

AEROSPACE INDUSTRY
IN INDIA
INVESTMENT OPPORTUNITIES



THE INDIAN SCENARIO



The Indian aerospace industry is one of the fastest growing aerospace markets in the world. With a long history spanning six decades, the country has an excellent pool of resources matching global standards. India's liberalised economy offers sound opportunities for international companies that look to outsource Manufacturing and Maintenance, Repair and Overhaul (MRO) activities.

India's aerospace sector is at an inflection point. Various estimates put Aerospace & defence expenditure on acquisitions at around Rs. 5 lakh Crore (US\$ 100 Billion) over the next 10 years. Robust growth potential of the industry is attracting original equipment manufacturers (OEMs) in this sector to setup facilities in India thereby providing tremendous opportunity for all stakeholders.

With a size of US\$ 16 Billion, the Indian civil aviation industry is ranked amongst the top 10 globally. It also presents a US\$ 82 Billion market opportunity in 2010-20 cumulatively.

It is in the space industry that India has made even more significant strides – it is one of the six countries in the world that undertakes space launches with commendable work put in by Indian Space Research Organisation (ISRO). ISRO has successfully operationalized two major satellite systems mainly Indian National Satellite for communication services and Indian Remote Sensing (IRS) Satellite for management of natural resource.

The Indian space program, run by ISRO and its affiliates is among the most advanced in the world. Recent mega-missions such as the Chandrayaan and Mangalyaan, coupled with one of the most vigorous satellite programs in the world are expected to invigorate the sector.

GROWTH PROSPECTS



- i) The Defence Procurement Policy (DPP-2011) has included civil aviation equipment in the list of direct offsets. This has boosted the Indian aviation market and by 2017 the same is projected to be among the three largest markets globally.
- ii) The MRO segment in India is estimated to reach Rs. 1300 Crore by 2020. Given the labour intensive nature of MRO, several leading MRO companies, OEMs and international airlines have outsourced heavy maintenance work to India.
- iii) The country has been upgrading its airports to international standards, catering to heavier cargo and passenger traffic. Private airlines now account for 75% of domestic aerospace market. Opening up the skies led to a boom in air traffic, both passenger and freight, which was reversed in 2008 with the global slowdown. However recovery has begun and the aviation sector is set to continue on its high growth trajectory.
- iv) Growth in air traffic is expected to outperform the global average till 2025. In military aviation, India is expected to spend about \$35 billion over the next 20 years as it replaces its existing fleet. Indian MRO segment has been growing at 11 percent and has not been affected significantly by the slowdown. This market is expected to grow at an average of 10% and reach \$ 2.6 billion by 2020.

- v) The Indian Government has recognized the need for massive investment to meet these growing needs:
- The Ministry of Civil Aviation estimates investment of \$ 200-300 billion over the next 25 years, till 2034.
 - The Airports Authority of India has planned investment of \$ 3.04 billion to upgrade airports across the country, even as the sector is open for public-private partnerships (PPPs).
 - According to Boeing, India needs 856 airplanes worth \$ 72.6 billion over the next 20 years to meet the surging demand.

POLICY INITIATIVES



The Indian Government has liberalized the framework for operating in the aerospace industry considerably:

- Manufacturing and R&D activity is allowed 100% Foreign Direct Investment on automatic route in all areas, except air traffic services.
- 100% FDI permitted under automatic route for MRO, flying training institutes and technical training institutes.
- 100% tax exemption for airport projects for a period of 10 years.
- Tax incentives are given for investing in Special Economic Zones.

GROWTH FACTORS

The various segments in the aerospace industry, including civil and military aviation and space, are showing a significant level of growth. The factors driving growth in the manufacturing sector of the aerospace industry include both macro and micro factors that provide attractive fiscal benefits for developers and manufacturers:

- a. growing domestic aircraft demand,
- b. liberalization of civil aviation policies,
- c. offset requirements,
- d. a strong domestic manufacturing base,
- e. cost advantages, talent pool, and
- f. a liberal Special Economic Zones law,
- g. globalization of Maintenance, Repair and Overhaul (MRO) services,
- h. manpower cost competitiveness,
- i. availability of talent,
- j. locational advantages,
- k. use of technologies such as increased use of composites, modern engine technology, all weather capabilities, etc.

FDI POLICY IN AEROSPACE

The defence sector was opened up to 100% for Indian private sector participation, with FDI permissible up to 26%, both subject to licensing and Government approval. However, this cap and the accompanying conditions failed to attract FDI with a mere 5 million USD having come in since 2001. Recognising this, the new Government decided to raise the cap to 49% through the FIPB approval route and has further decided that FDI beyond this will be allowed by the Cabinet Committee on Security only where cutting-edge technology is being transferred.

The Indian aerospace industry is moving into an era of multinational cooperation, or 'horizontal specialisation', where original equipment manufacturers as well as

service suppliers seamlessly integrate functions such as engineering, manufacturing, and customer support across multiple global locations.

INVESTMENTS IN AEROSPACE



- A. Boeing and Tata Advanced Systems have announced a joint venture that will manufacture aero structures for aircraft and also collaborate on integrated systems development opportunities in India.
- B. Mahindra Defence and Airbus Helicopters have formed a joint venture to produce military helicopters in India.
- C. Companies like Fokker and Airborne have entered into joint ventures with various Indian companies in order to scale up local manufacturing capabilities.
- D. Public private partnerships in the areas of Defence Procurement Procedure (DPP) and Defense MRO.
- E. While QuEST Global set up the country's first aerospace SEZ in State of Karnataka in November 2009, the State Government has also planned an Aerospace SEZ in 250 acres of land at Devanahalli, near Bangalore International Airport, both these have attracted significant interest.
- F. Udyog Mitra, the Government's single window agency for industrial projects and the apex body for SEZ projects, has given clearances to majors like US civil and military aviation companies and the European Aeronautics Systems or EADS (Rs. 11,700 Crore investment); Sobha Nadathur Aerospace Pvt Ltd (Rs 200 Crore) and hydraulic equipment manufacturer Dynamatic Technologies (Rs 466 Crore).

- G. Five proposals worth Rs. 135.98 crores were cleared by the State Level Single Window Clearance Committee (SLSWCC) in June 2009: Systems Controls, G.L. Polyurethane Company Private Ltd., Micron Engineers, Priyaraj Electronics Limited and Pacific Natura Biotech Private Limited are ready to invest in aerospace component units in the aerospace SEZ at Devanahalli.
- H. Hindustan Aeronautics Limited's (HAL) proposal to set up a Rs. 2,095 Crore unit in Devanahalli to manufacture aero-engines and provide MRO facilities was approved by the SLSWCC.
- I. In January 2010, British engine maker Rolls-Royce Group Plc's joint venture (JV) with Hindustan Aeronautics Limited (HAL) to make civil aero engine components and sub-systems locally for export.

AEROSPACE PARK IN TELENGANA

The State of Telangana boasts of the country's first Aerospace and Precision Engineering SEZ at Adibatla in Ranga Reddy district near Hyderabad, and has also announced plans to set up two more similar aerospace parks to accommodate prospective companies.

- I. Currently, several home grown and multi-national companies like Zen Technologies, Tata Advanced Systems Ltd (TASL), Mahindra & Mahindra, Sikorsky, Pratt & Whitney and Lockheed Martin have operations at the Aerospace SEZ.
- II. Currently, the aerospace SEZ is spread across 350 acres of which only 250 acres has been notified as SEZ. Besides TASL, the state had allotted 30 acres in the SEZ to Nova Integrated Systems, a Tata enterprise, 25 acres to Punj Lloyd, 20 acres to Mishra Dhatu Nigam (Midhani) and 96 acres to Samuha, a consortium of manufacturers including MTAR Technologies Pvt Ltd.
- III. Given the locational advantage and existing infrastructure at the SEZ, the Tata Group has decided to base all its aerospace activities in Hyderabad. The Company had already committed investments of more than Rs 1,550 crore to set up facilities

in separate joint ventures with overseas companies like Sikorsky and Lockheed Martin Aerostructures.

- IV. While with Lockheed Martin-TASL, it will make aerostructures for the C-130 aircraft produced by Lockheed Martin, with Sikorsky, it is producing components for S-92 helicopter cabins and more than 50 cabins have already been produced so far.
- V. Similarly, Nova Integrated Systems, is setting up an integrated aerospace complex to undertake high-end precision electronics manufacturing, assembly and integration of airborne vehicles.
- VI. B/E Aerospace, one of the leading aircraft cabin and interior products producers, has set up its engineering services division here.

INVESTMENT OPPORTUNITY AND AEROSPACE PARK IN ANDHRA PRADESH



Andhra Pradesh, the southern state of India occupies a strategic position in terms of opportunities for the aerospace sector. The State has three functional domestic and one international commercial airport. This is in addition to a naval airport at Visakhapatnam.

- (i) The State further plans to develop eight new airports, which include Greenfield airport at Bhogapuram (near Visakhapatnam), five Greenfield no frills airports at Kuppam, Dagadarthi, Oravakallu, Ongole and Tadepalligudem & two brown field no frills airports at Donakonda and Nagarjuna Sagar.
- (ii) The State also plans to develop a Greenfield International Aerotropolis infrastructure project spread over 7500 acres in Visakhapatnam district. These

southern states offer certain tactical advantages like (a) excellent port logistics, (b) large land bank, (c) reliable infrastructure and (d) abundant availability of skilled manpower.

- (iii) The State Government of Andhra Pradesh has framed a 5 year policy for the Aerospace sector. All incentives mentioned in Aerospace & Defence Manufacturing Policy 2015 - 20 will be extended to industries as per guidelines to be notified separately. The proposed Policy makes Andhra Pradesh one of the most preferred destinations for Aerospace & Defence manufacturing. It aims to attract mega Aerospace & Defence manufacturing projects in the State and promote establishment of new Aerospace & Defence clusters in order to promote development of a sectoral ecosystem.
- (iv) The Andhra Pradesh Government targets as follows:
 - a) Attract new investments worth Rs. 20,000 Crore in the sector by 2020.
 - b) Create 5,000 additional highly skilled employment opportunities in the sector by 2020.
 - c) Attract at least 4 anchor unit investments of over Rs. 1000 Crore each in the sector in the policy period.
 - d) Attract orders for at least 10% of all offset obligations discharged by companies in India over the policy period.
- (v) Additionally the State Government of Andhra Pradesh is giving labour concessions, single desk clearance and setting up a special cell. It aims to promote Aerospace parks MRO facility and Air cargo complex. In order to achieve this Government is giving special tax incentives and subsidies.

The Government of Andhra Pradesh intends to setup Andhra Pradesh Aerospace Park (on PPP basis) in Ananthapur and Chittoor/Nellore districts. An SPV will maintain and manage this park.

The Park will provide 'plug-and-play' industrial infrastructure allowing companies to focus on their core business. The Park will have:

- a) Manufacturing area (components, sub-components, sub-assemblies, aerospace parts) and SEZ
- b) Testing centre
- c) Hardware/Embedded Technology Centre
- d) Technology innovation centre
- e) Housing & Common facility centre

Government of Andhra Pradesh will provide subsidy of upto 50% of the cost of land, building, plant and machinery subject to a maximum of Rs. 25 Crore for testing centre, Rs. 30 Crore for technology innovation centre and Rs. 50 Crore for the common facility centre

MAINTENANCE, REPAIR AND OVERHAUL FACILITY

It is proposed to setup a world class MRO facility as part of the proposed Bhogapuram Aerotropolis near Visakhapatnam. This will be a state-of-the-art facility which will provide full aircraft base maintenance services and will cater to the maintenance needs of regional and global airline customers.

STRENGTHS AND OPPORTUNITIES

India has a strong framework for providing all requisite resources for this industry – research and development capabilities, leading information technology and engineering services, manufacturing expertise with global firms located in the India and a huge pool of skilled manpower. **Bangalore and Hyderabad provide the Aerospace SEZ** in India that can be used by foreign manufacturers to manufacture aerospace spares.

AEROSPACE MANUFACTURING AND DESIGN COMPANIES IN INDIA

1. Acumen Aviation - Bangalore, Karnataka - acumenaviation.in
2. Altran India - Bangalore, Karnataka - altran.co.in
3. Apollo Microsystems - Hyderabad, Andhra Pradesh - apollo-micro.com

4. BytzSoft Technologies - Pune, Maharashtra - bytzsoft.com
5. CADES Digitech - Bangalore, Karnataka - cadestech.com
6. Calsoft Labs - Bangalore, Karnataka- calsoftlabs.com
7. Drone Aerospace Systems - Bangalore, Karnataka - droneaerospace.com
8. EffiaSoft - Hyderabad, Andhra Pradesh - effiasoft.com
9. EXFAQ - Mumbai, Maharashtra - exfaq.in
10. Four Bridge Technologies Pvt. Ltd. - Pune, Maharashtra - fourbridgetech.com
11. IBS Software - Bangalore, Karnataka - ibsplc.com
12. Milan Infotech - Bangalore, Karnataka - milan-infotech.com
13. NeST Software - Kochi, Kerala - nestsoftware.com
14. Ramco Aviation - Chennai, Tamil Nadu - ramco.com
15. Sand River Technologies - Mumbai, Maharashtra - sandrivertechnologies.com
16. Sheorey Digital Systems Ltd. - Mumbai, Maharashtra - sds.co.in
17. W.H. Brady & Co. Ltd. - Mumbai, Maharashtra - whbrady.in
18. Zeus Numerix - Pune, Maharashtra - zeusnumerix.com
19. Yatih Air Services - New Delhi - yatihair.com/yatihair¹
20. Boeing USA
21. EADS Netherlands
22. Lockheed Martin USA
23. BAE Systems UK
24. General Electric

The Indian Government's regulatory focus for the sector has been on self-reliance, import substitution, and indigenisation in India. As a result, it has encouraged foreign investment and technology platforms for increasing manufacturing operations in India, rather than importing defense equipment.

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