

# Saras is about to connect India on its own wings – linking smaller towns for an aviation market set to boom

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India is laying claim to the club of aviation manufacturers. The aviation industry in India is still in its infancy, though Hindustan Aeronautics Limited has been working on smaller aircraft mainly for defence requirements – like Dhruv, the advanced light combat helicopter and Tejas, the light combat aircraft. These, though, are just kids on the block with lots to prove.

India over the last 70 years has never taken aviation manufacturing seriously – though a country as vast as ours should have an indigenous, dependable aircraft manufacturing facility to cater to burgeoning domestic transportation requirements. The first attempt to design and develop a multi-role light transport aircraft began in 1999, with then Prime Minister Atal Bihari Vajpayee giving green signal to a project by National Aerospace Laboratories (NAL) under the Council for Scientific & Industrial Research (CSIR). With no prior experience, NAL designed and developed the first prototype from scratch, which took

to skies on May 29, 2004.

Saras was the first indigenous civil aircraft programme in the country. So naturally, NAL faced many challenges in design and manufacturing of airworthy aircraft grade components, assemblies, tooling and certification for test flying. The UPA government flagged down the project, after an accident involving an improved version of Saras in March 2009, though the accident was not due to any design flaws.

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When I took charge of the ministry of science & technology and met the technologists at NAL, I could read their disappointment. As a medical professional I knew that science is an art of balancing imponderables. You reach success only after several failures and if you stop, you will never innovate. So I



decided to convince the government that NAL and other agencies involved in the design and development of Saras should get another chance.

It worked. A team of 40 young and enthusiastic scientists at CSIR-NAL have started working on various modifications like high power engine, new nacelle, enhanced rudder, linear flap tracks, improved environmental and flight control systems and digital avionics to overcome deficiencies observed during earlier flight testing. The upgraded Saras took to the sky in a record period of 14 months on January 24 this year and then again on February 21 – both to textbook precision. By 2022 it will be ready for induction, first into the Indian Air Force and later for civilian use.

Saras Mk2 will have speeds in excess of 500 kmph, range in excess of 700 km with full payload, and lower operational/acquisition cost compared to contemporary aircraft of this class. The cost of the aircraft, with more than 70% indigenous content, will be around Rs 40-45 crore as against Rs 60-70 crore for an imported one.

India has the potential to be among the top three nations in the world in terms of domestic and international passenger traffic. It has an ideal geographical location between the eastern and western hemisphere, a strong middle class of about 30 crore Indians and a rapidly growing economy. Despite these advantages, the Indian aviation sector has not achieved the position it should have and is at

present ranked 10th in the world in number of passengers. But it is expected to grow at a faster pace, which will create demand for new aircraft, air aviation service technologies and increased infrastructure.

Looking at the present civil aviation policy scenario, India needs a 19-seater commuter transport aircraft like Saras for remote and tier 2 and 3 cities. It is estimated that the potential demand for small civil and military aircraft is to the tune of 120 to 160 in the next 10 years.

India, being a powerhouse of talents in almost all disciplines, should allow our experts to find solutions to our national problems, instead of continuing with our colonial mindset of depending on foreign sources to meet our critical requirements. While scientists and technologists of Indian origin contribute to high technology evolution of several foreign countries, we have so far not encouraged and given them the required space. Science does not emerge from vacuum; even a conjecture should not be left without probing the possibility. Like Vascode Gama, you would either land up in America or India – but let us first venture out.

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