

DEFERENCE NAGGARRI



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 **DEFENCE NAGARI**

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IAF

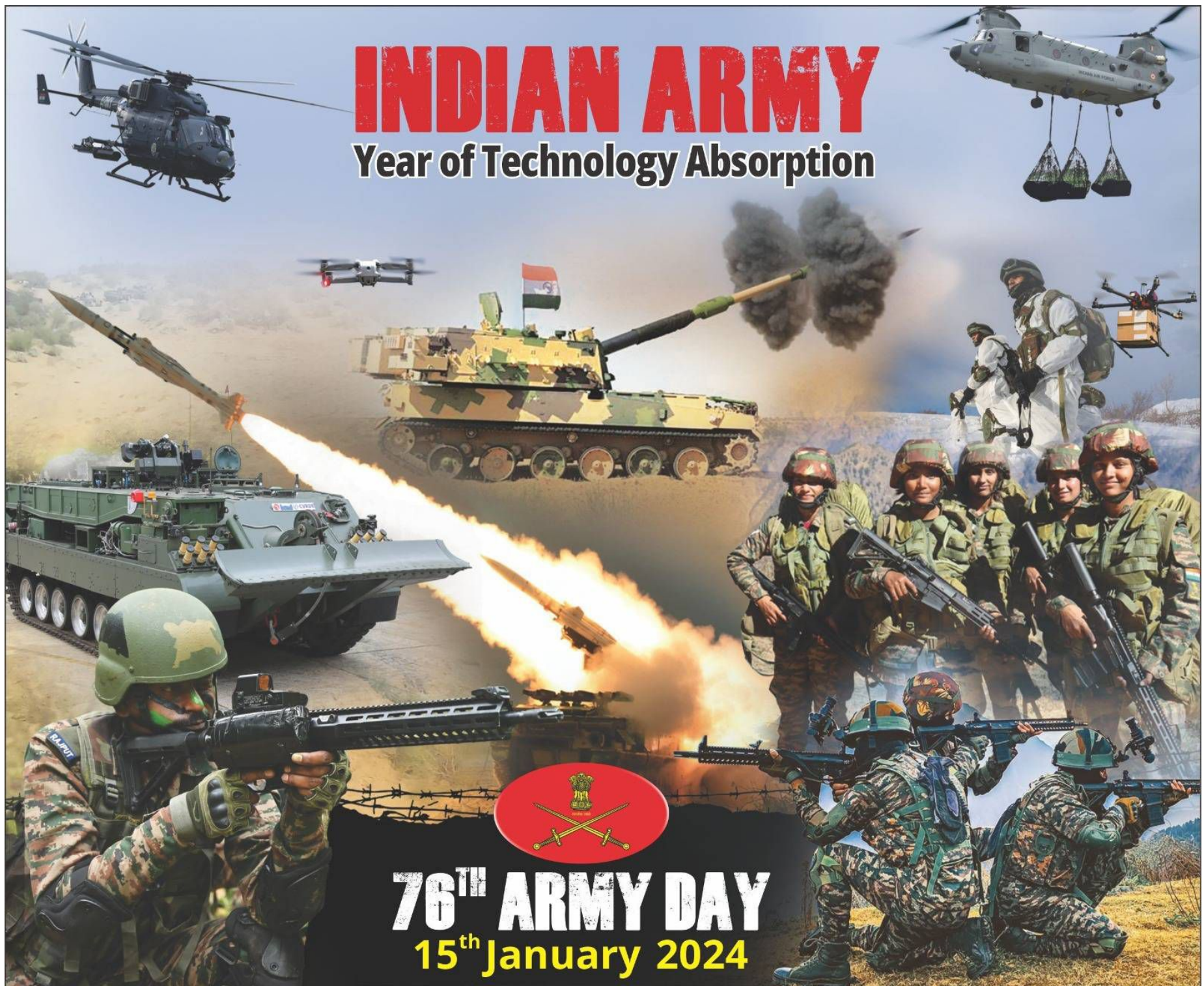
TO
IASF

By Kr. Aditya



INDIAN ARMY

Year of Technology Absorption



76th ARMY DAY
15th January 2024

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IAF goes full throttle to turn into an 'aerospace power'

Rajat Pandit / TNN / Updated: Dec 11, 2023, 12:43 IST

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The Indian Air Force (IAF) is undergoing a transformation to become the Indian Air and Space Force (IASF) in order to enhance its capabilities in the aerospace domain. The IAF has formulated a new doctrine called Space Vision 2047 and is c ... [Read More](#)




WHAT'S HAPPENING?



The Indian Air Force (IAF) is undergoing a significant transformation as it seeks to become the Indian Air and Space Force (IASF) and **expand its capabilities in the aerospace domain.**

With a new doctrine centered around **the effective utilization of** the "air and space continuum" and a "Space Vision 2047," the IAF has presented a detailed **proposal to the government** for its renaming.



In line with this transformation, the IAF is intensifying its efforts to fully exploit the potential of space,

Moving beyond its current focus on intelligence, surveillance, reconnaissance, communication, and navigation capabilities.

According to sources, the proposal is expected to receive clearance soon.

COLLABORATION WITH OTHERS



Collaborating with organizations such as ISRO, DRDO, IN-Space, and the private industry, **the IAF aims to develop niche space-related technologies.**

This includes advancements in positioning, navigation, and timing (PNT), advanced intelligence, surveillance, **and communication systems, space weather prediction, space situational awareness, and space traffic management.**

100 MILITARY SATELLITES



The IAF envisions India having over 100 military satellites, both large and small, within the next **seven to eight years, with active participation from the private sector.**

Additionally, the Defense Space Agency, established in 2019, is set to evolve into a fully-fledged Space Command.

WHAT ABOUT NAVIC?



Indian armed forces already use NavIC, an Indian version of the US Global Positioning System, **which is inherently a positioning, navigation and timing (PNT) service.**

NavIC services are accessible at a higher accuracy for defence purposes and at relatively lower accuracy for civilian purposes.

Such indigenous positioning and navigation services are important, given India's experience of being denied GPS support during the Kargil War.

NavIC, at this point, is however **not comparable to the GPS, which offers global coverage.**

NavIC services are limited to 1,500 km beyond the **Indian landmass**

In September, Indian Space Research Organisation (ISRO) chairman S. Somanath had said that the space agency is **trying to increase the navigation coverage of NavIC to 3,000 km.**

The widening of the coverage would mean that it would include **neighbouring countries.**

TRAINING FOR OFFICERS



Recognizing the importance of space in future conflicts, **the IAF has incorporated space-related training for its officers and airmen.**

This includes exercises that simulate space-related contingencies.


According to sources, this transition from air to space is a natural progression for the IAF.

WHAT'S THE NEED FOR SUCH MOVE?



Air Chief Marshal V R Chaudhari, **the Chief of the Air Staff, has emphasized the need for India to develop defensive and offensive capabilities in the space domain.**

He has highlighted the success of 'Mission Shakti' in March 2019, where **DRDO successfully tested an anti-satellite (A-Sat) interceptor missile.**



The source further stated that the battles of the future will be fought in **near space (20 to 100 km altitude) and outer space.**

To operate seamlessly in these domains, the IAF is developing **advanced winged bodies.**

The IAF believes that India must be prepared **for these challenges.**

Take, for instance, **ballistic and hypersonic missiles.**

These are launched from **far-off distances** and **cannot be detected by line-of-sight radars.**

Hence, ground-based radars and space-based sensors will have to be **integrated for timely detection of every kind of threat.**

If the Air Force is renamed as the 'Air and Space Force', it will only help in building its **orientation towards space where there is an increased need to focus more**

WHAT ABOUT OTHER COUNTRIES?



It is worth noting that **China has been rapidly developing and deploying various A-Sat weapons**, including kinetic and non-kinetic options **such as high-powered lasers, electromagnetic pulse weapons, jammers, and cyberweapons.**

Countries like the United States, the United Kingdom, Japan, France, and **Russia already have space commands or wings within their air forces.**

As a result, the IAF recognizes **the necessity of harnessing space for future battlespaces.**





To keep pace with global developments, the IAF is gradually expanding its mission scope from offensive and defensive counter-air operations to operations in the space domain.

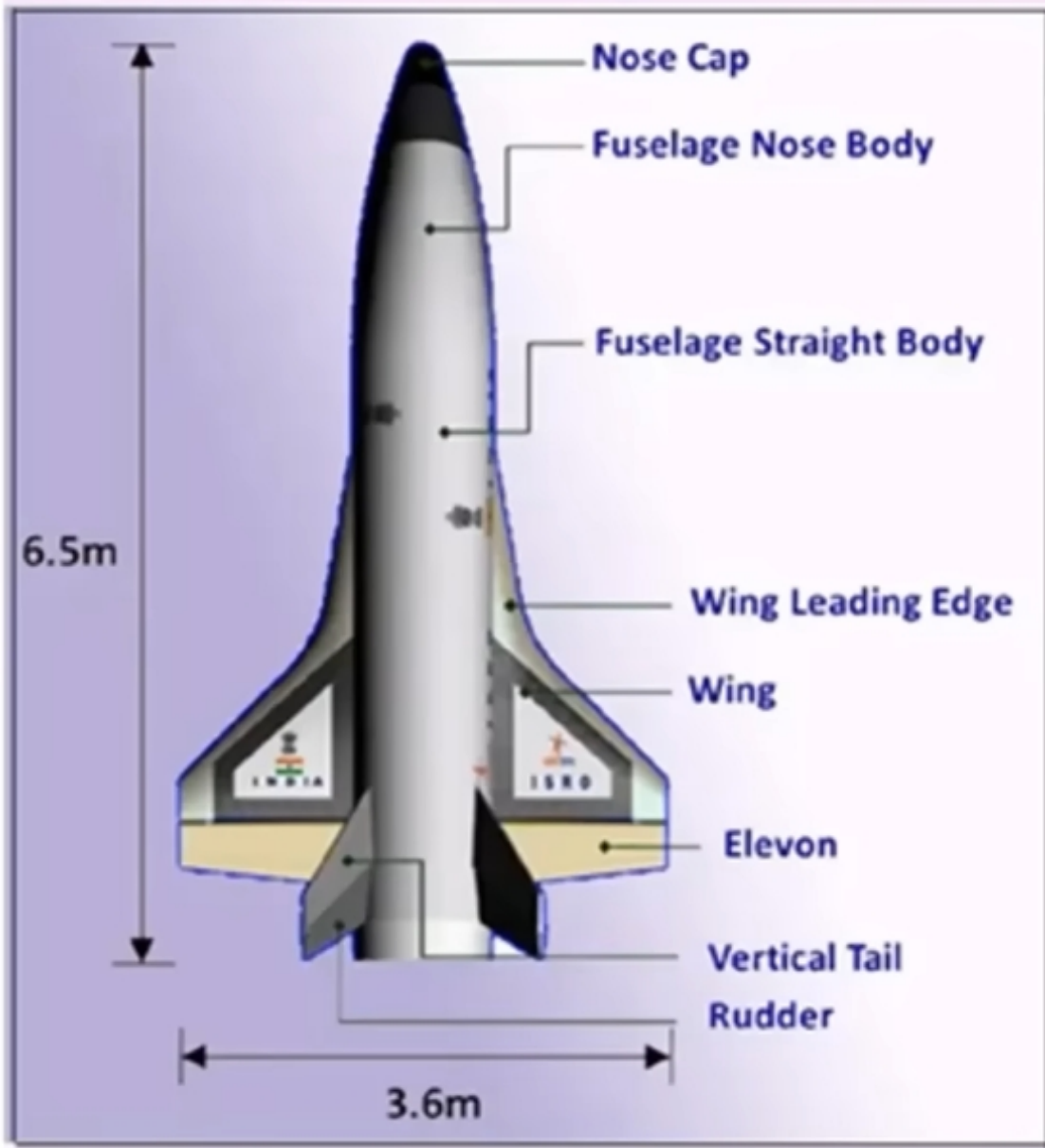
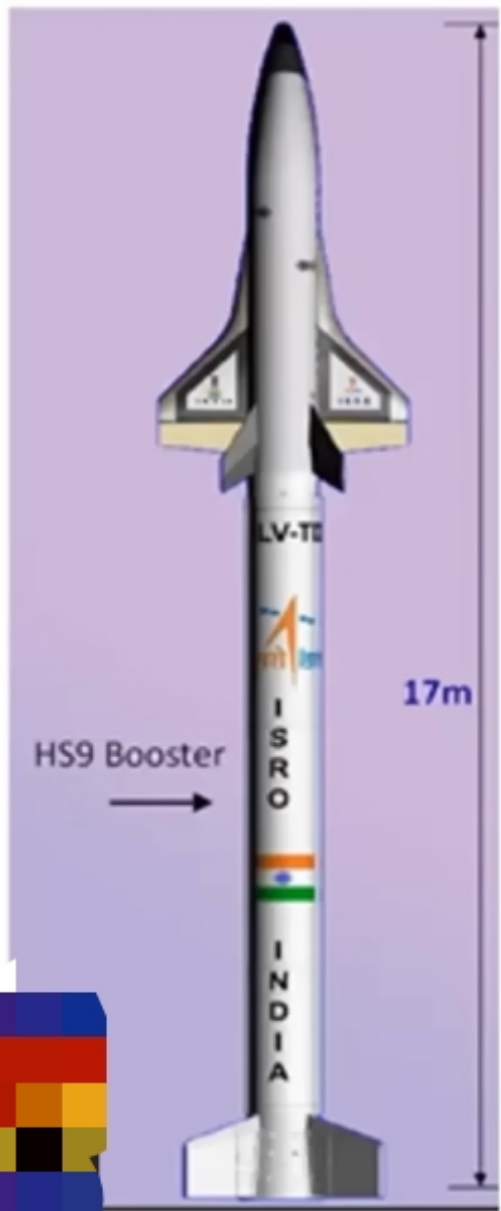
As part of this transition, the existing integrated air command and control system (IACCS) will evolve into the **integrated air and space command and control system (IASCCS)**.

SPACE VISION 2047



In terms of accessing space, the **IAF** is looking at procuring the **Reusable Launch Vehicle (RLV)** that is **under development at ISRO.**

The IAF source told that the **autonomous landing trials** of this spaceplane have already taken place and the Air Force is keen on **buying the vehicle, which is capable of circling the Earth at an altitude of 350 km in space for nearly a month.**






The vehicle is similar to a space shuttle and would have a payload capacity of 200-1,000 kg.

It will also be capable of carrying a human onboard.

RLV is not a standalone rocket, instead, it is a winged aerospace vehicle that is mounted atop a rocket.

Only the US and China are known to possess operational spaceplanes.



Indian Airforce **Indian Air And Space Force**



2024



2047

CONCLUSION



The IAF's transformation into the Indian Air and Space Force marks a significant step towards becoming a **credible aerospace power**.

By embracing the potential of space and collaborating with strategic partners, the IAF aims to ensure **India's preparedness for future challenges in the air and space domains**.



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BRICS

By Kr. Aditya



WHAT IS BRICS

Born out of a vision to challenge Western dominance on the global stage, the BRICS alliance – comprising Brazil, Russia, India, China, and later South Africa – has gradually evolved into a formidable force in the international arena. We take a look at its origins, objectives, and more.



NEWS 10



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