



## Sankalan Chattopadhyay writes for us on The Extraordinary Journey of LCA Mk-II



As the euphoria over the sanction of Rs 10,000 crores for the development of LCA Mk-II ebbs, it's time we went down in the annals of India's most ambitious defence project, paving the way for future generations to indulge in nostalgic reminiscence of the glorious past.

### LCA-early development phase

In the quest to become self-reliant on combat aircraft technology, India has initiated multiple projects since independence. It was in the 70s when a replacement for older variants of MiG-21 and other old platforms was realised. Initially a light platform with much simple configuration was sought. The Air Staff Target (AST) 201 was issued in 1982 and next year the Light Combat Aircraft (LCA) was formally approved. Following the formal air staff requirement (ASR) of 1985, the project definition was completed by 1987. At that time the series production was envisioned in 1994! In 1991 the Cabinet Committee on Political Affairs approved execution of the LCA project in two Full Scale Engineering Development (FSED) phases.

### Why did the IAF request for Mk-II?

What was initiated as a simple, rugged project soon emerged as an ambitious one featuring cutting-edge technologies. Limitations in indigenous capability were a major constraint. Successful development required time, inadvertently dragging if not delaying the project significantly longer. The prolonged time also witnessed the rapid rise of new generation technologies critical for future combat environments. Even long before that, the Project Definition Phase (PDP) document of LCA, prepared by ADA and reviewed by Air HQ in 1989, was found deficient in the crucial parameters of aerodynamic configuration, volume and weight as set in ASR. The FSED was persuaded in stages. The LCA IOC will fail to meet the ASR in terms of increased weight, reduced internal fuel capacity, non-compliance of all-weather operations, non-achievement of single point refueling, failure to meet required sustained turn rate (STR), transonic acceleration and climb rate, lack of Self Protection Jammer (SPJ), Radar Warning Receiver (RWR), and Counter

Measure Dispensing System (CMDs), leading to a deficiency in electronic warfare (EW). Thus, an initial 53 shortcomings were noted. It was precisely with this forethought that the Empowered Committee headed by the Chief of Air Staff (CAS) recommended in October 2007 the building of LCA Mk-II under FSED Phase-III in order to meet the ASR parameters. The project for design and development was sanctioned in November 2009 at a cost of Rs. 2431.55 crore with a Probable Date of Completion (PDC) of December 2018.

### Mk-II in initial days

In 2009, for the first time, an official statement about Mk-II was made by Ashok Baweja, the Chairman of HAL at Aero India 2009, confirming work on a bigger platform with a more powerful engine. Later, under P.S. Subramanyam, Director of the Aeronautical Development Agency (ADA), five squadrons of the same were envisaged with indigenous content of 70% and first flight in 2014. A Request For Proposal (RFP) for the required engine was issued to two contenders—General Electric