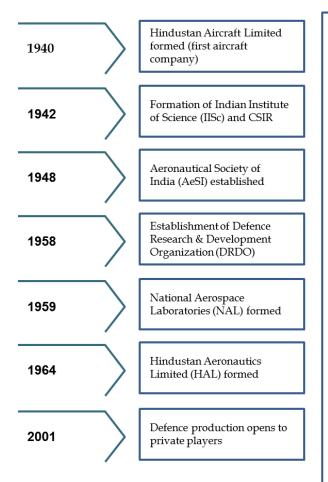


## **Aerospace Industry - Overview**

India has emerged as one of the fastest growing aerospace markets in the world and is fast developing as an attractive manufacturing destination. Indian civil aviation industry ranked ninth in the world (2007) but constitutes less than one per cent of the global industry. Nevertheless, the sector has been growing at almost 20% per annum since 2004². In contrast, the Indian space industry has been very successful, being one of the six in the world to undertake space launches. The efforts of Indian Space Research Organisation (ISRO) and various research institutes like DRDO, IISc Bangalore, CSIR, etc. have played an important role in building development capabilities for various space programmes.

The Indian aerospace industry is one of the fastest-growing aerospace markets in the world with airlines, corporates and HNIs placing orders for an increased number of aircraft. The Indian aerospace industry has historically been dominated by large Public Sector Units (PSUs). The figure below illustrates the key milestones in the development of the Indian aerospace sector:



- The first aircraft company, Hindustan Aircraft Limited, was established in 1940 by Seth Walchand Hirachand. This company later merged with Aeronautics India Limited and Aircraft Manufacturing Depot, Kanpur to form India's largest aerospace major, Hindustan Aeronautics Limited (HAL). HAL is a prominent Government controlled entity and maintains 19 production units and 9 R&D centers in seven locations. HAL has been involved in several R&D programs for both defence and civil aviation and has assumed a significant role in India's space programs.
- In 1942, the Indian Institute of Science (IISc), India's premier centre for research and postgraduate education in science and engineering, offered a two-year Post Graduate course in Aeronautical Engineering.
- In 1948, the Aeronautical Society of India was established to integrate engineers, professionals and industrialists towards a common goal of furthering the growth of the aerospace sector in India.
- In 1958, Defence Research & Development Organization was formed with
  the merging of the former Technical Development Establishment (of the
  Indian Army) and the Directorate of Technical Development & Production
  and the Defence Science Organization. Today, the organization has a
  network of over 50 laboratories which are engaged in developing defence
  technologies covering disciplines like aeronautics, armaments, electronics,
  combat vehicles, engineering systems, instrumentation, missiles, advanced
  computing and simulation, and special materials.
- In 1959, National Aerospace Laboratories (NAL), Bangalore was formed as a constituent institution under the Council of Scientific and Industrial Research of India (the premier industrial R&D organization in India constituted in 1942). It followed a decade of remarkable consolidation, facility build-up and created R&D divisions in diverse areas of aeronautics. By the mid-1970's, NAL was a major player in Indian aeronautics and one of CSIR's best-managed national laboratories. With the approval of India's Light Combat Aircraft (LCA) project in 1983, NAL strengthened its presence as a major player in the Indian aerospace industry. India's space programme also attained a significant level of maturity during this decade.

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<sup>&</sup>lt;sup>2</sup> India Aerospace: Poised for take-off - Report by AT Kearney



Prior to 2001, the aerospace and defence industries were exclusively reserved for PSUs. Consequently, these PSUs have grown tremendously by developing and acquiring new technologies and entering into the manufacture of indigenous aircraft. Over the years, these PSUs have also helped a number of industries (large and small) to acquire technologies, technical and managerial processes, better quality standards, infrastructure and facilities, networking etc. This has helped the industry enhance its capabilities through exposure to flexible and modern manufacturing methods while simultaneously reducing the tolerance for cost and time overruns. In addition, several private sector groups such as Tata's, Larsen and Toubro, Mahindra and Mahindra, Kirloskar's and a large number of smaller companies have been supplying limited parts and equipment to the armed forces and the PSUs. In 2001, the Government allowed 100% domestic private investment in the defence sector upon obtaining an Industrial Licence (IL) and FDI of up to 26% with conditions. Allowing private investment has begun to attract a number of Indian companies into the sector.

The introduction of the defence offset policy in 2006 and significant liberalization in 2008 has provided significant opportunities for Indian companies entering the sector. New players are entering the industry and are aggressively building capabilities to make them attractive partners for the primes and Tier-1 suppliers. Foreign companies are also showing interest in establishing their presence in India.