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INVESTMENT & TRADE OPPORTUNITIES IN DEFENCE & AEROSPACE SECTOR IN INDIA

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PREFACE

This Knowledge Paper aims to provide an overview of the Indian Military and Civil Aerospace Manufacturing industry which encompasses the Governing Departments, Policies and Regulations, Public and Private Sector Organizations. The general theme of this paper is “Make-in-India”, for Procurement in the Aerospace Industry. The paper correlates policies to the current trends in the Indian Defence and Civil Aerospace industry, and the trajectory of the future trends & potential, as India strives to establish its own self-reliant Defence industrial base. The scope of this paper also covers the current ecosystem with regards to the Defence Public Sector Unit, and the level playing field created for the Private Sector companies. The paper also covers the Indo-Czech trade relationship in various sectors.

INTRODUCTION

India is already a large commercial and Defence aircraft market. With rising passenger traffic and increasing military and Defence expenditures, the demand for aircrafts is expected to increase further. The Indian Aerospace industry is one of the fastest growing sectors. India is expected to become the 3rd largest Aerospace industry by 2021.The current government has brought in significant policy reforms over the last three years. The new Defence Aquisition Procedure (DAP 2020) and National Civil Aviation Policy (NCAP 2016) highlight the intent of the government to alter the status quo and that's a positive sign. Even as India was making these transitions in its Defence procurement, the Geo-politics, and along with it the Geo-strategic and Geo-economics in the region and beyond, have also transformed and realigned significantly. The reverberations of these alignments have been felt in the Indian Defence procurement, with some of the best-of-the-breed Aerospace equipment exporters in the world, vying to partner with India, as opposed to maintaining the "buyer"-"seller" relationship. Such inducements by global Defence OEMs seeking partnerships with Indian companies, augurs well with India's "Make-in-India" plans, and opens the flood gates to the aspiring Indian Defence companies, with cornucopia of opportunities.

Add to this mix, the relaxation of the Foreign Direct Investment (FDI) policy, 20% reservation for MSME companies, and we have all the right ingredients to create the top-of-line ecosystem. Further, the successes of ISRO and the Department of Atomic Energy (DAE) in integrating the private companies and the recognition of India's contribution in the Joint Development (JV) of BRAHMOS Missiles and Sukhoi 30 Fighter Aircrafts have underlined India's capabilities to deliver cutting-edge technology and state-of-art Aerospace equipment.

The spirit of Indian Aerospace sector is driven by the Make in India movement and thus the focus on indigenization and manufacturing of Defence equipment in India. Therefore, making it essential for Indian industry to collaborate with foreign companies for long term partnerships to ensure a vibrant manufacturing industry in India.

INDIAN AEROSPACE & DEFENCE BUDGET AND MARKET ATTRACTIVENESS

AEROSPACE & DEFENCE BUDGET

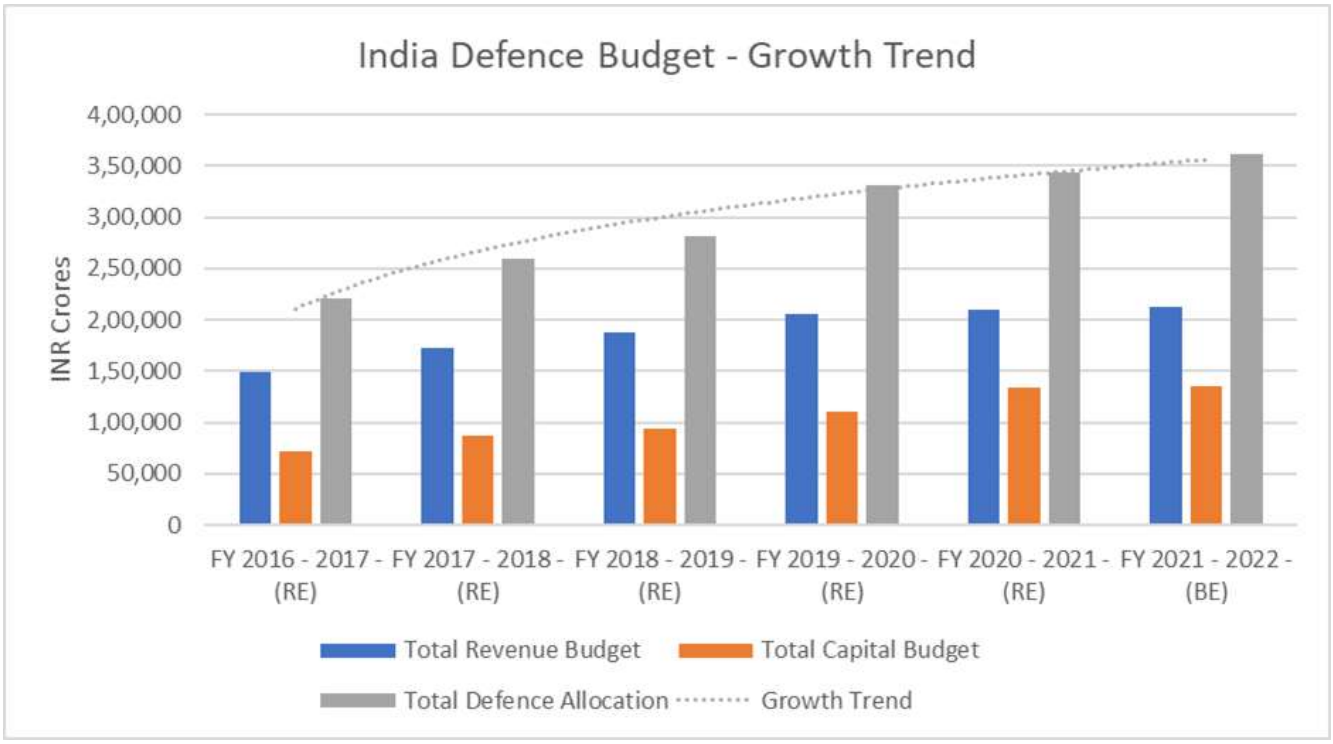
The Indian Aerospace and Defence market presents an attractive and significant opportunity for Indian and foreign companies across the supply chain. India has the 3rd largest armed forces in the world, and its Defence budget is about 1.62% of its GDP. India is one of the largest importers of conventional Defence equipment and spends about 40% of its total Defence budget on capital acquisitions. About 60% of its Defence requirements are met through imports.

A report from the Stockholm International Peace Research Institute (SIPRI) which tracks global arms purchases has found that between 2015 and 2019, India accounted for 10% of global arms imports, followed by Saudi Arabia, the United Arab Emirates and China.

Here is a glimpse of the Defence budget for the last 3 financial years categorized by the two main heads of Revenue Expenditure and Capital Expenditure.

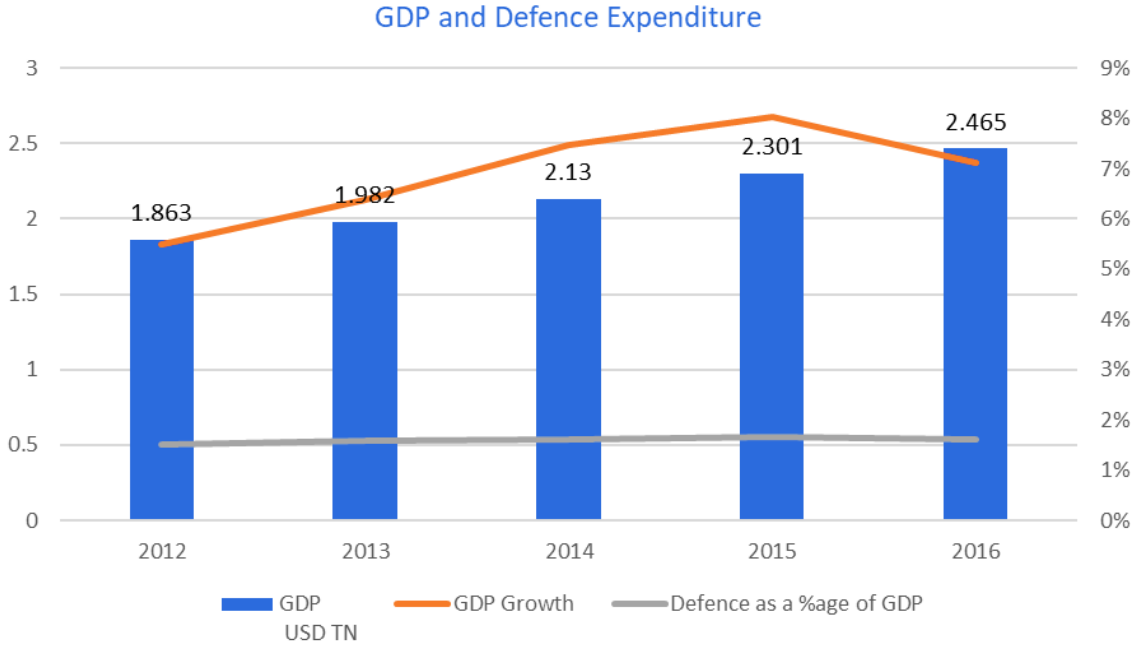
FY	REVENUE EXPENDITURE (RS. IN CRORE)	CAPITAL EXPENDITURE (RS. IN CRORE)	TOTAL (RS. IN CRORE)
2017-18	172,774	86,488	259,262
2018-19 (RE)	188,118	93,982	282,100
2019-20 (RE)	205,902	110,394	316,296
2020-21 (RE)	209,319	134,510	343,829
2021-22 (BE)	212,028	135,061	362,346

India's Defence spending has grown tremendously to 62 Bn USD in 2020 as against 15 Bn USD in 2007 at a compounded annual growth rate (CAGR) of approximately 7%. The Defence expenditure of the government accounts for about 11% of its total expenditure.

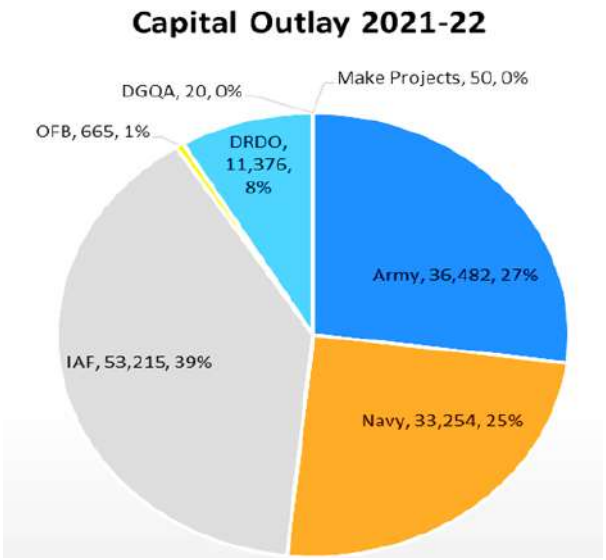


The Indian economy continues to be at a bright spot in the global economic environment, with the initial estimates of the Gross Domestic Product (GDP) showing a growth of over 7% per annum for 3 consecutive years between 2014 and 2016. The growth momentum has taken a beating this year globally due to the Covid-19 pandemic.

The Defence budget allocation has been consistent at around 1.6 – 2% of the GDP. Experts feel that the ideal allocation of Defence Budget should be 2.5% of the GDP.



Among the Defence services, the Indian Army with a capital budget of Rs. 179333 crore accounts for the biggest share in Defence budget, followed by the Air Force, Navy, Defence Research and Development Organization (DRDO) and Ordnance Factories (OFs) (Figure below). The lion's share for the Army is primarily because of its overwhelmingly numerical superiority over the sister services. Accounting for over 85% of the uniformed personnel, bulk of the Army's budget goes into meeting the pay and allowances of the personnel. In 2017-18, only 17% of Army's total allocation has been earmarked for capital expenditure. The comparative figures for the Air Force and Navy are 58% and 51% respectively.



The capital budget is primarily spent for the modernization of Defence Forces.

Modernisation Budget of the Armed Forces (Rs in Crore)

ARMED FORCE	2018-19 (RE)	2019-20 (RE)	2020-21 (RE)	2021-22 (BE)	% INCREASE IN 2021-22 (BE) OVER 2020-21 (RE)
Army	856	1002	25778	30387	17.88%
Navy	35754	44844	35715	31031	-13.11%
Air Force	93986	110550	52768	50295	-4.69%
Total	**74224**	**156396**	**114261**	**111713**	**-2.23%**

While the Armed Forces budget draws out a reasonably high 12% of the union budget, most of the allocation apparently seems to service the pay and allowances and other requirements. A large standing armed force draws out a good part of this budget. What is left over for new schemes is a meagre Rs. 70000 Cr which is termed as the budget for modernization or budget for cap expenditure. So, at the end of the day the DPP services this miniscule portion. What is however more intriguing is that about 90% of the modernization budget is consumed to service the commitments and procurements made in the yester years. This is what is called committed labilities. The committed liabilities for a 70,000 crores outlay are as high as Rs. 62-63,000 Cr. What remains (to the tune of Rs. 6-8000 Cr) is all that is available to conclude contracts in the present year. In accordance with the provisions of the GFR and the DPP, an advance of 10-15% is admissible while concluding a new contract. And therefore, as an optimistic estimate, we have Rs. 8000 Cr which would translate to Rs. 55000 Cr worth of new deals value.

The MoD has a record of not being in a position to spend the complete allocation and Rs. 10-12000 Cr, which is called back by the Ministry of Finance or returned by the MoD.

MARKET ATTRACTIVENESS

The Ministry of Defence has signed more than 180 contracts with the Indian Aerospace and Defence Industry, as on December 2019. These contracts were valued over USD 25.8 Bn approximately. Favorable government policy is the one which promotes self-reliance, indigenization, and technology upgradation. The policies also aim at achieving economies of scale, including the development of capabilities, and for exports in the Defence sector. India's extensive modernization plans are with an increased focus on homeland security and growing attractiveness as a Defence sourcing hub.

Aerospace and Defence production in India is gradually heading towards private sector participation. Between 2015-16 and 2018-19 (April-October), out of a total 188 contracts, 121 contracts have been signed with Indian vendors including DPSUs/PSUs/OFB and private vendors for capital procurement of Defence equipment. The equipment to be procured includes Helicopters, Naval vessels, radars, ballistic helmets, artillery guns, simulators, missiles, bulletproof jackets, electronic fuses and ammunition.

The size of the opportunity is huge. The government is looking at achieving a turnover of Rs 1.7 trillion in military goods and services by 2025 and the SP model is envisaged to capitalize this opportunity and contribute to the Make in India initiative. The target also is to achieve an export of Rs 350 billion (USD 5 billion approximately) in Defence goods and services by 2025. As per the acquisition plans of the three armed forces in the next 10 years, the industry is expected to acquire capital assets worth Rs 15 trillion.

MILITARY AEROSPACE OPPORTUNITIES

The Indian Air Force (IAF), in its 'Indigenization Roadmap Indian Air Force (2016-2025)', highlighted acquisition projects worth USD 33 bn (INR2.5 lakh crore) over the next 15 years.

Major programmes under various stages of procurement stage are mentioned:

S.NO.	PROGRAMME	QUANTITY	PROGRAMME VALUE (USD MILLION)	CURRENT STATUS
1	**LCA Tejas fighter aircraft**	83	6700	Contract awarded to HAL
2	**Medium weight multi role fighter aircraft**	114	15000	RFI issued in 2018
3	**Naval utility helicopter**	111	3000	Under strategic partnership
4	**Medium-lift transport aircraft**	56	1600	MoD clearance awaited
5	**Infrared Imaging Search & Track System (IRST)**	100	247	Design stage
6	**Foldable Fiberglass Mat (FFM) for runway repair**	122 sets/yr	26	EoI response received
7	**Chaff and flares**	Chaffs-1,00,000: Flares-1,50,000	19	Design stage
8	**Light Combat Helicopter (LCH)**	15		Contract likely in 2021
9	**Medium Altitude Long Endurance (MALE) UAV**			
10	**Advanced Medium Combat Aircraft (AMCA)**	~100		Design stage

SPACE OPPORTUNITIES

India's space program stands out as one of the most cost-effective in the world. India has earned worldwide recognition for launching lunar probes, building satellites, ferrying foreign satellites up and has even succeeded in reaching Mars. Till December 2019, a total of 319 foreign satellites from 33 countries have been successfully launched onboard Polar Satellite Launch Vehicles (PSLVs) by ISRO.

With ISRO undertaking the development of cutting-edge technologies and interplanetary exploratory missions, there is a tremendous scope in contributions to the realization of operational missions and new areas such as satellite navigation. The Union Cabinet of India has approved reforms in the Space sector which will boost private sector participation in the entire range of space activities. The Indian National Space Promotion and Authorization Centre (IN-SPACe) will provide a level playing field for private companies to use the Indian space infrastructure and also hand-hold, promote and guide the private industries in Space activities through encouraging policies and a friendly regulatory environment. Such a thrust from the Government of India is intended to create investment opportunities for private companies in the Space sector in India.

INDIAN AEROSPACE & DEFENCE ECOSYSTEM

The Department of Defence Production (DDP) was set up in November 1962 with the objective of developing a comprehensive production infrastructure to produce the weapons/systems/platforms/equipment required for Defence. Over the years, the Department has established wide ranging production facilities for various Defence equipment through Ordnance Factories and Defence Public Sector Undertakings (DPSUs). The products manufactured include arms and ammunition, tanks, armored vehicles, heavy vehicles, fighter aircraft and helicopters, warships, submarines, missiles, electronic equipment, earth moving equipment, special alloys and special purpose steels. With the objective of achieving self-reliance in Defence production, the Ordnance Factories and DPSUs have been continuously modernizing and upgrading their capabilities and widening their product range. Many major products have been developed through in-house research and development initiatives in addition to a number of products and equipment being produced through transfer of technology.

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ORDNANCE FACTORIES

The OFs form a giant industrial setup which functions under the Department of Defence Production (DDP). Headquartered at Kolkata, the Indian Ordnance Factories is a conglomerate of 41 Factories, 9 Training Institutes, 3 Regional Marketing Centres and 4 Regional Controllers of Safety. The 41 OFs operate to manufacture a wide list of products including civilian arms & ammunition, weapons, explosives, propellants & chemicals, military vehicles, armored vehicles, optical devices, parachutes, support equipment, troop comfort & general stores, material, components & SPMs. The Indian Armed Forces are the prime buyers of the OFs. Apart from supplying armaments to the Armed Forces, OFs also meet the requirement of Central Paramilitary Forces and State Police Forces in respect of arms, ammunition, clothing, bulletproof vehicles and mine protected vehicles etc.

The OFs are managed by the DDP as the highest decision-making body. The objectives set by the DDP are carried out by the Ordnance Factory Board (OFB) which lays out policies to be followed by the various OFs. The OFB also lays out the budget allocated to the OFs.

Production achievement: The turnover during the financial year 2015-16 was Rs 14158 crore. The turnover for 2016-17 up to December 2016 was Rs 9154 crore including taxes and duties.

Due to lack of sufficient R&D, skilled manpower and efficient management, the OFs have been unable to cater to the ever-growing demands of the Armed Forces. Further, the OFs are now faced with additional burdens with the entry of private sector in the realm of Defence production. The measures taken to provide level-playing field to private sector by withdrawing excise and custom duty exemption granted to the public sector is expected to add INR 1000 crore to the OF bills.

DEFENCE PUBLIC SECTOR UNDERTAKINGS (DPSUS)

Government-owned corporations are termed as Public Sector Undertakings (PSUs) in India. In a PSU, majority (51% or more) of the paid up share capital is held by the central government or by any state government or partly by the central government and partly by one or more state governments. In the Defence sector, 9 Central Public Sector Undertakings run under the administrative control of the Department of Defence Production, MoD.

These DPSUs are not departmentally run like the OFs. They are corporate entities run by the Board of Directors and follow broad guidelines set by the DDP, Department of Public Enterprises, Ministry of Heavy Industries and Public Enterprises. The 9 DPSUs are as follows,

1. Hindustan Aeronautics Limited (HAL)
2. Bharat Electronics Limited (BEL)
3. BEML
4. Bharat Dynamics Limited (BDL)
5. Mishra Dattu Nigam Limited (MIDHANI)
6. Goa Shipyard Limited (GSL)
7. Garden Reach Shipyard and Engineers Limited (GRSE)
8. Mazagon Dock Limited (MDL)
9. Hindustan Shipyard Limited (HSL)

HAL is the flagship DPSU that accounts for over 50% of their collective production. BEL and HAL have been accorded the status of 'Navratna' companies, i.e. state-owned entities listed on stock exchanges, having an average turnover of INR 25,000 Crores and average net profit of INR 5000 Crores. HAL is ranked 34 amongst the top 100 global Aerospace industries. As on date, HAL has produced or overhauled 1,416 aircraft (of 17 types) of indigenous design, 2,097 aircraft (of 14 type) under license and a total of 5,015 aero engines. BEL is currently in the process of setting up a Missile Systems Integration Complex in Andhra Pradesh and has been jointly selected with Rolta India (a private company) to design the Battlefield Management System (BMS) for the Indian Army. This is worth an estimated INR 50,000 Crores.

BEML produces coaches and assembly of space parts with a dedicated product segment for Defence Equipment, such as trucks, engines and earth movers. BDL, created out of the DRDO, is a producer of many of India's indigenously developed missile systems. The Inter-Continental Ballistic Missile Systems such as the Prithvi and the Agni have been produced by BDL for the Indian Army.

The DPSUs have always enjoyed the status of preferred supplier of India's Defence equipment and products. One of the routes has been through nomination - a method of allocating Defence contracts without a tender process. This has successfully insulated the DPSUs from competition from the private sector. However, the MoD has now reduced this practice significantly through the route of open tenders, allowing level playing field of competition.

DEFENCE RESEARCH AND DEVELOPMENT ORGANIZATION (DRDO)

Defence Research and Development Organization (DRDO) is the country's leading organization involved in the design and development of indigenous Defence systems. The organization has set its sights on making India self-sufficient in Defence equipment ranging from missiles, radars, sonars, electronic warfare, engineering systems, surveillance and recce systems, among others. DRDO is also looking at providing state-of-the-art communication systems, electro-optics, night vision devices, information security products, naval & airborne weapons etc. Each of these has been developed using indigenous manufacturing and testing facilities to maximum extent.

DRDO labs are grouped into 7 technology clusters namely, Aeronautical Systems (AERO), Armament and Combat Engineering Systems (ACE), Electronics and Communication Systems (ECS), Life Sciences (LS), Micro Electronic Devices and Computational Systems (MED & CoS), Missiles and Strategic Systems (MSS) and Naval Systems and Materials (NS&M).

During the financial year 2016- 17, DRDO has been allocated Rs 13,593.78 crore (BE) which is about 5.5% of the total Defence Budget. A total of Rs 6,865.73 crore has been allocated under Capital head and Rs 6,728.05 crore under Revenue head.

DRDO currently has 291 ongoing projects (excluding strategic projects) amounting to approximately Rs 49,030 crore (including User share). Out of 291 ongoing projects, 42 large projects (cost ≥ Rs 100 crore) have a cost of Rs 42,643 crore (DRDO's share~ 70% of the total share). Major projects undertaken by DRDO are as follows,

- Light Combat Aircraft (LCA) 'Tejas'
- LCA Navy
- Airborne Early Warning and Control (AEW&C) System
- Airborne Warning and Control System (India)
- Medium Altitude Long Endurance UAV 'Rustom-II'
- Heavy Drop System (HDS)
- Controlled Aerial Delivery System
- Medium Size Aerostat Surveillance System 'Nakshatra'
- Long Range Surface-to-Surface Ballistic Missile 'Agni-5'
- Surface-to-Air Missile 'Akash'
- Long Range Surface-to-Air Missile (LRSAM)
- Medium Range Surface-to-Air Missile (MRSAM)
- Supersonic Cruise Missile 'BrahMos'
- Beyond Visual Range Air-to-Air Missile 'Astra'

UTTAR PRADESH DEFENCE INDUSTRIAL CORRIDOR

Uttar Pradesh Defence Industrial Corridor (UP DIC) is an aspirational project that intends to reduce foreign dependency of Indian Aerospace & Defence Sector. The Uttar Pradesh Expressways Industrial Development Authority (UPEIDA) was made the nodal agency to execute this project in conjunction with various other state agencies.

Planned across 6 nodes namely – Lucknow, Kanpur, Jhansi, Agra Aligarh, Chitrakoot, which spreads across Central, East, West region of Uttar Pradesh and along the Golden Quadrilateral connecting Delhi – Kolkata supported by networks of expressways. This Corridor aims to bring up the state as one of the largest & advanced Defence manufacturing hubs and put it on the world map. Ordnance Factories, Hindustan Aeronautics Ltd. (HAL), Bharat Electronics Limited (BEL), Bharat Dynamics Limited (BDL) and BrahMos Aerospace are the major giants which have planned investments in the state to further strengthen Defence manufacturing.

KEY HIGHLIGHTS

- MoU signed with Indian Navy and Indian Air Force to facilitate integration of MSMEs and Start-Ups directly with the end user
- Creation of Defence Testing Infrastructure at the Nodes initiated by MoD and Common Facility Centre by state
- Next Generation (Brahmos-NG) Missile Project planned by BrahMos Aerospace in Lucknow Node
- Creation of Defence Testing Infrastructure at the Nodes initiated by MoD and Common Facility Centre by state.

INDIA'S CIVIL AVIATION OPPORTUNITIES

Globally, the travel industry was hit badly by the pandemic and India's airlines too suffered due to the restrictions imposed on domestic and international travel. Nevertheless, India's civil aviation industry presents tremendous opportunities and this is likely to help the airlines recover much faster than many other countries. The civil aviation industry in India has emerged as one of the fastest growing industries in the country during the last three years and is likely to bounce back once the travel restrictions are removed and people start travelling for business and leisure. There is a huge pent-up demand which is likely to surface the moment countries open up their boundaries. The other advantage India has, being a large country, there is an unmet demand for domestic travel which is constantly growing. India has become the third largest domestic aviation market in the world and is expected to overtake UK to become the third largest air passenger market by 2024.

India has 91 international carriers comprising of 5 Indian carriers and 86 foreign carriers, which ensure that India is well connected with most major countries. Revenue passenger kilometer (RPK) in domestic airline demand growth of 18.6% in 2018 was three times the global RPK growth of 6.5%. Indian carriers are projected to increase their fleet size to 1,200 aircrafts by 2024. Freight traffic on Indian airports is expected to cross 11.4 MT by 2032. India has 464 airports and airstrips, of which 125 airports are owned by Airport Authority of India (AAI). These 125 AAI airports manage close to 78% of domestic passenger traffic and 22% of international passenger traffic.

MARKET SIZE

India is the fastest-growing aviation market in the world and is expected to cater to 520 million passengers by 2037. India has been projected to be the second-fastest-growing country in the world for passenger traffic by the Airports Council International (ACI) in its traffic forecasts between 2017-40. Demand for aircraft in India is expected to be 1,750 by 2037.

To cater to the rapidly growing demand, airline operators have been expanding their capacity. Capacity available in India's domestic flights, as measured by Available Seat Kilometers, stood at 155,033.4 million kms, while demand, as measured by Revenue Passenger Kilometers, stood at 136,631.4 million kms in FY19.

India's passenger traffic stood at 341.05 million in 2019-20. It grew at a compound annual growth rate (CAGR) of 11.13% during FY 2016–FY 2020. Domestic passenger traffic stood at 274.50 million in FY 2019-20, growing at a CAGR of 12.91% over FY 2016. International passenger traffic stood at 66.54 million, growing at a CAGR of 5.01% during FY 2016–FY 2020. The expenditure of Indian travelers is expected to grow to Rs. 9.5 lakh crore (US$ 136 billion) by 2021.

Freight traffic grew at a CAGR of 5.32% during FY 2016–FY 2020 from 2.70 million tonnes (MT) to 3.33 MT. Freight Traffic is expected to grow at a CAGR of 7.27% to reach 4.14 million tonnes in FY 2023.

Aircraft movement grew at a CAGR of 9.56% from 1.60 million in FY 2016 to 2.59 million in FY 2020. During FY 2016–FY 2020, domestic aircraft movement increased at a CAGR of 9.83% and international aircraft movement expanded at a CAGR of 3.57%. India's domestic and international aircraft movements grew to reach 2,155 thousand and 433 thousand during FY 2020, respectively.

India is likely to order more than 1,500 new aircrafts by 2037. India will become the largest civil aviation market after the USA and China. This in turn will result in the need for MRO organizations. The Maintenance, Repair & Overhaul (MRO) industry is expected to grow to $1.2 bn by 2020 from $950 million currently. Large aircraft manufacturing companies like Boeing and Airbus are planning to set up MRO facilities in India with local partners. The National Civil Aviation Policy-2016 has announced policies related to the MRO industry. Once the travel industry returns to normal and airlines resume their operations, the need for MRO services will grow. This will lead to good opportunities in India for the MRO sector.

INFRASTRUCTURE

As on September 2020, there were 125 operational airports in India. As on November 2019, 680 airplanes were in-service in the fleet of scheduled Indian operators. Due to rise in demand in air travel, India will need 2,380 new commercial airplanes by 2038. India is expected to have the largest number of aircrafts flying by its scheduled airlines latest by December 2019. India plans to open 100 additional airports by 2024. As on October 2019, 55 AAI (Airports Authority of India) airports were declared as single-use plastic free airport terminals. The Government of India launched regional connectivity scheme named UDAN (Ude Desh ka Aam Nagrik) to make flying affordable for common man.

AAI plans to invest Rs 25,000 crore (US$ 3.58 billion) in the next five years to augment facilities and infrastructure at airports. It has opened the airport sector to private participation as six airports across major cities are being developed under the PPP (public private partnership) model. Investment to the tune of Rs 42,000–45,000 crore (US$ 6–6.5 billion) is expected in India's airport infrastructure between FY18–23. Under Union Budget 2020–21, the Government has introduced Krishi Udan scheme on both domestic and international route to help farmers in transporting agricultural products and improving their product value.

To cater to the rising air traffic, the Government of India has been working towards increasing the number of airports. As on March 2019, India had 103 operational airports. India has envisaged increasing the number of operational airports to 190-200 by FY40.

Further, the rising demand in the sector has pushed the number of airplanes operating in the sector. The number of airplanes is expected to reach 1,100 planes by 2027.

KEY DEVELOPMENTS

- In October 2020, Zurich Airport International signed the concession agreement for the development of Jewar Airport on the outskirts of Delhi. The agreement has granted Zurich Airport International the licence to design, build and operate Noida International Airport (NIAL) for the next 40 years.
- In October 2020, the Airports Authority of India (AAI) announced plans to upgrade runways at seven airports across the country by March 2022.
- In January 2020, IndiGo became the first Indian carrier to have an aircraft fleet size of 250 planes and became the first airline to operate 1,500 flights per day.

- In December 2019, AAI announced its plans to set up India's first three water aerodromes in Andaman & Nicobar.
- As on December 2019, France-based Safran Group planned an investment of US$ 150 million in a new aircraft engine maintenance, repair and overhaul (MRO) unit in India to cater to its airline customers.
- In November 2019, the Competition Commission of India (CCI) approved the acquisition of shareholdings in Mumbai International Airport Limited (MIAL) by Adani Properties Private Limited (APPL).
- AAI plans to invest Rs. 25,000 crore (US$ 3.58 billion) in the next five years to augment facilities and infrastructure at airports.
- UK group to invest Rs. 950 crore (US$ 135.9 million) in Turbo Aviation's new airline TruStar.
- Airbus has entered a memorandum of understanding (MoU) with GMR Group to explore collaboration opportunities across aviation services, technologies and innovation. The MoU was signed at Aero India 2021 held at Yelahanka in Bengaluru, Karnataka.
- GMR Airports to raise $300 million for Hyderabad airport expansion.
- Airbus has delivered the highest numbers of aircrafts (57) to Indian carriers during pandemic in 2020.
- The region surrounding the upcoming Noida International Airport in Uttar Pradesh has received investments worth INR 7,617 crore in FY21, including some from Fortune 500 firms.
- The Airports Authority of India (AAI) signed a Memorandum of Understanding with NTPC Vidyut Vyapar Nigam, an NTPC subsidiary to promote usage of electric vehicles and set up solar power plants at its airports.

FDI POLICY

- Up to 100% FDI is permitted in Non-scheduled air transport services under the automatic route.
- Up to 100% FDI is permitted in helicopter services and seaplanes under the automatic route.
- Up to 100% FDI is permitted in MRO for maintenance and repair organizations; flying training institutes; and technical training institutes under the automatic route.
- Up to 100% FDI is permitted in Ground Handling Services subject to sectoral regulations & security clearance under the automatic route.
- Up to 49% in Scheduled Air Transport Service/Domestic Passenger Airline and Regional Air Transport Service under automatic route.
- Over 49% in Scheduled Air Transport Service/Domestic Passenger Airline and Regional Air Transport Service under government route.

CONCLUSION

To be sure, the Indian civil aviation industry has tremendous opportunities. And these opportunities are manifold, providing manufacturing organizations and service providers with great prospects. From airports, construction and infrastructure, to airport interiors and equipment, from aircrafts to ground handling facilities, from MRO services to aircraft equipment and components, the opportunities are endless. This is the right time to start planning to enter the market as once the airline industry returns to normalcy in a year's time, companies can be ready to explore the market.

LEGAL AND REGULATORY FRAMEWORK FOR DEFENCE PROCUREMENT

POLICY	MINISTRY OF DEFENCE	ALL DEFENCE AND SECURITY RELATED MATTERS
Legislations & Procedures	INDUSTRIES (DEVELOPMENT AND REGULATION) ACT, 1951	Governs industrial licensing for manufacture of Defence Items
	DEFENCE AQUISITION PROCEDURE, 2020	Governs procedure for capital acquisitions in the Defence sector
	FOREIGN DIRECT INVESTMENT POLICY & REGULATIONS UNDER FOREIGN EXCHANGE MANAGEMENT ACT,1999 (FEMA)	Governs policy on foreign direct investment and regulations on foreign exchange
	OTHER ACTS - INDIAN ARMY ACT, 1950; INDIAN AIR FORCE ACT, 1950; INDIAN NAVY ACT, 1957	Statutory provisions and supplementary rules concerning government, regulation, administration, enrolment and discipline of the Army, Air Force and Navy.
Regulators & Agencies	DEPARTMENT OF INDUSTRIAL POLICY AND PROMOTION, MINISTRY OF COMMERCE & INDUSTRY (DIPP)	Formulation and implementation of industrial policy, including the relevant FDI policies from time to time.
	DEPARTMENT OF DEFENCE PRODUCTION, MINISTRY OF DEFENCE	The primary agency dealing with the production of Defence equipment in India.
	DEFENCE ACQUISITION COUNCIL, MINISTRY OF DEFENCE	Responsible for the purchases to be made for the Indian defence forces.
	DEFENCE OFFSETS MANAGEMENT WING, MINISTRY OF DEFENCE	Reviews the post contract status of all the offset agreements entered into by IOPs

MINISTRY OF DEFENCE

The Government of India is responsible for ensuring the Defence of India and every part thereof. The Supreme Command of the Armed Forces vests in the President. The responsibility for national Defence rests with the Cabinet.

This is discharged through the Ministry of Defence, which provides the policy framework and wherewithal to the Armed Forces to discharge their responsibilities in the context of the Defence of the country. The Raksha Mantri (Defence Minister) is the head of the Ministry of Defence.

The principal task of the Defence Ministry is to obtain policy directions of the Government on all Defence and security related matters and communicate them for implementation to the Services Headquarters, Inter-Services Organizations, Production Establishments and Research and Development Organizations. It is also required to ensure effective implementation of the Government's policy directions and the execution of approved programmes within the allocated resources. Ministry of Defence comprises of four Departments, Department of Defence (DOD), Department of Defence Production (DDP), Department of Defence Research & Development (DDR&D) and Department of Ex-Servicemen Welfare and also Finance Division. The principal functions of all the Departments are as follows:

The Department of Defence deals with the Integrated Defence Staff (IDS) and three Services and various Inter-Service Organizations. It is also responsible for the Defence Budget, establishment matters, Defence policy, matters relating to Parliament, Defence co-operation with foreign countries and co-ordination of all Defence related activities.

The Department of Defence Production is headed by a Secretary and deals with matters pertaining to Defence production, indigenization of imported stores, equipment and spares, planning and control of departmental production units of the Ordnance Factory Board and Defence Public Sector Undertakings (DPSUs).

The Department of Defence Research is headed by a Secretary. Its function is to advise the Government on scientific aspects of military equipment and logistics and the formulation of research, design and development plans for equipment required by the Services.

DEFENCE ACQUISITION PROCEDURE 2020

The Defence Procurement Procedure (DPP) (Renamed Defence Acquisition Procedure - DAP in 2020) is a set of guidelines approved by the Defence Acquisition Council (DAC) that govern capital procurements in terms of Defence equipment, manufacturing capabilities and technology. It provides framework and criteria for allotment of Defence contracts. The first DPP was formulated in 1992 but came into effect only in 2002. Since then, it has been revised in 2005, 2006, 2008, 2009, 2011, 2013, 2016 and 2020.

DAP 2020 focuses on simplifying the Defence acquisition procedure and institutionalizing monitoring mechanism with concurrent actions using digital technologies & database for selection of best equipment in a transparent and competitive manner giving adequate opportunities to capable vendors. Make in India initiative of the Government of India focuses on increasing participation of Indian Vendors including MSMEs, and therefore “Make” procedure has been further refined in DAP 2020 to make it more objective and time bound with focus on Indian industry especially MSMEs. Cutting down permissible timeframes for various activities and institutionalizing robust mechanisms to monitor for probity at various stages of the acquisition process are the attributes of this DAP.

KEY FEATURES OF THE DAP 2020

DAP 2020, a product of extensive analysis, deliberations, interactions and focused formulations, aims to further ‘Self Reliance’ of the country in the Defence sector and implement ‘Ease of Doing Business’ with emphasis on Simplification, Delegation, Reduced Timelines and making the process as Industry friendly as possible. The following chapters have been introduced in DAP 2020,

- **Chapter IV** - Procedure for Acquisition of systems designed and developed by DRDO/DPSU/OFB
- **Chapter VIII** - Acquisition of Systems Products and ICT Systems
- **Chapter IX** - Leasing
- **Chapter X** - Other Capital Procurement Procedure
- **Chapter XI** - Post Contract Management
- **Chapter III** - Addition of Innovation category

EASE OF DOING BUSINESS

One of the key focus areas of the review was to implement ‘Ease of Doing Business’ with emphasis on simplification, delegation and making the process industry friendly with certain specific provisions incorporated:-

a. Procedural Changes

- Single stage accord of AoN in all cases upto Rs 500 crores has been instituted thereby reducing time
- FTP cases, post accord of AoN, will be progressed as per delegated powers thereby reducing the procurement cycle considerably
- In Planning Process, LTIPP has been re-designated as Integrated Capability Development Plan (ICDP) covering planning period of 10 years instead of 15 years.

b. Request for Proposal (RFP) and Standard Contract Document (SCD)

Certain measures to provide clarity and alignment of requirements and also enabling provisions have been incorporated in the RFP and SCD in terms of Flow Chart driven guidelines, provision of in-storage preservation and termination of contracts in cases where projects are not progressing as per pre-defined milestones.

SALIENT FEATURES OF DAP 2020

Reservation in Categories for Indian Vendors

The categories of Buy (Indian-IDDM), Make I, Make II, Production Agency in Design & Development, OFB/DPSU and SP model will be exclusively reserved for Indian Vendors meeting the criteria of Ownership and Control by resident Indian Citizens with FDI not more than 49%. This reservation will provide exclusivity in participation to domestic Indian industry.

Enhancement of Indigenous Content

a. Overall Enhancement in Indigenous Content (IC)
b. **IC Verification** - A simple and practical verification process has been instituted and IC will now be calculated on 'Base Contract Price' i.e. Total Contract Price less taxes & duties
c. **Indigenous Military Material** - Promoting use of indigenous military material with provisions for examination of platforms and other equipment/ systems and reward for vendors for using indigenous raw material
d. **Indigenous Software** - Provision for exploring options for operating base applications like Fire Control System, Radars, Encryption, Communications etc on indigenous software in Buy (Indian- IDDM) & Buy (Indian) cases has been included.

Modernisation Budget of the Armed Forces

CATEGORY	DPP 2016	DAP 2020
Buy (Indian-IDDM)	Min 40%	Min 50%
Buy (Indian)	Min 40%	Indigenous design - Min 50%, otherwise - Min 60%
Buy & Make (Indian)	Min 50% of Make	Min 50% of Make
Buy (Global – Manufacturing in India)	-	Min 50%
Buy (Global)	-	Min 30% for Indian vendors

RATIONALISATION OF TRIAL AND TESTING PROCEDURES

- Testing equipment based on its employability and for other conditions, appropriate certifications confirming functional effectiveness may be obtained
- Scope of Trials will be restricted to physical evaluation of core operational parameters, other parameters may be evaluated based on vendor certification, certification by accredited laboratories, computer simulations of parameters
- Avoid duplication of trials and waiver will be granted based on Certificates of Conformance. Ensure simultaneity of various Trials and wherever feasible, entire Trials be conducted by a Combine Trial Team in order to save time
- Requisite opportunity will be afforded to participating vendors to rectify shortcomings/faults during the Trials with permission to carry out repairs
- Request For Proposal will apprise vendors to submit draft Acceptance Test Procedure (ATP), to be finalized by QA agency during Technical Trials itself. Sample size for destructive tests including the aspect of cost to be borne by seller will be stated upfront in the RFP for vendor
- No repetition of inspections will be done especially during acceptance of equipment. Third Party Inspections will also be carried out.

MAKE & INNOVATION

- **Make I** (Government Funded upto 70%). Laying down a cap of Rs 250 crore/DA and selection of DAs based on bidding criteria
- **Make II** (Industry Funded) for production of indigenously designed & developed weapons/equipment/systems/platforms along with sub components/assemblies
- **Make III** (Indigenously Manufactured) category for manufacture of equipment/platforms or spares/assemblies/sub-assemblies for enabling import substitution
- Procurement of prototypes developed through 'Innovation' under various initiatives like iDEX, Technology Development Fund and Internal Services Organizations has been facilitated.

DESIGN & DEVELOPMENT

A separate dedicated chapter has been incorporated in the DAP 2020 for acquisition of systems designed and developed by DRDO/DPSUs/OFB. A simplified procedure with Integrated Single Stage Trials to reduce timelines and laying greater emphasis on evaluation through certification and simulation has been incorporated. Aspects of Spiral Development have been incorporated as well.

ADDRESS VOIDS

Certain existing voids have been addressed in the form of new Chapters as under,

- **Information Communication Technology** - Peculiar issues related to procurement of ICT intensive equipment especially of Interoperability & Built-in Upgradability, enhanced security requirements and change management have been included
- **Leasing** - A new category introduced to enable operating of assets without owning thereby, substituting huge initial capital outlays
- **Post Contract Management** - To formalise procedures post signing of contract with respect to inspections, levying of Liquidity Damages, Contract Amendments etc
- **Other Capital Procurement Procedure** - A new procedure has been included as a new chapter in DAP and structured as an enabling provision for Services to procure essential items through Capital Budget under a simplified procedure in a time bound manner.

INDUSTRY FRIENDLY COMMERCIAL TERMS

- Price Variation Clause has been incorporated for large and protracted contracts in order to avert inflated initial quotes by vendors and arriving at a realistic price of the project
- Payments to Vendors - Suitable provisions like parallel processing of documents by SHQ/PCDA through digital verification, within laid down timelines, has been included to ensure timely payment to vendors. Payments to Indian industry have been aligned with foreign industry.

Some of the major highlights of the DAP considered favorable are,

- Focus on technology in offsets, discarding traditional build to print or contract manufacturing
- Higher multipliers for technology transfers in Offsets
- Introduction of third party valuations and removal of restrictions on sub tier discharge of offsets as well as percentage discharge on particular avenues. All avenues are equally good
- Importance given to design and development from the planning stage through execution
- New concepts in terms of long term product support, leasing, price variation clause
- Introduction of AI, Military Materials, Indigenous software, Aero Engines and FAB
- Term of DPP Fixed , so one knows the duration of effect
- Timeframes - Reduction in implementation timeframes is encouraging
- Make 2, Make 3 and iDEX categories for more open competition.
- Clarity in Indigenous Content - Very clear and positive and also increase in percentages of IC in various categories of procurement.

DEFENCE PROCUREMENT MANUAL

This Defence Procurement Manual 2009 (DPM 2009) contains principles and procedure relating to procurement of goods and services for the Defence Services, Organizations and Establishments falling under Revenue Expenditure. The term procurement means acquiring all types of goods (both scaled and non-scaled), such as equipment, stores, spares, technical literature, etc., as well as all types of services, including packing, unpacking, preservation, transportation, insurance, delivery, special services, leasing, technical assessment, consultancy, systems study, software development, maintenance, updates, conservancy, etc. implies procurement of items and equipment, including replacement equipment (functionally similar) assemblies/sub-assemblies and components, to maintain and operate already sanctioned assets in the service, the necessity of which has been established and accepted by the Government.

Revenue Procurement: Implies procurement of items and equipment, including replacement equipment (functionally similar) assemblies/sub-assemblies and components, to maintain and operate already sanctioned assets in the service, the necessity of which has been established and accepted by the Government.

Channels of procurement – by placing demand on

- The Director General of Ordnance Factories
- Other ministries of government and state governments
- Industries/Factories/Statutory Corporations (partially or wholly owned by govt)
- Indigenous trade either directly or through the Director General of Supplies
- Local Purchase in respect of items which are not supplied by the central procurement authority/ organizations of the Services / Departments and stores emergently required
- Defence Public Sector Undertakings and other Government Public Sector Undertakings

Types of Procurement:

Capital – significant expenditure incurred with the object of acquiring tangible assets of a permanent nature (for use in the organization and not for sale in the ordinary course of business) or enhancing the utility of the existing assets, shall broadly be defined as Capital expenditure. Capital procurement would, therefore, refer to procurement of all goods and services that fit the description of capital expenditure. The procedure for capital procurement is separately laid down in the Defence Procurement Procedure 2016.

Revenue – revenue should bear all subsequent charges for maintenance and all working expenses, including all expenditure on working and upkeep of the project and also on such renewals and replacements and such additions, improvements or extensions, etc., as under rules made by the Government are debit-able to revenue account.

- Financial powers delegated to service/departments and SHQ: For Revenue Procurement, Government has delegated financial powers under revenue heads to a number of authorities in each Service/Department.

Indigenous - Procurement from indigenous sources is called indigenous procurement. It is the policy of the Government to encourage indigenization, particularly in the field of Defence to achieve self-reliance. Hence, indigenous firms should be given all support to produce and supply quality goods conforming to specifications. Proper loading criteria for all taxes, duties and other expenses involved in procurement of an item need to be applied to provide a level playing field to the indigenous manufacturers. Payments against indigenous procurement are made in rupee terms.

Foreign Procurement - Defence equipment and assets, which are of foreign origin, items required to maintain and operate these equipment may also need to be procured from suppliers abroad.

Central Procurement (CP) is undertaken against indents resulting from planned provisioning process like the Annual Provision Review, refit planning, obsolescence planning and planned routines. CP indents normally cover the entire requirement of the item for the duration of the provisioning period.

Local Purchase (LP) is undertaken within the LP powers of various authorities as per the delegated powers in the following circumstances:

- To meet the short-term, ad-hoc or urgent requirements of units/ establishments when supplies are not available through the central provisioning agency
- To meet the normal requirements of units/establishments for stores which are not within the purview of central purchase organizations.

INDUSTRIAL LICENSE IN DEFENCE MANUFACTURING

Manufacturing in the Defence sector is governed through industrial licensing under The Industries (Development and Regulation) Act, 1951. Before 2001, manufacturing in Defence sector was limited to public sector companies (OFB & DPSUs). However, in 2001, the Government allowed 100% Indian private sector participation in Defence manufacturing sector subject to licensing under IDR Act.

The requirement to obtain Industrial License (IL) for production of Defence equipment, coupled with an arduous licensing process, was a significant roadblock to entry of private companies in the Defence sector. Through a series of notifications issued between June 26, 2014 and September 22, 2015, the government has confined the requirement of licenses to a notified list of Defence equipment, which it released in the public domain. The validity of an IL has been raised from 3 to 15 years, extendable to 18 years considering the long gestation period of Defence contracts. The application process has been automated and simplified.

Manufacturing in the Defence industry requires industrial license (IL) as per the Industries (Development and Regulation) Act, 1951 (IDRA). This is to be read in conjunction with Notification No.S.O.477 (E), entry No. 13 of Schedule II dated July 25, 1991 which provides a list of compulsory licensing items finalized by the Department of Defence Production, MoD. In 2001, Defence manufacturing was opened to 100% private sector participation. Consequently, the list of items was amended vide Notification No. S.O.11(E) on January 3, 2002 to include 'arms and ammunition and allied items of Defence equipment; parts and accessories thereof' (as opposed to 'Arms and ammunition, parts and accessories thereof'). Since 2014, several clarifications have been issued in this regard for ease of business.

LIST OF DEFENCE ITEMS

Vide Press Note 3 of 2014, the Government has provided a consolidated list of items requiring IL. Items not included in the list do not require an IL. Further, (a) dual use items having military as well as civilian application, other than those listed, and (b) items, parts, components, castings, forgings and test equipment, which are not part of the list would not require IL from Defence angle. This will reduce entry barriers for the industry, particularly small & medium segment and promise growth of supply chain in the sector. However, with the recent notification of the Ministry of Home Affairs (MHA) on May 19, 2017, the list of Defence items under Press Note 3 of 2014 will also have to be read with the schedule in Notification S.O. 1636(A).

FDI POLICY

FDI policy applies to any organization that is looking for establishment of branch office, liaison office or project office or any other place of business in India. If the principal business of the applicant is Defence, approval of Reserve Bank of India is not required in cases where Government approval or license/permission by the concerned Ministry/ Regulator has already been granted. The latest release in August 2020 of the FDI policy allows the following investment in Defence sector,

- 74% is automatic approval
- 75 -100 % allowed with Government approval.

Other Conditions as per the most recent press note are as follows:

- Infusion of fresh foreign investment within the permitted automatic route level, in a company not seeking industrial license, resulting in change in the ownership pattern or transfer of stake by existing investor to new foreign investor, will require Government approval.
- License applications will be considered and licenses given by the Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, in consultation with the Ministry of Defence and the Ministry of External Affairs
- Foreign investment in the sector is subject to security clearance and guidelines of the MoD
- Investee company should be structured to be self-sufficient in areas of product design and development. The investee/joint venture company along with manufacturing facility should also have maintenance and life cycle support facility of the product being manufactured in India.

Key enablers of the FDI policy

- 100% FDI in Defence sector: FDI upto 74% under Automatic route
- Requirement of single largest Indian ownership of 51% of equity is removed
- 3 years of lock in period for equity transfer has been abolished.

FDI in Defence sector is also subject to industrial license under the Industries (Development & Regulation) Act 1951.

EXPORT POLICY

The Export policy in India for the manufacturing and exporting of components and equipment of critical Defence platforms categorized as dual-use items and technologies, are either completely prohibited or permitted under license only. Such dual use items, with the nomenclature of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies), as per the Foreign Trade Policy, are assigned specific codes called the ITC – HS Code (Indian Trade Clarification – Harmonised System Code). The products that are under the compulsory licensing regime are mentioned in Chapter 88 (all Aerospace related products), and Chapter 93 (arms and ammunition) and ITC HS code of 8710 also covers Armored vehicles.

Criteria to Qualify for the Issue of License:

The export license applications are scrutinized and issued on case-to-case basis, after thorough evaluation, considering the following factors, as per its categorization under the SCOMET list:

- End-user credentials, credibility of declarations of end-use of the item or technology, integrity of chain of transmission of item from supplier to end user, and the potential of item or technology, including timing of its export, to contribute to end users that are not in conformity with India's national security or foreign policy goals and objectives, objectives of global non-proliferation, or its obligations under treaties to which it is a State party
- Assessed risk that exported items will fall into hands of terrorists, terrorist groups, and non-State actors
- Export control measures instituted by recipient State
- Assessment of end-uses of item(s)
- Applicability to an export license application of relevant bilateral or multilateral agreements to which India is a party
- The item will be used only for the stated purpose and that such use will not be changed, nor items modified or replicated without consent of Government of India
- Neither the items nor replicas nor derivatives thereof will be re-transferred without consent of Government of India
- End-user shall facilitate such verifications as are required by Government of India. Government of India may also require additional formal assurances, as appropriate, including on end-use and non-retransfer, from State of recipient.

OFFSETS POLICY

In the Defence industry, the foreign manufacturer of the Defence equipment offsets the nation's costs of acquiring Defence equipment by various avenues, including purchasing or agreeing to purchase products from domestic vendors, making an investment in the Defence sector or by transfer of technology, amongst others. Offsets policy essentially means benefits that a buyer gets from the seller in the form of technology that leads to building capability or capacity locally. The purpose of an offset obligation is to ensure that a part of government spending on the capital acquisition of Defence products are repatriated into the country and if possible, specifically to its Defence sector.

As per the extant provision of the policy, a 30% offset apply to all Capital Acquisitions categorized as 'Buy (Global)', i.e. outright purchase from foreign/Indian Vendor, or 'Buy and Make' categories of procurements where the estimated cost of the acquisition proposal is Rs. 2000 Crore or more as on the date of accord of AoN.

30% of the estimated cost of the acquisition in 'Buy (Global)' category acquisitions and 30% of the foreign exchange component in 'Buy and Make' categories of procurements will be the required value of the offset obligations.

MoD released the revised version of the Defence Acquisition Procedure (DAP) 2020 in Sep 2020. Here we would like to highlight the changes in the Defence Offset guidelines, **Appendix E to Chapter II of DAP 2020.**

AVENUES OF DISCHARGE

Changes to the Avenues of Discharge for offset obligations are highlighted in the table below

CLAUSE	AVENUES OF DISCHARGE	
	DPP 2016	DAP 2020
3.1.a	Direct Purchase Export Orders	Direct Purchase Export Orders
3.1.b	FDI in Joint Ventures	Investment in Defence Manufacturing
3.1.c	Investment in 'Kind' (private industry)	Investment in ToT (private industry)
3.1.d	Investment in ToT (private industry)	Acquisition of tech through ToT to Government institutions
3.1.e	Acquisition of tech or equipment through ToT to Govt institutions	Technology Acquisition by DRDO
3.1.f	Technology Acquisition by DRDO	-

Investment in 'kind' to the Indian private industry has been removed as an avenue for offset discharge. Details of each avenue of discharge are as follows:

3.1.a : Direct Purchase or Export orders

- For eligible products manufactured or services
- Through Indian enterprises

3.1.b : Investment in Defence Manufacturing

- FDI or direct investment or JVs or through the non-equity route
- For co-production, co-development and production or licensed production of eligible Defence products
- As per guidelines of DPIIT / MHA

3.1.c : Investment in ToT (private industry)

- Through Indian enterprises for manufacture of eligible products
- Must cover all documentation, training and consultancy required for full ToT (civil infrastructure and related equipment is excluded).
- ToT should be provided without license fee and there should be no restriction on domestic production, sale or export.

3.1.d : Acquisition of tech through ToT to Government institutions

- Through Government institutions and establishments engaged in the manufacture and/or maintenance of eligible products.
- Includes augmenting capacity for Research, Design and Development, Training and Education but excludes civil infrastructure and related equipment.

3.1.e : Technology Acquisition by DRDO

- In areas of critical technology

The following Mandatory Offsets clause has been **removed** from DPP 2020.

- A minimum 70 % of the offset obligation must be discharged by any one or a combination of Paras 3.1(a), (b) and (c).
- Where the discharge of offset obligations is proposed in terms of Para 3.1(c), the vendor will be required to buyback a minimum 40% of the eligible product and/or service (by value) within the permissible period for discharge of offset obligations.

Eligible Products

For discharge through Indian companies under clause 3.1.a, 3.1.b and 3.1.c, the following products/services have been **removed from list of eligible products.**

- Specialized equipment for military training or for simulating military scenarios
- Miscellaneous equipment and materials designed for military applications, specially designed environmental test facilities and equipment for the certification, qualification, testing or production of the above products
- Software specially designed or modified for the development, production or use of eligible products
- High velocity kinetic energy weapon systems and related equipment
- Civil Aerospace Products
- Services (Related to Eligible Products) including Engineering, design and testing or Software development.

Technologies eligible for ToT under clause 3.1.d to DPSUs has been introduced in DAP 2020.

Critical technologies for ToT under clause 3.1.e to DRDO has been updated in DAP 2020.

DEFENCE ALLOCATIONS IN INDIAN UNION BUDGET 2022-23

Government of India, announced the annual budget for the financial year 2022-23 on 1st February 2022. The emphasis continues to be on Atmanirbhar Bharat or Make in India. The Defence Ministry is keen to aggressively promote local manufacturing in India and achieve self-reliance in development of technologies and R&D. The budget allocation for the Ministry of Defence for the coming financial year is a clear signal for indigenous development of Defence equipment. The highlights of the budget allocation for the Ministry of Defence are:

- The budget allocation for Defence has gone up to USD 69.8 Bn. This is 4.43% higher that the revised estimates of last year and 9.8% higher over the budget estimates of last year. This constitutes 13.31% of the total Union Budget for 2022-23. Of this, the revenue allocation is USD 31 Bn, capital allocation stood at USD 20.2 Bn and Defence pensions at USD 15.8 Bn.
- The capital budget is meant for new acquisitions and modernization of the Armed Forces, while the revenue budget will be utilized for the maintenance and sustenance of the equipment and weapons systems and for salaries of the Armed Forces.
- Of the USD 20.2 Bn for capital allocation which is meant for new purchases and payments for procurements, 68% will be reserved for procurement from domestic industry.
- The Indian Air Force continues to have the largest share among the forces for the capital budget at USD 7 Bn which is an increase of 4.5% from the previous year.
- The Indian Army's capital budget went down by 12.2% to USD 4.2 Bn compared to the previous financial year.
- The Indian Navy was allocated a capital budget of USD 6 Bn, which is a huge 43% increase from the previous year.
- Budget announced a 5.3% increase in in the DRDO allocation at USD 1.5 Bn.
- Defence R&D will be opened to the private sector and 25% of the R&D budget will be reserved for the private sector. The budget proposes to encourage the private sector to take design and development of military platforms and equipment in collaboration with the DRDO and other organizations through a Special Purpose Vehicle (SPV).
- The Budget announced the setting up an independent nodal umbrella body for meeting testing and certification requirements.

(Refer here for Capital Outlay on Defence Services)

(Apprx. values in USD with a conversion rate at 1 USD = INR 75)

INDO-CZECH BILATERAL RELATIONSHIP

Economic relations between the Czech Republic and India are a 100 years old, beginning with the setting up of the erstwhile Czechoslovakia Consulate in Bombay in 1920. In 1993, when Czechoslovakia became the Czech Republic, trade and investment relations initially slowed down and then picked up momentum. Both countries have shown a very healthy and growing trend with respect to their bilateral economic relations. There have been a number of high-level visits between both countries and India and the Czech Republic have supported each other in many international fora.

The first Joint Commission on Economic Cooperation (JCEC) between the Czech Republic and India was held in 2010. Since then, meetings have been taking place regularly. However, the 12th meeting of the JCEC which was to be held in 2020 was postponed due to the COVID pandemic. India and the Czech Republic also have a Joint Working Group on Heavy Engineering. Among other things, India and the Czech Republic have signed MoUs on Defence and Science & Technology and also have an Avoidance of Double Taxation Treaty.

Bilateral trade between India and the Czech Republic has been growing steadily. During India's financial year of April 2019 to March 2020, India exported goods and services worth US$ 313,361 to the Czech Republic and for the period April 2020 to January 2021, this figure stood at US$ 228,772. India's imports from the Czech Republic during the period April 2019 to March 2020 was US$ 474,709 and the figures for April 2020 to January 2021 was US$ 304,359.

Values given in US$ Millions.

India's main products of export to Czech Republic are Garments and textiles, Pharmaceutical products, Iron and Steel products, electronic instruments, auto components, chemicals, power equipment, footwear etc. India's main products of imports from Czech Republic are auto components, textile and leather machines, machines for rubber and plastic industry, machine-tools, food production equipment, ICT equipment, furniture, pumps, electronic items etc.

Almost 7% of Czech investments outside Europe came to India and India gained 1/10th of Czech investments. Around 30 Czech companies have invested in India including Skoda Auto, Skoda Power, Bonatrans, Home Credit etc. in transportation, power, automotive and financing sectors.

Indian companies have invested in the Czech Republic in sectors such as IT, vehicles, tea, textile, pharmaceutical and auto-components. Major Indian companies which have invested in the Czech Republic include Infosys, Tata Global Beverages, Cognizant, Samvardhana Motherson, Varroc Excellence, Pricol, CLC, KCI, Dina-Hitex, Glenmark Pharmaceuticals, Alok Industries/Mileta Horice a.s., APAG.

THE CZECH INDUSTRY & ECONOMY

The Czech Republic is located in central Europe. The country has a population of about 10.6 million people and covers an area of 78,866 km2. It is a landlocked nation bordered by Germany, Austria, Slovakia, and Poland. Prague is the capital city and the largest city of the Czech Republic. The country has about 1.3 million residents. The Czech Republic has one of the most stable, wealthy, and developed economies in the world. The availability of educated and skilled professionals in the automotive industry, the strategic location in central Europe, and the good infrastructural network has influenced the growth and expansion of the industrial sector.

The GDP of Czech Republic is USD $215.7 billion. The service industry tops in terms of GDP contribution to the economy of the country at 59.7%, followed by the industrial sector at 37.8%, and finally the agricultural sector at 2.5%. The labour force for these sectors stands at 59.2%, 38%, and 2.8% respectively. The Czech Republic is, in many ways, a Central European success. Driven by FDI and strong participation in global value chains, the booming manufacturing sector now leads all sectors in employment.

CZECH INDUSTRY & SERVICES

The manufacturing industry is the main pillar of the Czech's economy. There is a great output from high-tech engineering, machine engineering, and automotive engineering. The Czech Republic is the 12th largest global car exporter and has employed over 150,000 people accounting for more than 20% of both Czech manufacturing output and Czech exports. Engineering forms the backbone of the Czech economy and its manufacturing base is made up of more than 1,100 companies. These companies are especially involved in the field of energy engineering, transport engineering, production of machining and shaping tools, metallurgy and production of structures and metal components.

Approximately 60% of the employees in the Czech Republic work in the service sector just close to the European average of 75%. The service sector has risen to be among the most productive industries in the Czech Republic. The focus in the services sector is on research and development, ICT and software development, nanotechnology, real estates, consultancy, business (such as finance), and life sciences.

The aviation industry of the Czech Republic focuses on two main activities. First of all, there is the production of complete aircrafts. It concerns smaller aircrafts for local and regional transport, training and light combat aircrafts, sport and agriculture aircrafts, ultra-light aircrafts and gliders. A quarter of ultra-light aircrafts sold in the world have been produced in the Czech Republic. The second segment of the aviation industry is the production of components for large transport and military aircrafts and helicopters.

The chemical industry of the Czech Republic is among its main industrial branches. Production of basic chemical substances (64%) and production of pharmaceuticals (17%) contribute the biggest share in terms of revenue. Chemical industry products are supplied to other affiliated sectors, such as the automotive, construction, electronic, food-processing, textile industries and others. Czech companies produce, for example, fertilizers, polyester fibres, plastic materials and inorganic substances besides they also belong to the most significant producers in this sector.

Besides the above-mentioned sectors, the Czech industry has made a name for itself in several other areas. Some of them are Research & Development, Medical Equipment, Food Processing, Furniture & Glass & Ceramics. The Czech industry, unlike most other countries in Eastern Europe, has a very diversified economy, which in turn has helped the growth and development of the Czech Republic even in turbulent times. Its wide range of industries and services make it a very attractive country for trade and investment, especially in the Indian context where there are tremendous synergies and opportunities to further bilateral economic relations.

OPPORTUNITIES FOR ECONOMIC COOPERATION BETWEEN CZECH REPUBLIC & TAMIL NADU

Czechia:

The Czech Republic has one of the most stable, wealthy, and developed economies in the world. An explanation for this is the strong industrial tradition born in the 19th century. The availability of educated and skilled professionals in the automotive industry, the strategic location in central Europe, and the good infrastructural network has influenced the growth and expansion of the industrial sector. The GDP of Czech Republic is USD $215.7 billion. The service industry tops in terms of GDP contribution to the economy of the country at 59.7%, followed by the industrial sector at 37.8%, and finally the agricultural sector at 2.5%. The labour force for these sectors stands at 59.2%, 38%, and 2.8% respectively. The Czech Republic is, in many ways, a Central European success. Driven by FDI and strong participation in global value chains, the booming manufacturing sector now leads all sectors in employment.

Tamil Nadu:

Tamil Nadu is the second largest economy in India. Tamil Nadu has a diversified manufacturing sector and features among the leaders in several industries like automobiles and auto components, engineering, garments, textile products, yarn, leather products and leather tanning, chemicals, plastics, cement, banking and financial services, drugs and pharmaceuticals, agriculture and food processing, electronic hardware, IT & ITeS and tourism. It ranks first among the states in terms of number of factories and industrial workers. Due to its achievements as an auto production hub, Chennai has been dubbed as the "Detroit of India". Tirupur and Coimbatore are the major textile centres in Tamil Nadu. Tirupur is known as the ‘Knitting City’, while Coimbatore is called the ‘Manchester of South India’. Close proximity with East Asian countries is also enabling Chennai to become an international finance hub.

The Czech Republic and Tamil Nadu economies have many common industries and synergies. The business opportunities between the two regions are tremendous due to the common strengths. Some of the sectors where the Czech Republic and Tamil Nadu can explore, develop and collaborate are briefed here.

AUTOMOTIVE INDUSTRY

Czechia:

The Czech Republic hosts one of the highest concentrations of automotive-related manufacturing and design activities in the world. With passenger car production at 107.5 vehicles per 1,000 persons, the Czech Republic has maintained its supreme position among world automotive leaders in terms of per-capita output. It is also among the fifteen largest global passenger car producers by volume. The Czech automotive industry employs more than 150,000 people and accounts for more than 20% of both Czech manufacturing output and Czech exports. The Czech Republic is the 12th largest global car exporter and has employed over 150,000 people.

Tamil Nadu:

Tamil Nadu is one of the top 10 automobile hubs in the world. With a well-developed auto ecosystem, Tamil Nadu accounted for 45% of India's motor vehicle/car exports in 2017-18 and 35% of India's auto component production. Tamil Nadu is also the largest tyre manufacturing state in the country. It is known as the Automotive capital of India. Chennai has an annual installed capacity to produce 1.71M units of vehicles. Major OEM companies like Hyundai Motor Co., BMW, Daimler, Renault-Nissan, Ford Motors, Ashok Leyland, TVS motors & Yamaha Motors, etc. are present here. More than 1,300 factories are present in Tamil Nadu which cater to the automotive industry.

ENGINEERING INDUSTRY

Czechia:

Czechia's strength is engineering. Engineering forms the backbone of the Czech economy and its manufacturing base is made up of more than 1,100 companies. These companies are especially involved in the field of energy engineering, transport engineering, production of machining and shaping tools, metallurgy and production of structures and metal components. The Czech Republic exports almost 90% of its engineering production, especially to EU countries, whereas its presence has also been consolidated in the Asian and Latin American markets. There is a great output from high-tech engineering, machine engineering, and automotive engineering.

Tamil Nadu:

Tamil Nadu is a heavy engineering hub with a number of global manufacturers with respect to capital goods and heavy electrical equipment segments. The state contributes 19% to the national production of general purpose and special purpose machinery; It contributes 8% to the national production of heavy electrical equipment. Chennai is a heavy engineering hub with a number of global manufacturers with respect to capital goods and heavy electrical equipment segments. Tamil Nadu ranks second in the production of general purpose and special purpose machinery and ranks fourth in the production of heavy electrical equipment.

AVIATION INDUSTRY

Czechia:

The Czech Republic has a long aviation tradition and has always had a strong presence in the aerospace sector. From basic production to final aircraft assembly and cutting-edge research and development programmes, the local aerospace industry has progressed significantly and simply cannot be overlooked. The aviation industry of the Czech Republic focuses on two main activities. First of all, there is the production of complete aircrafts. It concerns smaller aircrafts for local and regional transport, training and light combat aircrafts, sport and agriculture aircrafts, ultra-light aircrafts and gliders. A quarter of ultra-light aircrafts sold in the world have been produced in the Czech Republic. The second segment of the aviation industry is the production of components for large transport and military aircrafts and helicopters.

Tamil Nadu:

Tamil Nadu is the first State to be designated as an Aerospace & Defence Corridor by the Central Government. Tamil Nadu is ideally placed to become India's largest defence hub as it already has 120 companies supplying to the aerospace sector and over 700 companies manufacturing for the defence sector. The Tamil Nadu Industrial Development Corporation (TIDCO) has established an Aerospace Park with 250 acres of land, which can be expanded to 500 acres. MRO facilities are coming up in Krishnagiri and Chennai. An advanced computing and design engineering centre for the aerospace sector is coming up in the Aerospace Park. In civil aviation, there exists opportunities in MRO development, setting up of greenfield airports, upgradation of existing airports and flying schools, to name a few. The Government of Tamil Nadu, in its Industrial Policy 2021 has designated the Aerospace & Defence sector as a Sunrise Industry. Tamil Nadu aims to position the State as the preferred hub for the aerospace and defence industries in India in the areas of engineering, design, manufacturing and allied activities by harnessing its industrial base and talented human capital strengths.

DEFENCE INDUSTRY

Czechia:

Czechia has huge strengths in heavy engineering. The Czech Engineering sector employs over 126,000 workers. More than 5,200 machinery companies are manufacturing even the most sophisticated components, which makes the Czech Republic second most specialized in industrial machinery, equipment, and tools in the world. That makes the engineering sector one of the three most important industry sectors in the Czech Republic. The Czech engineering sector has been transformed over the past twenty-five years by globalization, technology and the growth of other emerging markets.

Tamil Nadu:

Tamil Nadu is an attractive destination due to its existing industries and infrastructure in the Automotive, Engineering, Electronics & other sectors and how this would have synergies with the Aerospace and Défense sector. The formal launch of the Tamil Nadu Defence Industrial Corridor was done by the then Defence Minister Nirmala Sitharaman in Trichy on 20th January 2019. This southern Defence corridor is also called the “Tamil Nadu Defence Production Quad”, since the nodal cities namely, Chennai, Salem, Hosur, Tiruchirappalli and Coimbatore form the quadrilateral. Independently each of these cities already supports well defined tiered manufacturing clusters, which cater to a variety of industries, from automobiles to heavy industries. These manufacturing hubs also have a fairly developed ecosystem like the Ordnance Factory Boards, DRDOs, and other Defence Public Sector Units.

TAMIL NADU & TN DEFENCE INDUSTRIAL CORRIDOR

Tamil Nadu (TN), located on the south-eastern coast of India, is a well-known and industrially diversified economy. The State is a significant contributor to the Indian economy and has consistently performed well. It is India's 2nd largest economic powerhouse. It is one of the most sought after investment destinations in India due to the availability of skilled manpower, high quality infrastructure, a conducive business environment and its favorable location.

Tamil Nadu ranks number one in industrial performance, number of factories, annual turnout of skilled manpower and number of operational Special Economic Zones. The State ranks second in healthcare and good governance. It is the second largest economy in the country.

TN is home to the largest automotive hub, with OEM companies like Hyundai Motor Co., BMW, Daimler, Renault-Nissan, Ford Motors, Yamaha Motors, Ashok Leyland, TVS motors, Royal Enfield etc., TN accounts for 35% of India's auto component production. The state also accounted for 45% of India's total auto exports in previous years.

TN also contributes to 16% of the total electronics production in India, 2nd in India in Computer, Electronics and Optical Products, 3rd in India in terms of Electronic Exports and home to leading companies like Dell Computers, Motorola, Samsung, Foxconn, Flextronics, Nokia, Siemens, Sanmina - SCI, Salcomp etc and many other suppliers of components.

Tamil Nadu should be seen as an attractive destination due to its existing industries and infrastructure in the Automotive, Engineering, Electronics & other sectors and how this would have synergies with the Aerospace and Défense sector.

FEW OTHER HIGHLIGHTS OF TAMIL NADU

- **Infrastructure:** On the infrastructure front, the state boasts of 4 large ports - Madras, Ennore, Kattupakkam, and Tuticorin - handling around 19.3% of India's capacity;4 Airports handling 23 Million passengers; 6700 KM of Rail network, and 200,000 KM of Road network, and more, like the 8 lane Chennai-Salem Green Expressway are in the pipeline
- **FDI:** The state has received $27 Billion USD as Foreign Direct Investment (FDI), between 2000 to 2017
- **SEZ & Industrial Parks:** Tamil Nadu has 36 operational Special Economic Zones (SEZs) – the highest in the country – and a vibrant MSME sector, and a network of about 113 industrial parks, and the highest number of factories in the country, giving it the edge of being one of the most urbanized states in the country
- **Higher Education:** With over 500 Engineering colleges, and an equal number of Polytechnics, the state can offer an abundance of skilled manpower, and a vibrant youth population of more than 66% are in the working age group
- **Power Sector:** The state has 2 Nuclear plants – at Kalpakkam and Kudankulam – besides many Thermal Solar and Wind power plants, to provide cost-effective power for the industries
- **Others:** The state of TN has a good blend of Public Sector Units – including Defence PSU – many Indian and global manufacturers and IT companies, and its proximity to the IT/ITES and Electronic design and manufacturing base hub, Bengaluru, is an added advantage.

TAMIL NADU DEFENCE INDUSTRIAL CORRIDOR

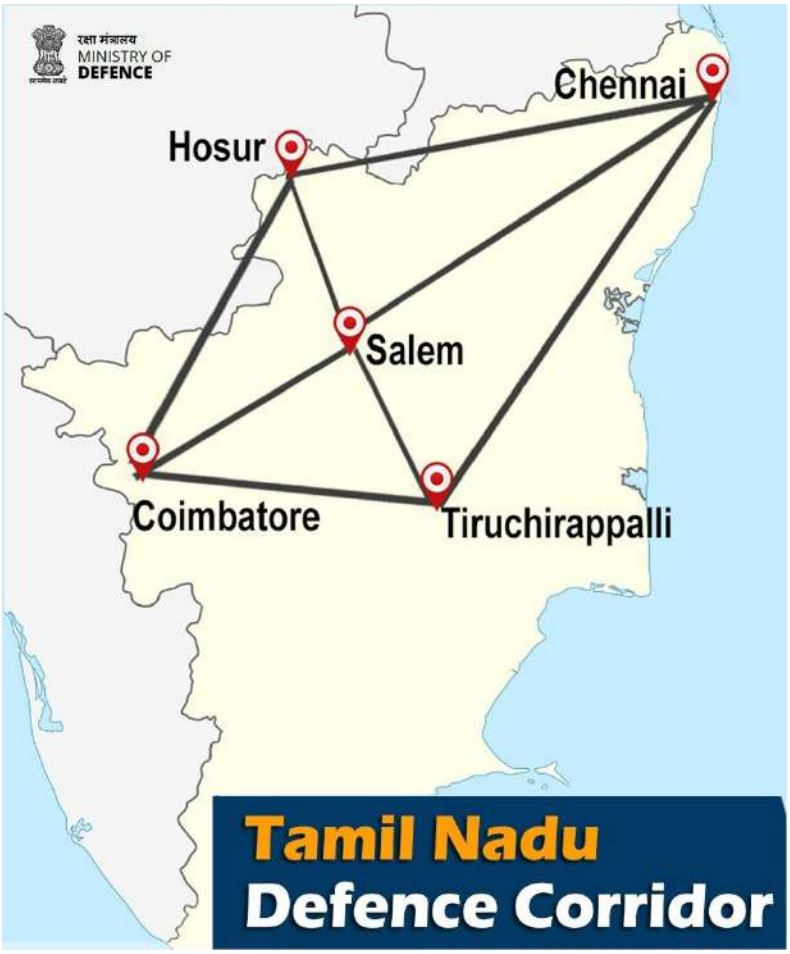
The formal launch of the Tamil Nadu Defence Industrial Corridor was done by the then Defence Minister Nirmala Sitharaman in Trichy on 20th January 2019. This southern Defence corridor is also called the **"Tamil Nadu Defence Production Quad"**, since the nodal cities namely, Chennai, Salem, Hosur, Tiruchirappalli and Coimbatore form the quadrilateral. Independently, each of these cities already supports well defined tiered manufacturing clusters, which cater to a variety of industries, from automobiles to heavy industries. These manufacturing hubs also have a fairly developed ecosystem like the Ordnance Factory Boards, DRDOs, and other Defence Public Sector Units.

The following are some of the key highlights of the launch:

- Investments of approximately INR 3,100 crores have been announced in the Tamil Nadu Defence Corridor
- An established TIDCO Aerospace park with 250 acres (expandable to 500 acres)
- An Aircraft MRO (Maintenance Repair Overhauling) facility in Krishnagiri and an upcoming MRO facility in Chennai will further catalyze industry growth
- An Advanced Computing & Design Engineering Centre (ACDEC) for Aerospace Industry in TIDCO Aerospace & Defence Park will offer cutting edge technology and state-of-the-art infrastructure to support incubation and innovation in the Aerospace Industry. Most of the investment will come from the Defence Public Sector Units (DPSUs), such as Ordnance Factory Board (OFBs), Bharat Electronics Limited (BEL), Bharat Dynamics Limited (BDL), Bharat Heavy Movers Limited (BEML), and Mazagon Dock Limited (MDL). OFB will be investing Rs 2,305 Crores, BDL will invest Rs 150 Crores, MDL will be setting up incubators in IIT Chennai with an investment of Rs. 15 Crores, and BEML is planning to set up a spares manufacturing facility with an investment of Rs. 40 Crores
- Tamil Nadu Industrial Explosives Limited has signed an MoU with Bharat Electronics Limited for reviving its defunct factory for producing ammunition and to set up a Centre of Excellence for ammunition related technologies
- An Aerospace division is being established by BHEL in Ranipet with an investment of Rs.200 crore
- Land acquisition has commenced for the satellite launch station of ISRO at Kulasekarapattinam in Thoothukudi District. This launching station will be established at an estimated investment cost of Rs.1000 crore
- A feasibility study by TIDCO through IIT-Madras for developing Ulundurpet airstrip as an Aviation Technology Development complex including UAV Testing, Flight Academy, Aeromodeling, etc is in progress
- The private sector companies have also announced their investment plans. The Bengaluru headquartered Alpha Design has announced an investment of Rs 100 Crores, while the TVS Group will be investing Rs 50 Crores, with plans for manufacturing tactical combat gears for soldiers. The Chennai headquartered Data Patterns with plans for Transfer-of-Technology (ToT), will invest Rs 75 Crores. Aerospace Engineers based at Salem also plans to invest Rs 105 Crores
- L&T MBDA Missile Systems Ltd, a JV between Larsen & Toubro and France's MBDA, have obtained the provisional approval for their SEZ unit in Coimbatore from Government of India, for producing missile weapon systems

- Lockheed Martin's has announced their intention to invest in the corridor and also mentioned of the impressive expertise and capabilities of companies like Lakshmi Machine Works (LMW) and some others, which measure up to be their supply chain partners
- The Defence Minister also launched by video conferencing, the "CODISSIA Defence Innovation and Incubation Centre" to support the MSMEs, Start-up, and existing companies, to encourage their participation and indigenous contribution to the Defence industry
- DRDO handed over the model of Arjun Mark-1A to Mr Saurabh Kumar, Director General of Ordnance Factories (DGOF) and chairman of the Ordnance Factory Board. The release also said that the Arjun Mark-1A is much superior to the earlier version in terms of firepower, mobility and protection features
- According to the TN Govt, Govt has identified about 1,000 acres of land in Manapparai, 1,300 acres in Krishnagiri, 1,000 acres in Dharmapuri and 900 acres in Hosur

AEROSPACE AND DEFENCE CLUSTERS UNDER TN DEFENCE INDUSTRIAL CORRIDOR



ANALYSIS OF CLUSTERS IN TN DEFENCE CORRIDOR AND ITS STRENGTHS

- **Chennai:** The capital city of the state is also the automobile capital of South Asia. It is home to Armored Vehicles and Ammunition Depot – AVADI has been a military base since the colonial times. Heavy Vehicles Factory (HVF), EFA-Engine Factory Avadi, Combat Vehicles Research and Development Establishment (CVRDE), Central Vehicle Depot (CVD), The Ordnance Depot [OD], Unfit Vehicles Park [UVP] and the Ordnance Clothing Factory (OCF) exist within the limits of Avadi. A Maintenance Repair Overhauling (MRO) complex is being planned in Chennai which will emerge as the preferred MRO destination. Aerospace Park in Sriperumbudur (Vallam - Vadagal) with an Advanced Computing and Design Engineering Centre (ACDEC) is being set up to form a strong base for supporting large OEMs.
- The city also boasts its advantage of having the largest port in India which connects with the busiest trade routes in the Indian Ocean.
- **Trichy:** One of Trichy's unique advantages is the usage of state-of-the-art tools and technology in SMEs that specialize in laser cutting of tungsten, a material which is widely used in the making of ships and submarines. Heavy Alloy Penetrator Project (HAPP) Trichy pioneers in the manufacture of Tungsten and other heavy alloys primarily for Defence applications
- Trichy also houses Bharat Heavy Electricals (BHEL). The Ordnance Factory of Trichy (OFT) specializes in the manufacture of rifles, grenades etc.
- **Coimbatore:** The entrepreneur rich city is a strong base for foundry, machining, tooling and forging. It also has a large base for auto-ancillaries manufacturing in the country. It is an education hub with a large number of Engineering and Industrial Training Institutes supplying technical talent to the nation. Termed the "Manchester of South India" it pioneered the industrial development in India. Currently, over 14,000 MSMEs support the supply chain across foundry, motor & pumps, auto-components and tooling sectors.
- **Salem:** Strategically lying at the heart of the Defence quadrilateral and equidistant from the four Nodal cities of the Defence corridor, Salem has rich deposits of minerals such as bauxite, magnesite, granite and calcite, and is a hub for making power grids and steel, which form the foundation for the shipping industry. Salem is also a focus state for Power Grid.
- **Hosur:** Hosur is a prominent city along the Chennai -Bengaluru Industrial Corridor. Heavy Engineering and Automobile majors across the globe have set-up bases. Hosur is a powerhouse in the auto corridor. Often missed out in the Defence quadrilateral is the proximity of the corridor with Bengaluru, the IT hub of the world. Bengaluru is right at the doorstep of Hosur and Defence corridor. Electronics, embedded systems and software controls are critical to Engineering systems and proximity of Bengaluru is a bonus to the already well-placed Quadrilateral.

AEROSPACE & DEFENCE ECO SYSTEM IN TAMIL NADU

- The Defence industry in Tamil Nadu is one of the fastest growing sectors in the state generating a huge amount of export revenue. The state serves as the headquarters for numerous Defence manufacturing public undertakings and number of private companies. Few highlights of the AD industry are:

    - More than 120 Aerospace Component manufacturing companies
    - More than 700+ suppliers to Defence Public Sector Units (DPSUs)

FEW OF DEFENCE PSUS AND ORDINANCE FACTORIES IN TAMIL NADU

- Heavy Vehicles Factory (HVF), Avadi, Chennai, manufacturing tanks and heavy vehicles for military requirements
- Ordinance Clothing Factory (OCF), Avadi, Chennai manufacturing clothing and other military wears for armed forces
- Engine Factory (EFA) manufacturing high power diesel engine and battle tanks for Defence applications
- Ordnance Factory Trichy (OFT) manufacturing rifles and grenade launchers etc.,
- Heavy Alloy Penetrator Project (HAPP), Trichy manufacturing special alloys like Titanium and other alloys for Defence applications, and
- Cordite Factory Aruvankadu (CFA) Ooty manufacturing arms and ammunitions

GOVT POLICIES SUPPORTING THE AEROSPACE INDUSTRY IN TAMIL NADU

1. TAMIL NADU AEROSPACE & DEFENCE POLICY 2019

Tamil Nadu Government has unveiled the Tamil Nadu Aerospace & Defence Industrial Policy 2019 in January 2019.

POLICY OBJECTIVES

- To create an end-to-end ecosystem for A&D sector
- To attract an estimated investment of around 5 Bn USD in 5 years and 10 Bn USD in 10 years in A&D sector
- To generate direct & indirect employment opportunities to around 1 lakh persons in 10 years
- To create a global workforce for high-end manufacturing by establishing Centre of Excellence, R&D and skill development institutions and
- To attract global OEMs and Tier-1 suppliers and Indian majors as anchor units in the State.

INCENTIVES & CONCESSIONS AND SINGLE WINDOW CLEARANCE

ANCHOR UNIT SUBSIDY (CLAUSE 5.1)

Anchor Unit Subsidy of Rs.10 Crore for the first 10 tier 1 / OEMs each and / or their supplier with a minimum investment of Rs.50 crore each and direct employment of 50 persons.

SUBSIDY FOR SKILL DEVELOPMENT (CLAUSE 5.2)

100% of the cost of the "on job" technical training will be reimbursed (subject, to max. of Rs.10000/ month/ trainee for 50 trainees per unit per year).

SUBSIDY FOR CERTIFICATION PROCESS (CLAUSE 5.3)

50% of the cost of Certification from Indian and International bodies will be reimbursed to the Industry, subject to a ceiling of Rs 25 lakhs per unit.

SUBSIDY FOR LAND ALLOTMENT (CLAUSE 5.4)

20% Concession will be given on the land cost for A&D units.

CAPITAL SUBSIDY FOR MSME UNITS (CLAUSE 5.5)

Back ended Subsidy @10% will be given to the MSME industry investment upto Rs.10 crore.

CAPITAL SUBSIDY FOR DEVELOPMENT OF AEROSPACE AND DEFENCE PARK (CLAUSE 5.6)

Back ended Subsidy @10% will be given to the developers of A&D parks.

MRO (CLAUSE 5.7)

Attractive Tax refund for MRO activities in Tamil Nadu.

OTHERS

Structured Package of Incentives for projects @ investment >Rs.300 crores will also be offered to both new and expansion of A&D manufacturing units on a case-to-case basis.

2. TAMIL NADU INDUSTRIAL POLICY, 2021

Tamil Nadu Industrial Policy 2021-2025, aims to achieve four key objectives:

- Attract investments worth over ₹10-lakh crore ($135 billion) by 2025
- Achieve annual growth rate of 15% in the manufacturing sector during the policy period
- Increase contribution of manufacturing sector to 30% of the state's economy by 2030 from 25% now and
- Create over 20 lakh jobs by 2025

New Industrial policy is applicable for projects establishing or expanding industrial units, industrial parks, Research & Development, warehousing and logistics, except in 14 sectors specified by the policy. Investments made from January 1, 2021, will be considered eligible for availing incentives.

This policy provides a structured package of incentives for companies looking to invest more than ₹500 crore in the State. While it offers four different subsidy models to investors — SGST reimbursement, fixed capital subsidy, flexible capital subsidy and turnover subsidy.

It also provides a bigger set of incentives in "Sunrise Sectors". Aerospace & Defence has been classified as a "Sunrise Sector" category aimed to get lot of boosting from Government.

INCENTIVES FOR INDUSTRIES

Government of Tamil Nadu intends to support the projects in manufacturing with the potential for positive externalities in the State, through the following Incentive Packages:

- Structured Package
- Incentives for Sunrise Sector
- Incentives for Industrial Parks
- Incentives for R&D Projects
- Incentives for Logistics Infrastructure
- Incentives for Foreign Direct Investment
- Incentives for Sub-Large Projects

ELIGIBILITY & DEFINITIONS

For the purpose of administering the incentives, the following four investment commitment ranges have been identified:

	INVESTMENT COMMITMENT RANGE (RS IN CR)		
PROJECT CATEGORY	MINIMUM INVESTMENT	MAXIMUM INVESTMENT PERIOD	STANDARD INVESTMENT
SUB-LARGE	50	300	4 years
LARGE	300	500	4 years
MEGA	500	5000	4 years
ULTRA MEGA	5000	-	7 years

STRUCTURED PACKAGE FOR LARGE & ABOVE PROJECTS

The Structured Package of Incentives includes:

- Investment Promotion Subsidy
- Training Subsidy
- Land Cost Incentive
- Interest Subvention
- SGST Refund on Capital Goods
- **Standard Incentives:**
  - Electricity Tax Incentive
  - Stamp Duty Incentive
  - Green Industry Incentive
  - Quality Certification Incentive
  - Intellectual Property Creation Incentive

SPECIAL INCENTIVES FOR SUNRISE SECTORS

Aerospace & Defence sector is included in Sunrise sectors along with other sectors like EV, EV cells, Renewable energy components, Pharmaceuticals, Medical electronics, Technical textiles including medical textiles etc.

The following incentives are in addition to the structured Package above (Section 13) and are applicable to projects in Sunrise Sector (Annexure-II) that are Mega and Ultra-Mega Projects for “A” Districts, or Large, Mega and Ultra-Mega Projects for “B” & “C” Districts.

INVESTMENT PROMOTION SUBSIDY

Sunrise Booster Projects in Sunrise Sector industries opting for Flexible Capital Subsidy shall get a Sunrise Booster of one which implies an additional capital subsidy of up to 7.5% of EFA (Section 13.1.3), depending upon the investment and employment.

LAND COST SUBSIDY FOR ELIGIBLE PROJECTS IN SIPCOT

Land allotment will be made for Concessional rate applicable at different locations based on the district.

STAMP DUTY INCENTIVE

100% stamp duty exemption will be given for lease or purchase of land/ shed/ buildings meant for industrial use in land obtained from SIPCOT. In the case of private lands, stamp duty concession will be given as a 100% back ended subsidy for up to 50 acres on fulfilment of investment and employment commitment.

ENHANCED INCENTIVE FOR QUALITY CERTIFICATION

Projects obtaining certifications like ISO, ISI, BIS, FPO, BEE, AGMARK, and ECOMARK or any other national or international certification shall be given a subsidy of 50% of the total cost incurred for obtaining the certification, as certified by a Chartered Accountant, limited to Rs. 1 cr. for the period of investment.

ENHANCED INCENTIVE FOR INTELLECTUAL PROPERTY CREATION

The Government will reimburse 50% of the expenditure incurred by the Project for the investment period for a patent, copyright, trademarks, Geographical Indicators registration subject to a maximum of Rs. 1 cr. for the period of investment.

INTEREST SUBVENTION

Interest Subvention of 5% as a rebate in the rate of interest shall be provided be on actual term loans taken for the purpose of the financing the project, for a period of 6 years subject to the limits.

HIGHLIGHTS OF THE NEW MSME POLICY, 2021

The following policy strategies are being adopted in the new MSME Policy:

FACILITATE INVESTMENT, INCLUDING FOREIGN DIRECT INVESTMENT (FDI)

MSME Trade and Investment Bureau (M-TIPB) will provide escort services to prospective foreign investors in the MSME sector. M-TIPB will facilitate the entrepreneurs for availing clearances from the Single Window Portal and escort them for setting up of industries and availing incentives to them. The vendor MSMEs for the large enterprises will also be identified by M-TIPB.

FOSTER CULTURE OF ENTREPRENEURSHIP AND INNOVATION

EDII is implementing the five year strategy plan 2017-22 for entrepreneurship development and innovation by MSMEs.

STRENGTHEN EASE OF DOING BUSINESS AND GOOD GOVERNANCE

To promote Ease of Doing Business, the MSME Department has developed and implemented a Single Window Portal for MSMEs as per the Tamil Nadu Business Facilitation Act, 2018.

New MSMEs and Start-ups will be exempted from approvals for establishment and operation for a period of three years based on self certification subject to the condition that the unit shall have mandatory approval within a period of one year from the expiry of the 3 year period.

EXPAND ACCESS TO AFFORDABLE FINANCE

- The existing schemes such as UYEGP and NEEDS will continue to be implemented for the promotion of MSMEs. TIIC is being infused with the additional capital of Rs.1000 crore to expand access to affordable institution finance to the MSMEs
- The Equity participation would be provided through the Tamil Nadu Start-up Fund of Funds, which would be managed by a professional financial agency as envisaged in the Tamil Nadu State Start-up and Innovation Policy, 2018
- The Incentives like Capital Subsidy, Special Capital Subsidy, Interest Subsidy, Subsidy for Backward Blocks and Agro Industries and Back-ended Interest subsidy will be available for MSMEs.

AUGMENT INFRASTRUCTURE SUPPORT

- TANSIDCO will develop Plug & Play facilities, plots and sheds and make them available on short term lease.
- A corpus of Rs. 500 cr. for the Estate Infrastructure Development & Maintenance Fund will be setup for up-gradation and better maintenance of TANSIDCO estates.
- The infrastructure support for privately developed Industrial Estate is enhanced from Rs.10 crores/estate to Rs.15 crores/estate. Similarly the infrastructure support for shifting the existing units will be enhanced from Rs.15 crores/estate to Rs.20 crores/estate.

ENHANCE AVAILABILITY OF SKILLED HUMAN RESOURCES

The Government will put in place an effective coordination mechanism for forecasting and development of skills involving the Tamil Nadu Skill Development Corporation (TNSDC), MSME Associations, Industrial Training Institutes, and Department of Industries and Commerce to enable annual surveys for forecasting the requirement, planning and for organizing of skill training programmes for such sectors.

FACILITATE ACCESS TO NATIONAL AND GLOBAL MARKETS

- The M-TIPB will play an active role to support the MSMEs for participation in National and International Trade Fairs and Exhibitions. The overseas markets will be explored for MSME products.
- The DICs will play an active role for the promotion of Export Hubs in the districts after analysing the export potential in the districts in coordination with the Director General of Foreign Trade (DGFT).

IMPROVE COMPETITIVENESS AND PRODUCTIVITY

- The MSME Department will design an MSME Manufacturing Competitiveness & Sustainability Initiative (MC&SI) to incentivize resource efficiency, environmental sustainability, and adoption of international product/process quality standards.
- The Promotion of Energy Audit and Conservation of Energy (PEACE) initiative and Q-Cert programme will be strengthened to ramp up productivity and competitiveness.
    - Reimbursement charges towards Energy Audit and implementing the recommendation of audit is enhanced as follows:
        - Incentive towards cost of Energy Audit enhanced from 50% to 75%, subject to a ceiling enhancement from Rs.75,000/- to Rs.1,00,000/- for Energy Audit.
        - Similarly incentive towards cost of eligible equipment for implementation of the recommendation is enhanced from 25% to 50% subject to a ceiling enhancement from Rs.2 lakhs to Rs.10 lakhs.
        - Reimbursement charges for quality certification enhanced from Rs.1 lakh to a maximum of Rs.2 lakhs for National Certification and Rs.10 lakhs for International Certification.
- The existing Government Testing Labs will be upgraded by providing state of the art facilities with NABL accreditation to meet the testing requirements of MSMEs.

REINFORCE SOCIAL EQUITY AND INCLUSION

The payroll based subsidy will be introduced to promote regular employment. The existing employment intensive subsidy is being redefined. The employer's contribution to the EPF for the first three years shall be reimbursed, if the MSMEs provide employment to more than 20 persons.

MONITORING & EVALUATION OF POLICY IMPLEMENTATION

Implementation of this Policy would be reviewed by the MSME Investment Promotion and Monitoring Board as constituted under the Tamil Nadu Business Facilitation Act, 2018.

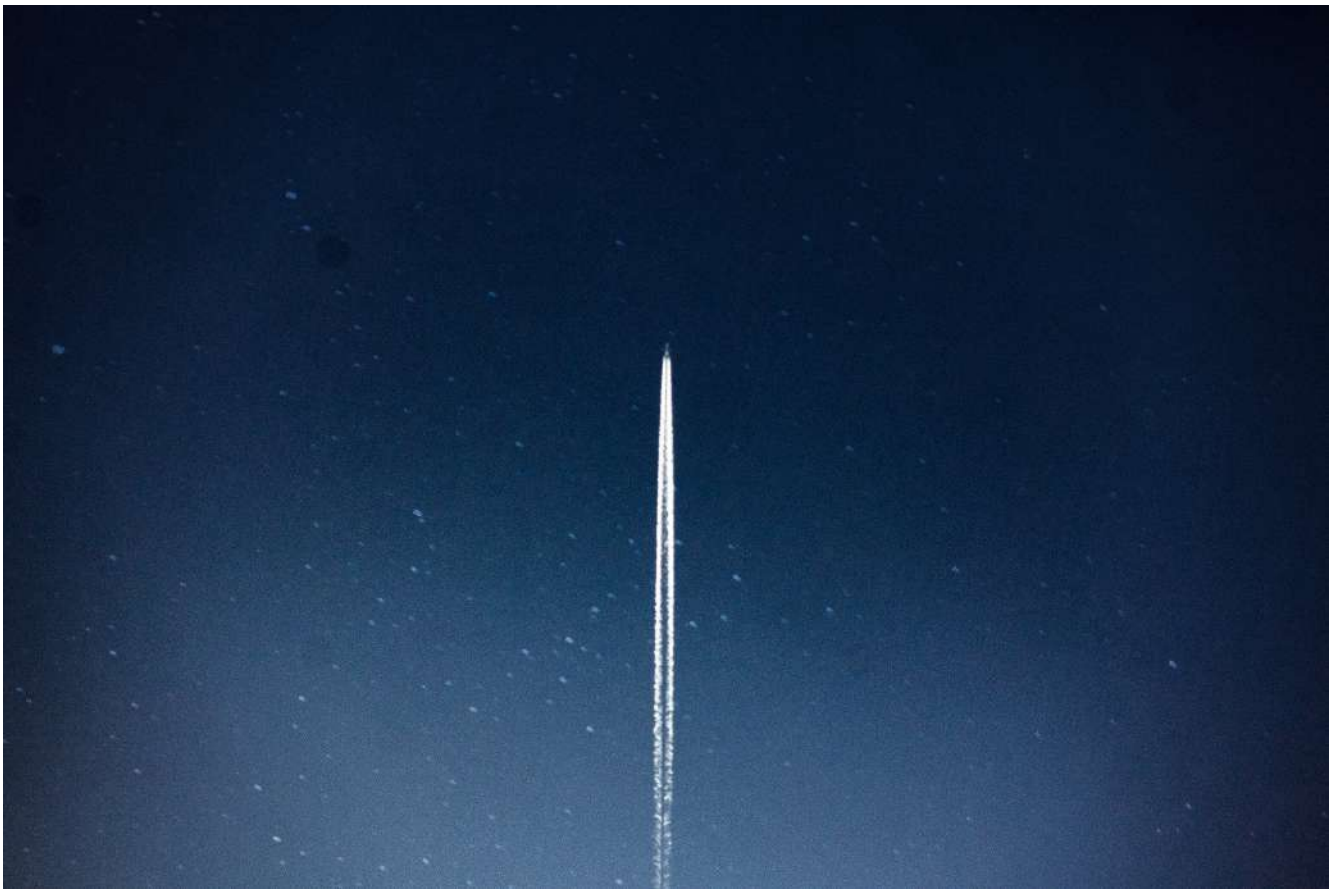
LOOKING FORWARD

ENCOURAGING GOVERNMENT MEASURES

- The Defence Acquisition Procedure 2020, introduced the category of Buy (Global – Manufacture in India) for the acquisition of foreign designed and developed equipment but to be manufactured in India
- The Buy (Indian - IDDM) category has been afforded the highest priority among the forms of acquisition.
- Procurement of equipment with enhanced performance metrics
- Funding of private sector design and development projects with a special focus on the Medium and Small Manufacturing Enterprises (MSME) Sector.

Major programmes under various stages of procurement stage are mentioned:

S.NO.	PROGRAMME	QUANTITY	PROGRAMME VALUE (USD MILLION)	CURRENT STATUS
1	**LCA Tejas fighter aircraft**	83	6700	Contract awarded to HAL
2	**Medium weight multi role fighter aircraft**	114	15000	RFI issued in 2018
3	**Naval utility helicopter**	111	3000	Under strategic partnership
4	**Medium-lift transport aircraft**	56	1600	MoD clearance awaited
5	**Infrared Imaging Search & Track System (IRST)**	100	247	Design stage
6	**Foldable Fiberglass Mat (FFM) for runway repair**	122 sets/yr	26	EoI response received
7	**Chaff and flares**	Chaffs-1,00,000: Flares-1,50,000	19	Design stage
8	**Light Combat Helicopter (LCH)**	15		Contract likely in 2021
9	**Medium Altitude Long Endurance (MALE) UAV**			
10	**Advanced Medium Combat Aircraft (AMCA)**	~100		Design stage



UPCOMING DEFENCE ACQUISITIONS

- 110 contracts signed with a total value of INR 1,13,995 crores
- 101 Acceptances of Necessity (AoNs) worth INR 2,39, 000 crores issued.
- Letters of Intent for the acquisition of Mine Counter Measure Vessels worth INR 32, 640 crores issued.

MAJOR CAPITAL PROCUREMENTS IN RECENT TIMES

- Navy Frigates worth INR 48,000 crores
- Apache Attack Helicopters worth INR 13,970 crores
- Chinook Helicopters worth 8,000 crores
- Barak Surface to Air Missiles worth INR 875 crores
- Poseidon Eight India (P8I) Long Range Maritime Patrol Aircraft, with an operational aircraft delivered and 4 in advanced stages of production
- 36 Rafale Multi-Role Combat Aircraft from the French manufacturer Dassault.

ENHANCED DEFENCE PRODUCTION MEASURES

- The process of granting Industrial Licenses (ILs) has become more liberalized and transparent, leading to a sharp increase in the number of ILs issued. The number rose from 19 in 2013-14 to 200 in 2018-19
- Strong focus on self-reliance, with all naval vessels including submarines on order, being constructed in India and a drop in expenditure on capital procurement from foreign vendors from INR 35,082 crores in 2013-14 to INR 22,422 crores in 2015-16
- The Streamlining of the Defence exports process has led to a significant rise in the value of Defence exports from INR 1,050 crores in 2013-14 to INR 2,014 crores in 2015-16
- There has also been a rise in the production value of DPSUs and OFBs from INR 43,746 crores to INR 51, 351 crores
- The new Offset Policy has led to 100% of the offset obligations being claimed by Foreign Vendors in 2014 and 2015, a significant increase from 63% from 2008-13
- The HAL Tejas, Advanced Light Combat Aircraft has been inducted into the Indian Air force
- The indigenously developed warships INS Kochi and INS Kolkata have been commissioned with the INS Kalvari Attack Submarine inducted in Dec 2017
- The indigenously developed Akash Surface to Air Missile Defence System has become fully operational.

CONCLUSION

The Indian government and the MoD, have pronounced their intention, and have walked their talk, by creating policies and opportunities to catalyze the growth in the Indian Military & Civil Aerospace industry. Taking cognizance of the undue advantage enjoyed thus far by the DPSUs & OFBs, the policies have been significantly modified, to encourage private sector participations of all sizes and capabilities, leaving it for the market forces to takeover and establish the industry ecosystem. The key drivers such as indigenization and an aggressive government spending on new platforms, throws up plenty of opportunities for the private sector companies, for both established and the new aspiring ones. A well planned, and periodically calibrated approach, can make the difference between being a recognized Aerospace & Defence company or the mediocre ones, which continue to exist in the system.

The opportunities are vast in the Indian Aerospace & Defence sector. With the ever-changing security environment in the APAC region, whether it is the uncertainties of North Korea or volatile situations with China, the requirements are only getting stronger. As the world is getting vary of China as a manufacturing hub, and looking for a new destination, India seems to be emerging as a favorite destination and it is the right time to make inroads into Aerospace Manufacturing.

There are many more industrial sectors that Tamil Nadu and Czechia have in common. Healthcare and Medical Equipment, Chemicals and Petro-Chemicals, ICT, Electronics and Industrial Design are some of the other sectors where Czechia and Tamil Nadu could come together and explore business opportunities. These opportunities need to be explored and taken forward for mutual benefit. SAS Partners, along with the Southern India Chamber of Commerce and Industry can help Czech companies do business in South India, organise B2B meetings and find Indian partners for the Czech companies. SAS partners is also specialized in other areas like Foreign Investment, Mergers & Acquisitions, India Entry Services and Compliance. If Czech companies are interested to explore opportunities in India, SAS Partners can provide all the necessary services that are required to do international business.

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ABOUT THE SOUTHERN INDIA CHAMBER OF COMMERCE AND INDUSTRY (SICCI)

SICCI was founded in 1909 under Mahatma Gandhi's inspiration to fight for the economic freedom of the nation. Though a leading regional chamber, SICCI possesses a national outlook having excellent relationship with Central & State governments.

SICCI has inherited rich tradition and at the same time remains youthful, dynamic & embracing change. Being in business for over 110 years, SICCI plays significant role in bridging Industry-Government connect while empowering the society.

The Chamber is a founder member of The Federation of Indian Chambers of Commerce and Industry (FICCI), New Delhi, the apex body, and continues to take an active interest in the affairs of this national body. Many Presidents of the SICCI have also been Presidents of FICCI and many members are also on the committees of the FICCI and other national bodies.

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ABOUT SAS PARTNERS CORPORATE ADVISORS

SAS Partners has been in the forefront of promoting and facilitating cross border investments with India as a focal point. Since its inception in 2008, SAS Partners has been an advisory partner for governments, businesses and entrepreneurs in their endeavor to conceiving, implementing and managing path breaking business ideas to successful organizations.

Drawing from the inherent competencies in legal and regulatory knowledge, SAS Partners has diversified into tax, finance and human resource advisory services. While the offerings are sector agnostic, SAS Partners is building a passionate and experienced talent pool, who can address the nuances of manufacturing in India, including in the domain of Aerospace & Defence.

Successful advisory interventions with SAS Partners has resulted in its clients establishing numerous manufacturing projects, undergoing result oriented corporate restructurings and expanding businesses through corporate M&A initiatives.

SAS Partners is establishing themselves as an end to end advisory partner for Indian and foreign Corporates for doing business in India.

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ABOUT SUGOSHA ADVISORY

"Sugosha" is the conch of Nakula of the Mahabharata fame. Nakula, gifted with the power to see the future, was cursed that he must not share his knowledge, lest he loses the said powers. Lord Krishna, the Chief architect of Kurukshetra war, used Nakula as the Military Advisor to the Pandava leadership. Lord Krishna, used the knowledge in Nakula, to position the friendly forces. We derive our inspiration from Nakula, as described in the Bhagwat Geeta, in following the principles of Dharma in our Advisory to industry.

Sugosha Advisory, is founded on the principle of providing "Value Based Consulting" to our clients, partnering with them, so as to create an impact on their revenue growth. With a team of erudite industry veterans, having deep domain experience in the Aerospace, Defence and Homeland Security verticals, Sugosha Advisory specializes in Defence Policies, Procurement Procedures and Offsets.

Sugosha Advisory leverages the expertise of the sectoral experts - with some of them having over four decades of industry experience - in Land Systems, Maritime, Defence & Aerospace, and subsumes their valuable inputs and advice, for a comprehensive and a result-oriented approach. Our other core services include Regulations & Licensing (Industrial, Export and Import), Strategic Business Development, Market Entry for Defence manufacturing companies.

We at Sugosha, also publish a monthly magazine, DefInsights, featuring news focused on procurement for the Indian Armed Forces. DefInsights, a Sugosha Media presentation, enjoys a circulation of more than 3000 professionals worldwide. We have already received some excellent reviews.

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