

Indigenous Defence Production - Tejas Case

What is the issue?

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- The polarising debate in recent times over defence acquisitions has raised questions about indigenous defence production.

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- A key proposal in this regard, is Tejas, the indigenous Light Combat Aircraft, which is getting delayed due to procedural challenges.

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How is Tejas developed?

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- The Tejas, or 'radiance', is an indigenous fighter aircraft.

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- It is the smallest lightweight, multi-role, single-engine tactical fighter aircraft in the world.

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- It is designed jointly by the Aeronautical Development Agency (ADA) in partnership with Hindustan Aeronautics Limited (HAL).

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- This works as per the Air Staff Requirement (ASR) issued by the Indian Air Force (IAF) in 1985.

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- At all stages, the IAF has wholeheartedly participated and supported in this vital indigenous design and development project.

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India's first indigenously designed and developed

LIGHT COMBAT AIRCRAFT *Tejas*

Project first conceived and launched in 1983	Maiden test flight took place on Jan 4, 2001	Designed for air-to-air, air-to-ground and air-to-sea combat roles	Intended to replace the phased out MiG-21 fighter jets
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Specifications

Crew	Length	Height	Wingspan	Max speed	Engine
One	13.2 m	4.4 m	8.2 m	1.6 mach	F-404-GE-IN20
Project development cost		Unit cost		Max take-off weight	
₹ 17,269 crore		₹ 220-250 crore		13,200 kg	

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Why is the delay in production?

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- The ADA, the design authority for Tejas, incorporates design changes based on observations made during test flights.
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- The ADA makes all such changes in consultation with HAL and other agencies.
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- These changes are issued as “change notices” with requisite documentation and manufacturing technology.
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- While the IAF participates in all these consultations, it is not authorised to issue “change notices”.
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- But Tejas production is getting delayed due to the IAF changing specifications.
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- HAL blames the IAF for changing specifications as the IAF is a customer and it can only issue the ASR.
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- It is the HAL, as the original equipment manufacturer, which has to issue the specifications of the aircraft and its components.

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- [The IAF has not changed the 1985 ASR, except for granting concessions after limitations were encountered during the design and development of the aircraft.

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- So, many design changes were incorporated in the Tejas to bridge the shortfall from ASR.

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- Other changes were incorporated to enhance the safety of flight, based on lessons learnt from recent accidents and incidents.]

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What are the challenges?

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- The production of Tejas aircraft is very different and complex because the aircraft is still at the design and development stage.

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- The standard of preparation of an aircraft defines its capability, which is just evolving for Tejas.

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- This requires a production capability with a robust supply chain supported by competent sub-vendors to help HAL production line to quickly adapt to such changes.

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- So HAL needs to bring in institutional flexibility to quickly adapt its production line to such evolving changes during the design and development phase of Tejas or any subsequent aircraft.

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- In all, the IAF and HAL have to work together for indigenous aircraft production process to be smooth.

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Source: Indian Express

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