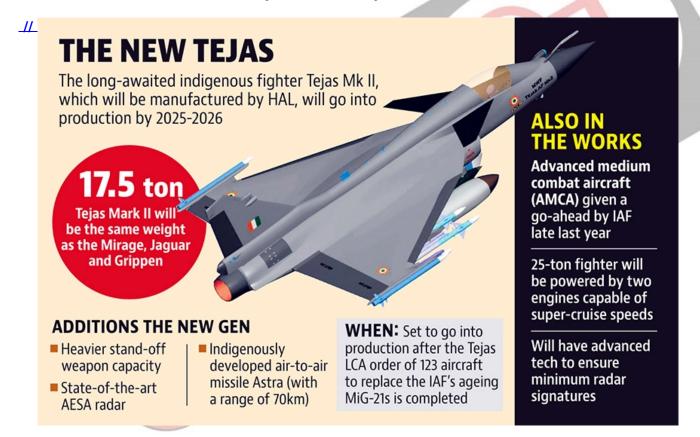


## LCA-Mk2 and AMCA

### Why in News

According to the Aeronautical Development Agency (ADA), LCA Tejas-Mk2 will be rolled out in 2022 and the first flight in early 2023. Advanced Medium Combat Aircraft (AMCA) will be rolled out in 2024 and first flight in 2025.

- Simultaneously, the project for development of a <u>twin-engine deck-based fighter jet</u> meant to fly from the Navy's aircraft carriers is also making progress.
- ADA is an autonomous body of the Ministry of Defence.



# **Key Points**

#### LCA-Mk2:

- It is a **4.5 generation aircraft** which will be used by the Indian Air Force.
- It is a replacement for the Mirage 2000 class of aircraft.
  - It has got a bigger engine and can carry 6.5 tonnes of payload.
- The technology is already developed in <u>Light Combat Aircraft (LCA)</u>.

- The LCA programme began in the 1980s to replace India's ageing MiG-21 fighters.
- The LCA is being designed and developed with ADA as the nodal agency and State-owned <u>Hindustan Aeronautics Limited (HAL)</u> being the principal partner.
- Its production is likely to start somewhere around 2025.

### **Variants of Tejas**

- **Tejas Trainer:** 2-seater operational conversion trainer for training air force pilots.
- LCA Navy: Twin- and single-seat carrier-capable for the Indian Navy.
- LCA Tejas Navy MK2: This is phase 2 of the LCA Navy variant.
- LCA Tejas Mk-1A: This is an improvement over the LCA Tejas Mk1 with a higher thrust engine (Air Force).
- LCA Tejas Mk-2: Following the Mk-1A is the Mk-2 which will provide a high degree of manoeuverability.
- Advanced Medium Combat Aircraft (AMCA):
  - About:
    - It is a fifth generation aircraft. And will be used by the Indian Air Force.
    - It is a stealth aircraft, i.e. **designed for stealth** and unlike the LCA, which is designed for maneuverability.
      - It has a unique shape to achieve low radar cross-section and has an internal carriage of weapons.
      - When the external weapons are removed, this aircraft has enough fuel and weapons inside to do a very capable operational role in stealth mode.
  - Range:
    - Over 1,000 km up to 3,000 km in different modes.
  - Variants and Engine:
    - It has two variants **Mk-1 and Mk-2**, While AMCA Mk-1 will have an imported engine, same as LCA Mk-2, the AMCA Mk-2 will have an indigenous engine.
  - Manufacturing:
    - The manufacturing and production of the aircraft will be through a <u>Special</u>
      <u>Purpose Vehicle (SPV)</u>, which will also have participation of private industry.

Source: TH

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