

Expert Series 2: Key Takeaways

We hosted an expert session with Captain Vishal Kanwar on “Growth Potential of Aerospace Defense in India.” Captain Kanwar is a Managing Director at PwC Advisory India. He has over 30 years of professional experience in military and corporate. He commanded two warships and the Mauritius Coast Guard. At PwC, he heads the company’s Aerospace, Defense, and Space practice in India for the last five years, dedicated to serving institutional and commercial stakeholders in these sectors. His role focuses on growth strategy, market entry and business transformation projects. He spoke about the scope of defense spending in India, the positioning of the Indian aerospace segment, and how the aerospace manufacturing ecosystem is gradually developing in India. With a large potential available in domestic as well as export markets for defense aerospace, the domestic defense sector has a huge scope of growth over the long term. In the near to medium term, the government will have to take a balanced call on domestic manufacturing of bigger platforms and imports.

Key highlights of the discussion

Defense spending in India to grow faster

In view of the changing global geopolitical landscape, many countries have started increasing their defense spending as a percentage of GDP, aiming for levels between 3%-5%. European nations like Germany, Spain, and even Japan are making significant upward adjustments. Similarly, Captain Kanwar stressed that India, which is currently spending about 1.9% of its GDP on defense, must strategically move toward a 4% target to meet its growing national security and technological needs. Given the increased threat perception in the South Asian region and the critical need to modernize its military capabilities, India must allocate more resources to defense to sustain technological superiority over its adversaries and to meet future operational demands.

Positioning of Indian aerospace market

India's aerospace sector is witnessing rapid growth, with major projects led by its top three DPSUs, namely Hindustan Aeronautics (HAL), Bharat Electronics (BHE) and Mazagon Dock Shipbuilders (MDL). HAL is already executing the Tejas Mk1A project and is expected to secure follow-on orders for 97 additional Tejas Mk1A units, along with future orders for Tejas Mk2. However, the timeline for the award of these future contracts will be closely linked to HAL's ability to meet its current delivery schedules. Building strong production capabilities and improving productivity are essential for HAL to maintain its role as the primary aerospace OEM and to foster the development of a vibrant aerospace industry in India. Other private players such as Tata Group, Mahindra Group, Aequs, Dynamatic and Bharat Forge have made a successful foray into aerospace manufacturing by leveraging their past experience and partnering with global OEMs.



Capt Vishal Kanwar (Retd.)

Captain Kanwar is a Managing Director at PwC India. He graduated from the National Defence Academy (NDA), Pune, and thereafter served in the Indian Navy for more than two decades. He joined PwC in 2018, spearheading Aerospace & Defense team. Before joining PwC, he was the Head of ASW Strategy and Operations - Naval Western Region in the Indian Navy.

Challenges and opportunities in India's aerospace manufacturing

India's aerospace manufacturing ecosystem is still in its early stages compared to the more mature ecosystems in the Army and Navy sectors. Indigenization levels in aerospace remain relatively lower, offering significant opportunities for domestic companies to increase local content across various components. HAL, for instance, has already outsourced critical sections like wings, front fuselage, rear fuselage, avionics, and radars to private players, focusing more on final integration. And, as per the expert, this strategic outsourcing is expected to help HAL scale up even faster. Nevertheless, the expert emphasized that India continues to rely heavily on imported engines, as critical gas turbine technologies have not yet been fully developed domestically, representing a major bottleneck in achieving complete self-reliance.

Marching on the path to be a key defense exporter

India's defense exports have witnessed remarkable growth in recent years, with a nearly 100% CAGR recorded for private companies over the past three years. Exports have primarily included subsystems and modules rather than full platforms, but the momentum is strong and sustainable. With government initiatives like the Defence Production and Export Promotion Policy (DPEPP) and a concerted push for 'Make in India,' India is emerging as a credible exporter of cost-effective and reliable defense equipment. As per the expert, India's defense exports are targeted to reach INR1.5t by 2047, focusing not just on traditional allies but also on the Global South, where Indian systems provide value-for-money alternatives.

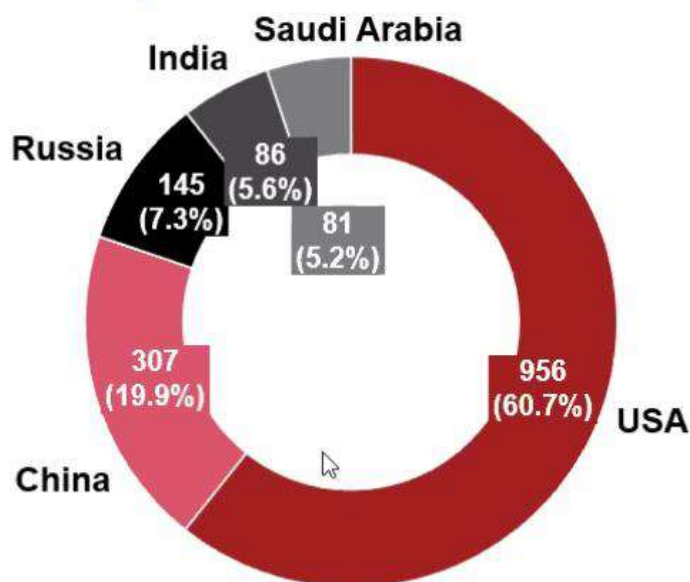
Vision for 2047

Captain Kanwar claimed that by 2047, India aims to transform itself into the third-largest defense spender globally, following the US and China. The country aims to raise its defense spending to 4% of GDP, increase the number of defense MSMEs from 16,000 today to about 25,000, and boost defense exports to INR1.5t. As of now, 22% of the capex is going towards modernization of the Indian Armed Forces. Captain Kanwar is of the view that a major shift is expected with higher capex allocation towards the same, moving from the current 22% to 40% by 2047, with a corresponding rise in R&D expenditure from 1% to 10% of the defense budget. India's vision also includes nurturing more indigenous OEMs into the global top 100 list and taking a leadership role in emerging non-kinetic warfare technologies like AI, cyber warfare, and electromagnetic spectrum dominance.

Key charts

Exhibit 1: Top 5 countries in terms of total defence spending in CY24

Top 5 defence spending countries in 2024 (100% = USD 1574 bn)



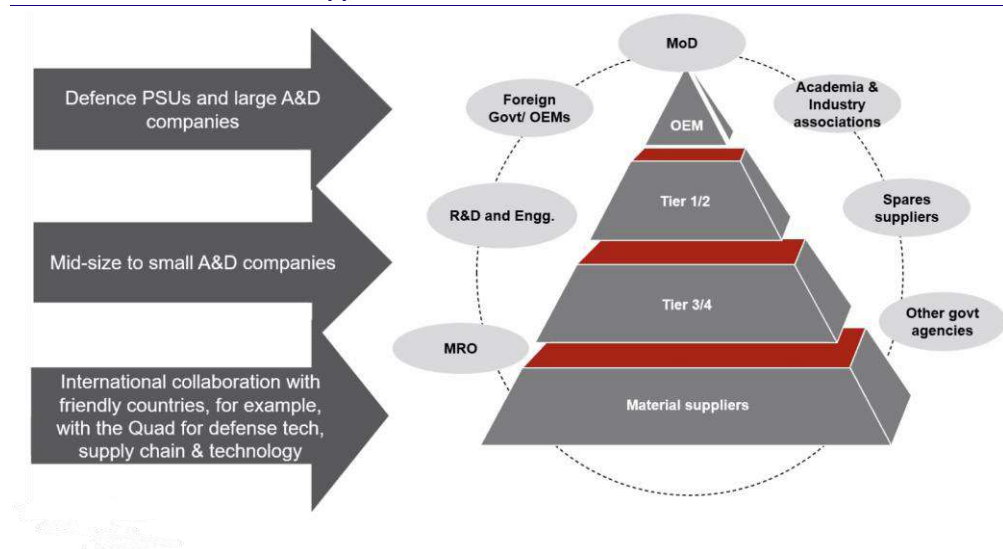
Source: PwC

Exhibit 2: Global OEMs are increasing their presence in India through partnerships with Indian players, local sourcing of raw materials, and setting up manufacturing and R&D facilities

	Develop local sourcing footprint	Forge private sector 'Strategic Partnerships'	Drive success of indigenous programs	Ensure availability of critical equipment	Enhance ER&D Footprint	Setting up own local manufacturing (subsidiary / JV)
Presence of key Global OEMs in India	AIRBUS DEFENCE & SPACE TATA, Aetus, Dynamic-aerostructures / components	Mahindra (Helicopters), TATA (Transport A/c C295)	Offered support for MkII Tejas MkIA (Landing gear)	Provide training to maintenance personnel for civil aircrafts	Own center for civil, captive with Quest, Axis Cades; other	In addition, OEMs, followed by their Tier 1s, are setting up local manufacturing
	BAE SYSTEMS INSPIRED WORK Composite Mission Consoles from Kinco Kaman for P-8	Mahindra (M-777 AIT) HAL - DPSU (Hawk)		For Hawk, Jaguar (including Jaguar upgrade support)	Bae-HAL JV for IT solutions	BOEING Boeing is setting up own manufacturing of avionics, actuators for India & global
	BOEING JV with TATA; procurement from Dynamic, HAL	Partnered with Mahindra & HAL for F18; TATA JV to manufacture UAVs	Carrier borne experience for Naval Tejas, position F/A-18 Hornet	For C-17, P8-I	Own center, National labs, educational inst., partners	THALES Setting up 'Export Oriented Unit' to cater to its global supply chain
	DASSAULT AVIATION Partnership with Reliance to deliver offsets (Falcon)		Partnership with HAL for development of ecosystem for aero-engines	Mirage upgrade, Shcema partnership with Max Aero.	Dassault Systems R&D centers in India	SAFRAN JV with HAL to maintain, repair and overhaul engines
	LOCKHEED MARTIN C130J, S-92 aerostructures JV with TATA	Partnered with Tata for F16 / F21	Partnering for Weapons integration facility for Tejas with Wem Technologies (UK)	For C-130J	Sponsoring innovation programs, entrepreneurs in India	GE JV with Tata to manufacture components for LEAP engines
	SAAB TATA (land sys); Samtel (HUD), Aetus (parts)	Tie-up with Adani for Gripen, Ship borne UAVs with Reliance	Offered engine upgrade for Tejas		Own center, in partnership with Tech. Mahindra	MBDA JV with L&T to manufacture guided weapons

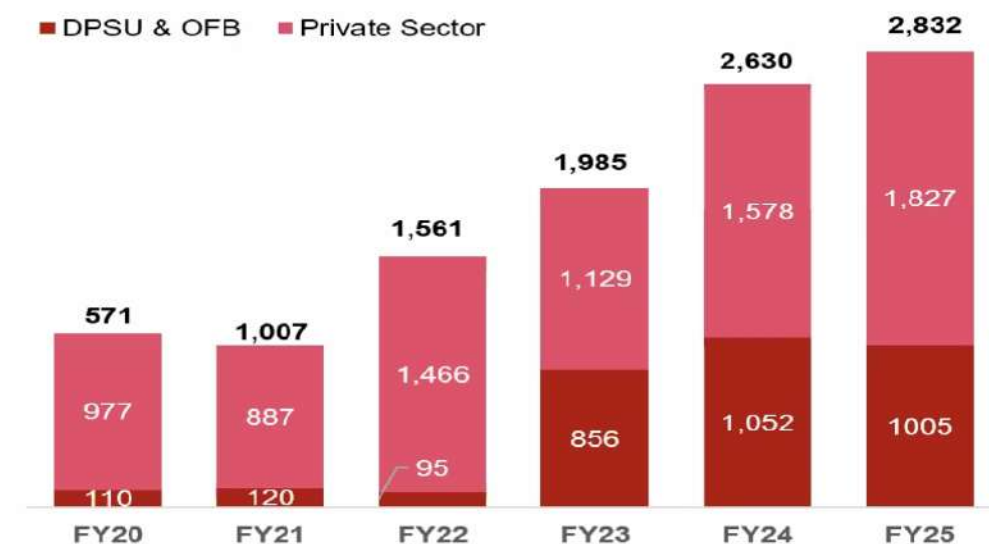
Source: PwC

Exhibit 3: The Aerospace & Defence manufacturing ecosystem revolves around OEM, Tier 1/2, Tier 3/4 and material suppliers



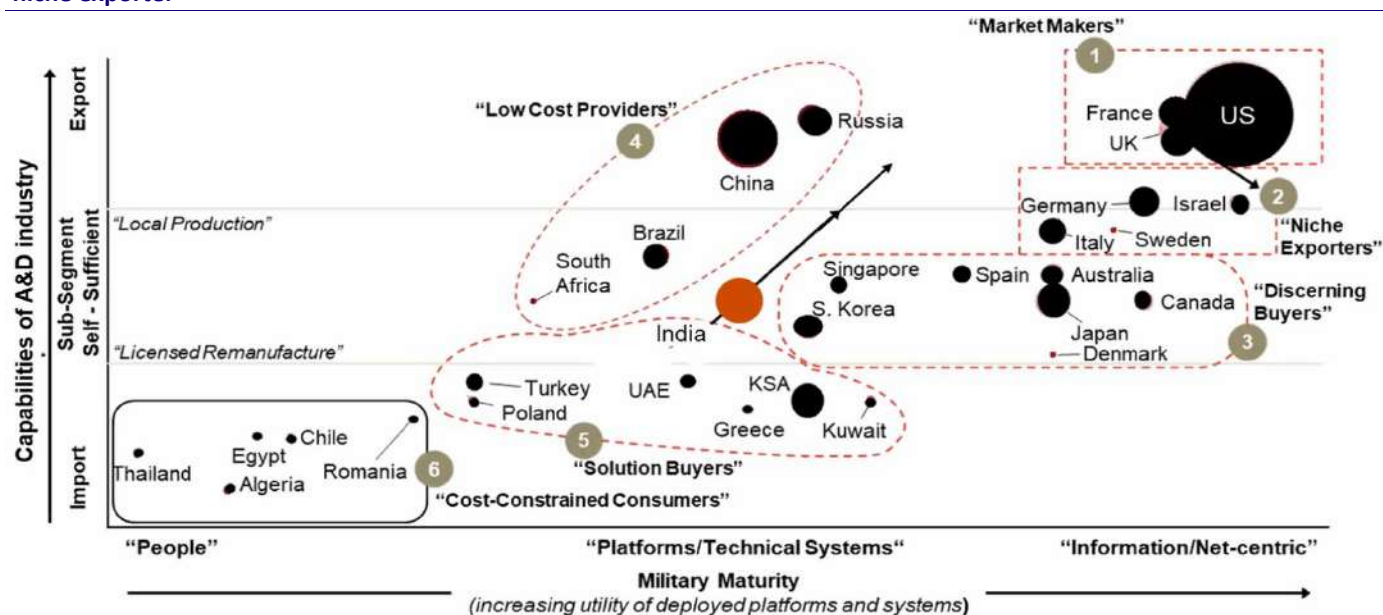
Source: PwC

Exhibit 4: Defense exports by Industry (USD m)



Source: PwC

Exhibit 5: India's defense production strategy should focus on transitioning from 'solution buyer' to 'low-cost provider' to 'niche exporter'



Source: PwC

Exhibit 6: Defence indicators for India as per the Vision 2047

As of 2025		In 2047	
4 th	largest defence spender globally	3 rd	largest defence spender globally
1.9%	of GDP spend on defence	~4-5%	of GDP spend on defence
16,000+	strong MSME vendor base	25,000+	strong MSME vendor base
23,622 cr.	worth of defence exports	~1.5 lakh cr.	worth of defence exports
22%	capital expenditure as % of budget	40%	capital expenditure as % of budget
1%	overall R&D spend as % of defence expenditure	10%	overall R&D spend as % of defence expenditure with stronger participation of private industry and handholding by the government
3	OEMs in Top 100 globally	20+	OEMs in Top 100 globally

Source: PwC

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