, Academia, DRDO, and Government has been set up to chalk out the strategic roadmap for Defence in the area of Artificial Intelligence and Robotics has been set up recently. Necessary mechanism will be set up to implement the recommendations.	✓		
71.	22.3 'Regulatory sandboxes' for defence sector will be set up to encourage domestic design and manufacturing activities and for exploring the potential of emerging technologies such as artificial intelligence in the defence sector.	✓		
72.	22.4 Support will be provided to strengthen cyber security infrastructure for defence related systems in the country.		✓	
73.	22.5 Secure communication devices, secure microprocessors and secure mobile phone development will be supported.		✓	
74.	22.6 Viability of chip-level fabrication (Silicon, GaN, etc.) will be supported in collaboration with similar efforts being taken up in Ministry of Electronics and IT.		✓	
75.	22.7 Focus would be given to Middleware technologies to facilitate interoperability between equipment sourced from various sources and new inductions.		✓	
76.	23.1 Support efforts for augmentation of skill levels amongst qualified workforce for employment in specialized fields and niche technologies in defence and aerospace sector.	✓		

77.	23.2 Optimise utilization of captive training facilities and create additional infrastructure for focused skill development.	✓		
78.	24.1 Defence Planning Committee has been set up to analyse and evaluate all relevant inputs relating to defence planning and draw a roadmap for defence manufacturing ecosystem and strategy to boost defence export.			
79.	24.2 Department of Defence Production (DDP), Ministry of Defence will be the nodal department for implementation of the Defence Production Policy 2018.			
80.	24.3 Legal framework will be put in place to ensure that technology and other sensitive information shared with industry is safeguarded and put in place.	✓	✓	
81.	24.4 All Acceptance of Necessity (AoNs) involving domestic production will be reviewed by Headquarters Integrated Defence Staff(HQIDS) in a time-bound manner and their implementation expedited.	✓		
82.	24.5 DDP will institute similar awards currently available for DPSUs and OFBs. and recognition for well-performing private industry and start-ups.	✓		
83.	24.6 As far as possible, all requirements of forces will be manufactured domestically based on indigenous design and development. Imports will be resorted only in exceptional situation.	✓		
84.	24.7 The Government e-Marketplace (GeM) will be used for those items, which are repeatedly required for needs of the forces and for which adequate supplier base exists.	✓		
85.	24.8 State Governments will be encouraged to come up with State specific aerospace and defence	✓		

	related policies to attract investment in this sector.			
86.	24.9 Department of Defence Production will hold regular interactions with all stakeholders, including industry, to foster a partnership model for growth of aerospace and defence sector in the country.	✓		
87.	24.10 All stakeholders; DDP, Services, Department of Defence R&D, DPSUs will conduct regular Outreach Programmes in various parts of the country to interact with industry, especially MSMEs, to spread awareness about the potential opportunities,.	✓		
88.	24.11 Services will also be encouraged to hand-hold defence industry through continuous interaction, sharing of information and arranging visits to repair establishments/field depots for better understanding/appreciation of the requirements.	✓		
89.	24.12 Public Procurement Order will be made applicable for procurement of those items in Defence sector for which tenders are global and domestic production capability exists.	✓		
90.	24.13 Institutional data collection mechanism regarding Aerospace and Defence industries in the country, including production, export, import, will be put in place.	✓		