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Toward Strategic Autonomy: India's Military Modernization in a Complex Security Environment

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ABSTRACT

India's armed forces are currently undergoing an important phase of modernization and structural reform as the country adapts to evolving security challenges. Since independence, India's defence development has been shaped by early wars, regional tensions, and the strategic demands of the Cold War era. These experiences played a key role in shaping the structure, priorities, and strategic outlook of the Indian military.

In recent years, several reforms have been introduced to address these issues. Important measures include the creation of the Chief of Defence Staff (CDS) and the Department of Military Affairs (DMA), along with policies promoting domestic defence production through initiatives such as "Make in India" and the SRIJAN programme. Greater attention has also been given to joint operations, advanced training, and the adoption of emerging technologies.

India's responses to border tensions with China and Pakistan, along with an increased focus on cyber capabilities and joint warfare preparedness, highlight the shifting priorities of the country's defence strategy. Rising defence expenditure and stronger support for indigenous defence industries further reflect efforts to enhance technological capability and strategic autonomy. Despite notable progress, institutional and procedural challenges remain. Continued policy support, improved coordination between services, technological investment, and attention to personnel welfare will be crucial for sustaining India's long-term military modernization.

INTRODUCTION

India's quest for a modern, capable military is driven by its emerging strategic ambitions and complex security environment. In the post–Cold War era, India has sought to build a defense force that can safeguard its interests amid challenges on multiple fronts. These include an increasingly assertive China along the Himalayan frontier, persistent tensions with Pakistan (including the threat of terrorism and nuclear escalation), and new domains of

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warfare such as cyber, space, and electronic warfare. India's leaders have repeatedly emphasized *Atmanirbhar Bharat* (self-reliant India) and the goal of upgrading the armed forces with state-of-the-art technology[1]. Prime Minister Narendra Modi's government has introduced ambitious reform initiatives under the slogans of "Make in India" and military efficiency. For example, the Defense Minister in 2021 released a booklet of 20 reform measures aimed at transforming India into a "military-industrial power".

Despite these high-level intentions, India's military modernization has faced persistent constraints. Analysts note that inadequate resource allocation, bureaucratic turf wars, and legal shortfalls have undermined recent transformation efforts. Moreover, India's defense expenditure as a share of GDP has hovered around 2%, limiting how fast modernization can proceed[2]. Procurement delays, inter-service rivalry, and a tradition of civilian control with limited public debate on strategy have also slowed progress[3].

Today, modernization efforts are taking place within a complex security environment. Growing geopolitical pressures particularly from China and Pakistan, have increased the need for stronger military capabilities and improved coordination among the armed services. At the same time, persistent challenges such as bureaucratic delays, inter-service rivalry, and inefficiencies in defence procurement have often slowed the pace of reform. Rapid technological advancements and changing patterns of warfare have further emphasized the need for modernization.

HISTORICAL DEVELOPMENT

India's military modernization reflects a historical evolution shaped by its colonial legacy and subsequent wars. At independence in 1947, India inherited colonial-era forces whose focus was policing and internal security. The first years saw India reorganize these institutions and build its own military identity. Between 1947 and 1962, emphasis was on restructuring colonial hierarchies and expanding the services' capacity in a divided subcontinent. The wars of 1947–48 (with Pakistan), 1962 (with China), and 1965 (again with Pakistan) tested the nascent Indian forces. The 1962 defeat by China exposed critical weaknesses in preparedness and inter-service cooperation, prompting an effort to improve training and procurement. By the 1971 war with Pakistan, India had strengthened its army and air force, achieving a decisive victory.

Vipul Dutta and Srinath Raghavan identify four phases of India's post-Independence modernization. The first phase (1947–62) was institution-building; the second (1962–72) focused on making the services more autonomous; the third (1972–99) centered on expanding the technological base (missiles, nuclear weapons, electronics); and the fourth (1999–2014) on jointness and integration. Each phase was interrupted by regional conflicts and political changes, so reforms often remained incomplete. For example, after the surprise intrusion of 1962, India boosted defense spending and built roads to frontier areas; after the 1965 and 1971 wars, it acquired main battle tanks and jet fighters, and conducted its first nuclear tests in 1974. The end of the Cold War and the 1998 nuclearization prompted another reform push. In the wake of the 1999 Kargil war with Pakistan, the Kargil Review Committee (KRC) was appointed. The KRC's 2000 report made sweeping recommendations: it argued for better intelligence coordination, transparency in procurement, and most notably for a Chief of Defence Staff (CDS) to ensure *"jointness"* in the military[4]. While many of its proposals were initially implemented (e.g., the creation of an integrated Andaman and Nicobar Command as a test-bed for tri-service theatre command), others (the CDS post) remained unrealized for nearly two decades.

India's institutional history shows a pattern of reacting to crises with reform efforts. The legacy of these efforts – including the KRC and the similarly broad 2016 Shekatkar Committee recommendations – has been uneven implementation. Often, as Anit Mukherjee observes, reforms raised expectations but made "suboptimal trade-offs" due to lack of follow-through. The Narendra Modi era (2014–present) is sometimes called the "fifth phase" of reform, seeking to complete earlier unfinished business (e.g., establishing a CDS, integrating commands, revamping acquisition). This historical backdrop – from colonial inheritance through wars and prior reform committees – sets the stage

1 India's Military Modernization Efforts Under Prime Minister Modi • Stimson Center https://www.stimson.org/2024/indias-military-modernization-efforts-under-prime-minister-modi/

2 Ministry of Defence 2026–27 Budget Estimates: An Analysis – MP-IDSA *https://idsa.in/publisher/issuebrief/ministry-of-defence-2026-27-budget-estimates-an-analysis*

3 India's Tortuous Defence Procurement Process: Delay, Not Delivery is the Only Constant - The Wire https://m.thewire.in/article/government/indias-tortuous-defence-procurement-process-delay-not-delivery-is-the-only-constant

4 Kargil's bitter lessons helped guide India's defence reform | Hindustan Times https://www.hindustantimes.com/opinion/kargils-bitter-lessons-helped-guide-india-s-defence-reform-101721921729687.html

for understanding current modernization challenges and strategies.

India's military modernization is driven by an increasingly complex security environment. Its geographic position in South Asia, with a long-disputed border with China in the Himalayas and tense boundaries with Pakistan, frames its threat perception. In recent years, Chinese military assertiveness (in the Indian Ocean and on the Line of Actual Control (LAC) in Ladakh) has been a particularly potent driver of reform. Indian analysts emphasize that a *"growing Chinese threat"* makes modernization both unavoidable and more challenging. The People's Liberation Army's (PLA) rapid modernization – including new infantry, armor and air units, nuclear modernization, and the expansion of the PLA Navy (PLAN) into the Indian Ocean – contrasts with India's slower progress. For example, China's military expenditure has grown consistently (reaching an estimated $314 billion in 2024) and its transformation of command structures has been aggressive, whereas India's corresponding spending (about $86 billion in 2024) remains a fraction of China's. The Indian government explicitly recognizes the need to catch up: the incumbent CDS warned a parliamentary committee that China's spending dwarfs India's and urged a reorientation of strategy. The 2022–23 Standing Committee on Defence noted India's *"meager"* outlays compared to China.

Threats from Pakistan also shape India's defense posture, albeit differently. Pakistan's military budget (around $10 billion in 2024[5]) is much smaller than India's, but India still allocates substantial resources to the Army deployed along the Line of Control (LOC) and International Border (especially in Jammu & Kashmir and Punjab). Cross-border insurgency and terrorist attacks have kept India in a security competition with Pakistan. The Kargil conflict (1999) and periodic skirmishes (2016 Uri attack, 2019 Balakot strikes) demonstrate the enduring Indo-Pak tensions. India's nuclearization of both countries adds a strategic deterrence dimension, limiting full-scale conventional war but sustaining high readiness in border garrisons.

Beyond immediate neighbors, India's security calculus considers the broader Indo-Pacific. Rise of China's presence in the Indian Ocean, alongside Iran's activities in the Arabian Sea, and India's own ambitions (e.g. to be a major power, protect shipping lanes) influence military planning. India's partnerships (e.g. the Quad with the US, Japan, Australia) also feed into modernization: cooperative ventures on technology and joint exercises indicate India's shift toward networked defense approaches.

Economically, India has increased its defense budget in absolute terms. The defence budget rose from ₹2.53 lakh crore in FY2013–14 to ₹6.81 lakh crore in FY2025–26. However, this still corresponds to roughly 2.0% of GDP (around 1.9–2.0% in recent years). Thus, India spends much less proportionally than China (over 4% of GDP) or Pakistan (2.7% in 2024), reflecting fiscal constraints and development priorities. Within the budget, revenue (salaries, pension) dominates (~70%) whereas capital outlay (equipment procurement) is under 30%. Recent budgets show modest increases: for 2026–27 the MoD allocation was Rs 784,678 crore, a 15.2% rise over 2025–26, with capital expenditure up 21.8%. Notably, capital acquisition was marked up in the 2026–27 budget, with Rs 185,467 crore planned for new fighter aircraft, naval vessels, vehicles, and importantly the "Joint Staff" (via the CDS) which saw a 33.4% increase.

The strategic pressures and budget trends thus set a context: India is in a race to modernize under constrained resources. Some recent successes and targets are documented by official sources: for instance, a 2025 government report highlights a 174% increase in indigenous defense production since 2014, record exports of ₹21,083 crore in FY2023–24, and an ambition to reach ₹3 lakh crore production and ₹50,000 crore exports by 2029. Yet the same sources note that India is still *"one of the world's largest arms importers"*, underlining that modernization goals require effective industrial and policy changes.

CHALLENGES TO MODERNIZATION

India's pursuit of military modernization is impeded by a range of persistent challenges. These include entrenched institutional silos, procurement inefficiencies, budgetary constraints, and civil-military frictions. Each is discussed below.

1.Institutional and Civil-Military Relations: Since independence, India has maintained strict civilian control over the military, which is a pillar of its democratic tradition. However, this civilian dominance has coexisted with a professional military that historically had limited input into policy planning. The Higher Defence Organization (HDO) – the bureaucratic structure overseeing defense – has traditionally been fragmented. The Ministry of Defence (MoD) comprises multiple departments (Defence, Defence Production, Defence Research, Ex-Servicemen) led largely by civilian secretaries. In practice, the Indian Administrative Service (IAS) officers often lead procurement and policy sections, while the uniformed Services concentrate on operations and force

5 Trends in World Military Expenditure, 2024 https://www.sipri.org/sites/default/files/2025-04/2504_fs_milex_2024.pdf

management. Analysts note that this setup has *"hardly cultivat[ed] cordial relationships"* between civilians and military, since defense planning was done in service-specific silos without sustained tri-service dialogue. As a result, the Army, Navy, and Air Force evolved and operated largely independently. The HDO has not produced a publicly debated national security strategy or periodic defense reviews, meaning that policy is often an *"amalgamation of inter-service or inter-ministerial interests and reactionary stands"* rather than a coherent national plan.The jointness deficit manifests in limited trust between services. Even after creating some inter-service bodies, the three services remained *"not on the same page"* about how to cooperate. Cultural parochialism and *"leadership shortcomings"* have been chronic problems. For instance, despite the 2001 creation of a tri-service Andaman & Nicobar Command, routine joint warfighting remains elusive. The new Chief of Defence Staff (CDS) and Department of Military Affairs (DMA), established in 2019 to inject jointness, have faced pushback. In practice the CDS is considered *"first among equals"* with the service chiefs and initially lacked statutory powers; at first his authority was defined only by executive order, not by a robust law. The MoD and Service HQs have even maintained separate clerical systems (filing, records), indicating slow integration. This has created *"clashes"* between the CDS and the Defence Secretary (the senior civilian MoD official) over rank and authority. A leaked account noted that the CDS often avoids meetings called by the Defence Secretary, further straining cooperation. Consequently, key reforms have languished: nearly four years after establishing the CDS and DMA, many integration proposals remain incomplete or *"riddled with confusion"*.

2.Procurement and Acquisition Processes: India's defense procurement regime has long been notorious for delays and opacity. Multiple watchdogs, including parliamentary committees and the Comptroller and Auditor General, have repeatedly criticized the lack of accountability and the density of procurement rules[6]. The Defence Acquisition Procedure (DAP) – revised periodically (latest DAP-2020) – sets targets (e.g. awarding multi-vendor contracts within 62–86 weeks) that are almost never met. There is no real penalty for missing deadlines, so acquisition programs often slip by years or even decades. In one summary, *"not a single major military acquisition … has ever been concluded within … its own self-imposed deadlines"*.Defence Secretary Rajesh Kumar Singh himself acknowledged that the MoD's procurement system was *"broken"* and chronically delayed. Citing a MoD official, The Wire noted that routine steps like drafting Requests for Proposal (RFPs) often got stalled early on. Service chiefs and officials have expressed frustration that even emergency procurement (e.g. after sudden operational needs) has become bogged down in bureaucracy. General Anil Chauhan, India's first CDS, called on industry to *"demonstrate greater … nationalism"* in honoring contracts, implying that vendors also contribute to delays. These systemic delays have practical consequences: critical equipment arrives late or in piecemeal fashion, hindering readiness. For example, fighter aircraft deals initiated in the early 2000s continued to languish into the 2010s without completion; artillery modernization projects have repeatedly stalled after scandals; and naval submarine production timelines have stretched so far that older classes are retired before newer ones fully enter service. The fundamental problem is that *"procedure overwhelms purpose"* – rules meant to ensure fairness and value-for-money have become so onerous that they choke the process.

3.Budgetary Constraints and Allocation: India's defense budgets have grown in nominal terms but remain constrained by overall fiscal priorities. Defense spending has roughly doubled in the past decade, but much of this has gone to pay for salaries and pensions. The 2026–27 budget allocated Rs 784,678.3 crore to the MoD, up 15.2% from the previous year. However, of this, over 70% is revenue expenditure (operations, pay, pensions). Capital outlay (funds for new equipment) is under 30%, though it has seen recent hikes (22% increase in capital outlay for 2026–27). India's defense budget hovers around 1.9–2.0% of GDP, which is low given its security challenges. By contrast, China's spending is over 4% of GDP. Within the budget, there are also imbalances and rigidities. Roughly half of all capital spending goes to the Army, with the Air Force and Navy getting smaller shares, sometimes contrary to strategic needs. For instance, the Navy has long argued it is underfunded relative to its mandate for maritime security. Similarly, pensions remain a steadily rising burden (over 21% of MoD budget in 2026–27). The Standing Committee on Defence noted concerns about an *"imbalanced budgetary allocation"* among the services. Limited funds force trade-offs: modernization programs must compete with personnel costs and maintenance of ageing systems.

4.Organizational Structure and Culture: The three services have historically cultivated distinct identities and doctrines. This limits inter-operability in joint operations. The Army, as the largest force, has tended to dominate planning in land conflicts, while the Air Force and Navy

6 India's Tortuous Defence Procurement Process: Delay, Not Delivery is the Only Constant - The Wire https://m.thewire.in/article/government/indias-tortuous-defence-procurement-process-delay-not-delivery-is-the-only-constant

developed separate command cultures. Exercises and real-world conflicts exposed the shortcomings of this approach. Anit Mukherjee recounts that the services had *"evolved and operated in silos"*. For example, air defense has suffered from lack of joint command: during peak tensions, coordination between army and air force air defense units was spotty. Even the creation of tri-service units (like the Defence Cyber Agency, Defence Space Agency, Special Operations Division) requires personnel to remain under their parent service laws, which the recent inter-services legislation reaffirmed.

5.Personnel and Welfare Issues: The human element is crucial. India's military today has an all-volunteer professional cadre of roughly 1.4 million (including reserves). Challenges include recruiting enough skilled officers and specialists, providing quality training, and retaining experienced personnel. Morale and welfare have been longstanding issues. The iconic "One Rank One Pension" (OROP) demand, for equal pensions for equal service length, was only finally resolved in 2015, after decades of protests. Housing shortages and bureaucratic delays in payouts have affected servicemembers and veterans. Recent initiatives (such as streamlining veterans' pensions, expanding hospital facilities under the ECHS health scheme, and doubling housing allowances) have been undertaken, but gaps remain in caring for the armed forces community. Additionally, the military's large size and seclusion have sometimes detached it from societal and political accountability. Although instances of direct politicization are rare (the armed forces remain apolitical), jointness and reform efforts sometimes get stuck due to cultural resistance and mistrust between ranks and between officers and bureaucrats. For example, the rank-and-file may view procurement scrambles or organizational upheavals with skepticism if they fear those reforms are more about saving money than improving capability. Ensuring that soldiers, sailors, and airmen have confidence in leadership – and that their welfare is prioritized – is an underlying challenge for any reform.

6.Technology and Industrial Base: A critical obstacle is India's limited indigenous defense industrial base. For decades, the country has been heavily reliant on foreign arms imports – according to SIPRI, India was the world's largest arms importer for the past three decades. Multiple factors contribute: traditionally, domestic production capacity was low; the Defense Research and Development Organisation (DRDO) often struggled to deliver complex systems on schedule or within quality standards; and private industry was until recently largely excluded from sensitive defense projects. Even when India has had successful programs (e.g. the Tejas light fighter, Arjun tank, Akash missile, INS Vikrant aircraft carrier), they have often been delayed and came at a cost premium. As a result, Indian forces have operated mixed inventories of Russian, Western, and locally-produced equipment. This causes logistical burdens (multiple ammunition types, spare parts) and fuels dependence. For example, in the 1980s–90s India relied heavily on Soviet/Russian tanks, artillery, and aircraft. In recent years, contracts for French Rafales, Israeli UAVs, and American Apache helicopters highlight continued import dependency. Thus, achieving self-reliance in tech and manufacturing is a major modernization imperative.

7.Emerging Domains (Cyber and Space): A new challenge is preparing for non-traditional warfare domains. Cybersecurity and space situational awareness have become urgent concerns. Both state and non-state adversaries are capable of cyber operations that could disrupt communications, intelligence networks, or civilian infrastructure during conflict. India established a Defence Cyber Agency (DCA) and a Defence Space Agency (DSA) under the Integrated Defence Staff to develop responses, but their capabilities and doctrines are nascent. Experts warn that legal frameworks for cyber warfare are still evolving in India, complicating preparedness[7]. The Indian military must still build robust cyberdefense, offensive cyber capability, and electronic warfare (EW) tools to secure its forces.

In sum, India's modernization is not held back for lack of vision, but by structural and bureaucratic constraints, limited budgets, and technological gaps. The reform measures introduced in recent years are extensive, but they must overcome these deep-seated challenges to be effective. The next section discusses the specific reforms that have been enacted to meet these needs.

INSTITUTIONAL AND STRATEGIC REFORMS IN INDIA'S ARMED FORCES

Recognizing the challenges above, successive Indian governments have enacted a variety of reforms to modernize the military's organization, procurement policies, and technology base. The Modi administration in particular launched an ambitious agenda, frequently summarized as "Make in India" and "Atmanirbhar Bharat" (self-reliant India) in defense, alongside structural changes to

7 [PDF] INDIA'S CYBER WARFARE STRATEGY IN NEXT DECADE https://capssindia.org/wp-content/uploads/2022/09/MK-Sharma.pdf

command and control. These efforts address institutional structures, procurement processes, defense production, and human capital. Key reform measures include:

1.Creation of the Chief of Defence Staff (CDS) and Department of Military Affairs (DMA): In December 2019 India finally appointed its first Chief of Defence Staff, General Bipin Rawat. The CDS is a four-star officer intended to serve as the single-point advisor to the government on military matters and to foster jointness among the services. Alongside this, the government established the Department of Military Affairs (DMA) within the MoD, headed by the CDS, to handle all tri-service functions (while services themselves handle force-specific tasks). These reforms reallocated many functions (training, procurement for capital acquisitions, battlefield management) from the old Defence Ministry into the DMA, with the aim of reducing bureaucratic layers. The CDS/DMA model is partly inspired by foreign practices: it is closer to the U.S. Chairman of the Joint Chiefs of Staff or the UK's Chief of Defence Staff, and was intended to *"streamline and rationalize"* the use of military resources. The June 2025 order further empowered the CDS: for the first time, the CDS was formally authorized to issue binding Joint Instructions and Orders across all three services[8]. Analysts hailed this as a *"watershed"* in India's joint reforms, making the CDS the unambiguous single-point authority for integrated planning, deployment, and operations. Prior to this, each service chief retained primacy in their domain, which had created coordination *"grey zones"* during crises. With the new directive, the CDS can issue joint strategic and operational orders under the DMA, which should make theater command constructs and cross-domain operations more feasible. However, important powers (such as budget control or legislative authority) still reside with civilian arms. Early reforms provided the CDS and DMA authority chiefly by executive order; without legislation, their mandate was limited. This changed in 2023 when Parliament passed the Chief of Defence Staff and Tri-Service Commands Bill, granting some statutory basis. Nonetheless, even after formalizing their posts, many integration plans remain unfinished due to inter-service mistrust or legal ambiguities. Critics argue that an equivalent to the U.S. Goldwater-Nichols Act is still lacking; without strong legal backing, pooling personnel into joint commands will be slow.

2.Procurement and Acquisition Reforms: India has revamped its procurement procedures to favor indigenous production and reduce delays. The Defence Acquisition Procedure was overhauled in 2020 (DAP-2020), emphasizing categories like "Buy (Indian-IDDM: Indigenously Designed, Developed, and Manufactured)". The government also introduced the Strategic Partnership model: it identifies domestic companies to partner with foreign OEMs for co-development of complex systems (e.g. fighter jets, helicopters, submarines). The Innovations for Defence Excellence (iDEX) program (launched 2018) engages startups and MSMEs to solve technology challenges; for FY2025–26, around ₹449 crore was allocated to iDEX. The Atmanirbhar Bharat and Make-in-India campaigns have ushered in liberalized policies: raising FDI caps (up to 74% automatic now) and faster licensing. Notably, the Positive Indigenization Lists (PIL) now cover thousands of items: beyond 4 lists for services and 3 lists for DPSUs (containing nearly 4,000 items) that cannot be imported beyond set timelines[9]. These lists are updated periodically. India also streamlined offsets (requiring foreign vendors to invest locally) and introduced a Defense R&D Organization (DRDO) prioritization to bridge technology gaps. In 2021, the MoD published "20 Reform Measures", including codifying many of these procurement changes. Early results show some progress: defence exports grew 30-fold in a decade, and a 2025 government report claimed over 14,000 items have been indigenized via the SRIJAN portal (a dedicated online list of imported components for domestic industry to develop). Yet, as noted above, actual delivery often lags behind policy. The new Defence Acquisition Policy 2026 (draft) hints at still more changes: for example, it calls for manufacturers to retain IP and emphasizes licensing of technology. These are intended to sustain long-term innovation, but will require time to have effect. In the short term, India is trying to balance accelerating imports of critical kit (via "Buy Global" routes) with pushing its own industry.

3."Make in India" and Defense Industry: A central plank of recent reform is to build India's defense industrial base. The "Make in India" initiative drives this by incentivizing domestic design and production. The government has transformed the Ordnance Factory Board (OFB) into seven new Defence Public Sector Undertakings (DPSUs) in 2021, with mandates to be commercially viable. Private sector participation has been encouraged: over 430 companies now hold defense licenses, and the private share of production has grown (to about 21% as of 2024). Special

8 Single-Point Orders, Joint Fight: How June 2025 Reform Reshapes India's Theater Command Reality – Analysis – Eurasia Review https://www.eurasiareview.com/24102025-single-point-orders-joint-fight-how-june-2025-reform-reshapes-indias-theatre-command-reality-analysis/

9 Microsoft Word - EV - 38th report - 21-3-23.docx https://sansad.in/getFile/lsscommittee/Defence/17_Defence_38.pdf?source=loksabhadocs

Economic Zones for defense are being proposed, and dedicated funds (like the Production-Linked Incentive scheme) support aerospace and defense manufacturing. These efforts have paid some dividends. Under Make in India, output of indigenous platforms has surged. For FY2023–24, India produced ₹127,434 crore worth of defense equipment – a 174% increase from 2014–15. Major projects like the Advanced Towed Artillery Gun System (ATAGS) and the Tejas fighter have moved forward. The ATAGS artillery gun (155mm, 52-caliber) was jointly developed by DRDO with Bharat Forge and Tata Power SED, and ₹7,000 crore worth of orders were placed for it under the IDDM category. The naval shipyard Mazagon Dockyards is building Scorpene submarines and destroyers, and Hindustan Aeronautics Limited (HAL) is manufacturing Su-30MKIs locally under license and producing Light Combat Helicopters. According to official figures, nearly 65% of India's defense equipment is now manufactured domestically, reversing the historic 65–70% import dependency. The goal is to reach 75% capital outlays for domestic procurement (22% of total defense spending), signaling a structural shift. Nevertheless, these industrial reforms face challenges. As the Stimson Center notes, *"weak indigenous defense production"* persists due to poor designs, underinvestment in R&D, and a fragmented ecosystem. Delays and cost overruns in even *"Make"* projects (such as the Tejas Mk1A, or OFB equipment delays) raise questions about efficiency. The DRDO still often lacks funding or suffers bureaucratic hurdles. Critics have labeled India's vision of *"Atmanirbhar Bharat in defense"* as partially mythical, citing continuing delays and high costs. The government has acknowledged this: for instance, it admitted that until recently, India lacked even a strong export culture and remained the top arms importer.

4.Training and Wargaming Modernization: Recognition has grown that modern forces require intellectual as well as material preparedness. Accordingly, the Indian Army and other services have expanded joint training and simulation. In February 2026, the Army held a national seminar on wargaming and simulation[10]. High-ranking speakers emphasized that wargaming is *"not merely a procedural exercise but a strategic instrument to sharpen judgement"*. The seminar highlighted embedding AI and simulation into doctrine, and unveiled indigenous software tools for decision support. Such events reflect a growing focus on multi-domain exercise: the armed forces now routinely conduct large-scale joint exercises (e.g., *Yudh Abhyas* with the US, *Malabar* with Japan/US/Australia) and incorporate computer simulations for planning. Simulation-driven training centers and AI-based wargames are being institutionalized, recognizing that facing advanced threats (urban warfare, cyber attacks, complex terrain) requires novel training.

5.Cyber and Electronic Warfare Preparedness: India's military has begun adapting to *"invisible"* domains of conflict. It has set up a Defence Cyber Agency (DCA) and a Defence Space Agency (DSA) under the Integrated Defence Staff to address cyber and space challenges. The Times of India reports that India's forces have *"moved steadily – if unevenly – towards a technology-centric doctrine"*, deploying AI-driven surveillance along borders and emphasizing cyber and EW platforms[11]. The DCA held annual exercises (e.g. "Cyber Suraksha" in 2025) to harden cyber defenses of networks and infrastructure. The Indian Army and Air Force have also integrated electronic warfare units to jam or protect communications. Alongside these operational steps, there is new institutional cooperation between the military and civilian cybersecurity agencies. However, observers note that legal frameworks for cyber conflict (and accountability in case of cyber incidents) are still evolving, requiring parallel reforms in India's cyber doctrine and laws.

6.Leadership and Structural Reforms: Beyond the CDS and DMA, India's leadership has pushed other structural changes. The Shekatkar Committee of 2016 recommended cutting fat and improving logistics (e.g. closing army farms, reorganizing Army HQ) to make the military leaner and more lethal. Many of its proposals were implemented, including merger of the Army HQs of operational and logistics commands. The MOD now holds tri-service talks on defense planning via the Defence Acquisition Council, and has increased involvement of uniformed officers in the DMA – a move meant to foster trust. India has also set up think tanks and institutions (like the Defence Planning Committee, Defense Cyber Board) to involve experts in strategy.

In summary, India's reform measures are broad: they encompass new command structures (CDS, DMA, theatre commands), procurement policy overhauls (DAP-2020, SP model, iDEX, offsets), industry incentives (indigenization

10 Press Release:Press Information Bureau https://www.pib.gov.in/PressReleasePage.aspx-?PRID=2230790®=1&lang=1

11 Before the first missiles fly: AI, cyber & electronic warfare - how India is preparing for invisible battlefields - The Times of India https://timesofindia.indiatimes.com/defence/news/before-the-first-missiles-fly-ai-cyber-electronic-warfare-how-india-is-preparing-for-invisible-battlefields/articleshow/127694639.cms

lists, DPSU reforms, private sector entry), and enhanced focus on technology (AI, cyber, space). The 2026–27 budget also signaled that these reforms are government priorities by substantially raising capital allocations and even creating a *"Joint Staff"* budget line (up 33%) to fund the CDS's office. Nonetheless, successful implementation remains contingent on cultural change within the forces and civilian bureaucracy, as well as sustained funding and clear legal backing.

INDIA'S RESPONSE TO BORDER CONFLICTS

1.India–China Border Clashes (2017–2020): The Sino-Indian border has been the focal point of recent tensions. In 2017 India thwarted a PLA incursion in Doklam, involving troops from India and China's People's Liberation Army. In 2020, clashes erupted in the Galwan Valley, resulting in casualties – the first fatalities on the frontier since 1975. These incidents exposed India's vulnerabilities: for decades, India's infrastructural preparedness (roads, bridges, airfields on the LAC) lagged China's. In response, India accelerated infrastructure development (e.g. building border roads and bridges at high altitude) and raised two new mountain divisions for Ladakh. The Galwan clash also underscored the need for integrated intelligence and rapid response. In 2021 the Indian Army unveiled its *'Mountain Strike Corps'* (part of a long-delayed reorganization) for operations in the Himalayas. Technology has also played a role. After 2020, India stepped up deployment of surveillance drones, AI-enabled sensors, and night-vision capabilities in border areas. The Army and Indo-Tibetan Border Police acquired new drones and unmanned ground vehicles for patrol and logistics. The lessons of these face-offs – which saw soldiers engage at close quarters — emphasize preparedness for "grey-zone" conflicts below the nuclear threshold. The government later cited these confrontations as justification for the 2025 reforms empowering the CDS to issue unified orders – observers note that previous limitations caused coordination friction during crises like Galwan. The decision to finally vest the CDS with operational authority in mid-2025 was explicitly linked to avoiding a repeat of the *"coordination depended on goodwill rather than command"* problem of 2020.

2.India–Pakistan Conflicts: Border conflicts with Pakistan have repeatedly shaped doctrine. The 1999 Kargil War taught hard lessons: India realized it needed better high-altitude artillery and air support (later addressed by procuring surface-to-air missiles like Akash and arming helicopters for mountain ops). Joint operations (Army and IAF) in Kargil spurred the 2000 Kargil Review Committee's call for jointness. In recent years, India's responses to Pakistani incursions have also become more assertive. In September 2016, following a terrorist attack in Uri, India conducted *"surgical strikes"* across the Line of Control to target terror camps. In February 2019, India's air force struck what it called a terrorist training camp in Balakot (Pakistan), marking the first use of airpower across the border since 1971. These actions indicate a greater willingness by Indian leadership to use advanced capabilities (drones, precision munitions) for deterrence. Pakistan's own nuclear arsenal and the specter of escalation keep India's defence planners cautious, but they have invested heavily in ballistic missile defenses (like the Prithvi Air Defence, PAD, system) and rapid reaction forces. On the force composition side, India has modernized its fighter fleet partly to counter Pakistan's F-16s, by inducting Rafale jets and upgrading MiG-29s and Tejas. Army modernization included procurement of new anti-tank guided missiles and night-fighting gear, reflecting lessons from cross-border skirmishes.

3.Cyber Warfare Preparedness: With cyberspace increasingly contested, India has launched specific initiatives. The Defence Cyber Agency (DCA) conducts regular exercises, such as the *"Cyber Suraksha"* exercise in June 2025 to strengthen the defense establishment's network resilience[12]. Reports indicate the DCA is developing both defensive protocols (network segmentation, encryption, red-team hacking drills) and offensive cyber capabilities (tools to disrupt adversary C3I). The Times of India notes that India's military now *"prepares for conflicts that may never involve a single shot being fired"*, highlighting the creation of DCA as formal recognition of *"sustained cyber operations"* in future wars. The Army has also created specialized cyber units at the corps level to protect local communications, and the Air Force is working on secure data links and UAV control networks hardened against jamming. These steps, though recent, indicate that Indian forces are integrating cyber and EW into overall planning – in line with the idea that the "invisible front lines" of cyber and electronic warfare shape battlefields before kinetic conflicts begin.

Make in India Programs (e.g. ATAGS, Tejas, etc.): The *Make in India* campaign has produced several high-profile projects. The ATAGS artillery system is one example: it was entirely designed in India (DRDO-led) and then manufactured by domestic industry partners. The Defence Cabinet approved ₹7,000 crore for procuring 307 guns

12 In June 2025, the Defence Cyber Agency launched the ... – Testbook https://testbook.com/question-answer/in-june-2025-the-defence-cyber-agency-launched-th--69955b1e02abaa6010a5a32e

of this system in an "IDDM" (Indigenously Designed, Developed, Manufactured) category. Similarly, the Light Combat Aircraft (LCA) Tejas is being iterated into a Mark 1A variant with more indigenous content, and several squadrons of Tejas have been inducted into the IAF. The naval *INS Vikrant* aircraft carrier, built at Cochin Shipyard, entered service in 2022 and symbolizes India's growing shipbuilding skill. Additionally, 14,000 items (such as spare parts, subsystems, tooling) have reportedly been indigenized via the SRIJAN portal: for instance, vendors have developed substitutes for imported hydraulics or sensors that were previously source-limited. The HAL-developed Light Combat Helicopter (LUH) is entering production, and indigenous missile projects (Nirbhay, ASTRA, Akash) are advancing.

In practical terms, these *Make in India* projects do more than replace imports; they build up domestic capacity and skills. They also generate economic benefits (a PIB report notes 16,000 MSMEs and over 430 licensed firms now constitute India's defense industrial base). Exports have grown: light utility aircraft, drones, and small arms (e.g., underslung grenade launchers) are being sold internationally. The government has targets (₹3 lakh crore in production and ₹50,000 crore in exports by 2029), reflecting ambition. However, these successes remain uneven. Many indigenous programs still run over schedule. For example, the Arjun tank Mk II, though combat-proven, was delayed by decades. Experts caution that while *"Make in India powers defense growth,"* India still needs foreign technology and know-how for top-end systems. Thus, complementary policies allow selective imports (e.g. Rafales, S-400 missiles from Russia) even as domestic projects mature.

SRIJAN (Indigenization) Initiative: SRIJAN is a recent example of policy in action. Launched in 2021 by the Department of Defence Production, SRIJAN is a portal that publishes lists of components and spares that are currently imported for defense production. It invites Indian industry to develop these items domestically. In parliamentary testimony, the MoD stated that DPSUs have uploaded thousands of such items on SRIJAN, effectively crowdsourcing indigenization. So far, companies have used the portal to bid for contracts or file expressions of interest to supply these parts. Early reports show hundreds of cases where previously imported parts (e.g. ammunition sub-assemblies, vehicle parts) have seen local tenders through SRIJAN. This mechanism addresses manufacturing gaps by signalling government demand. It also exemplifies a broader *"whole-of-nation"* approach, linking end-users (armed forces), planners, researchers, and industry in a feedback loop.

DEFENSE BUDGETING AND FINANCE

A critical factor in modernization is funding. In recent years India's defense budget growth has outpaced many other ministries, but challenges remain. We summarize key trends and allocations.

Over the past decade, India roughly doubled its defense budget in nominal terms. For example, in 2013–14 the total defense budget was ₹2.53 lakh crore; by 2025–26 it rose to ₹6.81 lakh crore. The jump in absolute numbers supports the acquisition of advanced platforms and pay raises for personnel. However, this increase is partly inflationary and partly to meet statutory pension hikes. In percentage of GDP, defence spending has held around 1.9–2.0% (for FY2025–26 it was 1.9%, rising slightly to 2.0% in the 2026–27 BE). This level is modest for a country of India's security needs. For comparison, regional rival China spends over 4% of GDP on defense (with a budget exceeding $300 billion), and even Pakistan spends around 2.7%. Prime Minister Modi has argued that "military readiness" is a top priority, but India's overall fiscal space is constrained by development goals and other social spending.

Within the defense budget, the biggest share by far goes to personnel: salaries, pensions, and welfare. In 2026–27, of the Rs 784,678 crore total, ₹365,478 crore (46.6%) was revenue expenditure for salaries and running expenses, and ₹171,338 crore (21.8%) was for pensions. That leaves only ₹219,306 crore (28.0%) for capital purchases (aircraft, ships, equipment). Even that figure (around ₹1.85 lakh crore) is distributed among dozens of projects. The proposed capital outlay was notably raised by 21.8% for 2026–27, with most of it allocated to specific acquisitions: e.g., Air Force fighters (+31% to ₹63,734 crore) and other equipment (+30% to ₹82,218 crore). Interestingly, the budget for the *"Joint Staff"* under CDS also rose sharply (33.4%), reflecting the new high-level command structure's needs.

Some specifics: the Army's share of capital was raised, the Navy's slightly, the Air Force's significantly, indicating an attempt to re-balance. Missile programs (other equipment) received a 30% boost. The fiscal year allocation process, however, still contends with carry-over obligations (contracts signed but unpaid from previous years), which squeeze new procurements. Additionally, inflation in defense items (especially imported tech) is high, so nominal increases sometimes do not translate to more hardware.

Comparatively, SIPRI reports India's total military expenditure in 2024 was $86.1 billion. This made India the world's fifth-largest spender (behind US, China, Russia, and UK). Although the annual increase (1.6% from 2023) was moderate, it represented a 42% rise since 2015. Crucially, India

now commits about 75% of its capital outlay to domestic procurement projects (which is 22% of total military spending). This suggests India is gradually reducing arms imports; yet, SIPRI notes India *"remains reliant"* on imported high-end systems for the foreseeable future.

Budget oversight in India is conducted by Parliament's Standing Committee on Defence, which in its 2022–23 report flagged concerns: for example, it demanded clarity on how the fixed Defense Services Headquarter (HQ IDS, Army Commands, etc.) reforms would be financed. The committee also pointed out that despite reforms, the defense services often requested and received supplementary grants, signaling persistent shortfalls. Overall, budgetary trends show that modernization programs are funded faster under PM Modi's tenure than before, but sustaining these increases is politically challenging.

ORGANIZATIONAL STRUCTURE AND LEADERSHIP

Modernization depends on how the military is organized and led. India's defence leadership structure has been transformed recently but retains traditional elements. The Ministry of Defence (MoD) is headed by the Defence Minister (Raksha Mantri), who is a cabinet member. Below him are four secretaries for the departments of Defence, Military Affairs, Defence Production, and Defence Research & Development, plus the Ex-Servicemen Welfare department. The Chiefs of Army, Navy, and Air Staff advise on service-specific matters.

The new CDS/ DMA, as discussed, has altered this architecture. The CDS is now ex officio Secretary, Department of Military Affairs, and chairs the Chiefs of Staff Committee (CoSC). The DMA oversees joint training, equipping, and staffing, while the individual service HQs (led by their respective chiefs) focus on raising, training, and sustaining their forces. In principle, this means that Indian defense is now managed through a *"dual-hatted"* civil-military leadership – the Raksha Mantri and Defence Secretary on the civilian side, and the CDS as a military secretary.

Below the top, the armed services each have their own command structures. The Indian Army has eight central commands (Northern, Western, Eastern, Central, Southern, Southwestern, Army Training Command, Andaman & Nicobar Command) led by Generals. The Air Force and Navy likewise have geographically and functionally organized commands (for example, the Indian Navy's Western, Eastern, and Southern Naval Commands). Special tri-service commands include the Andaman & Nicobar Command and the Strategic Forces Command (which controls India's nuclear missile arsenal). The ambition (not yet realized) is to create fully integrated Theatre Commands – for example, Eastern, Western, Northern, Coastal theatre commands combining land, air, and naval units under one commander. A defence ministry press release in August 2023 authorized such commands, but the details of their formation are still pending legislative action.

Analysts note that the DMA/ CDS reorganization centralizes some authorities but also creates reporting complexities. For instance, the Defence Secretary (civilian) technically outranks the CDS in the government's order of precedence, which led to anxiety among IAS officers. In practice, though, the CDS often has more clout in military matters. There have been friction points: as noted, bureaucrats sometimes see the CDS as encroaching on their turf, while military officers feel civilian administrators lack domain expertise. The government has tried to mitigate this by placing more military officers in the DMA at high ranks, and by reiterating that the CDS will not interfere in promotions or internal service matters.

The leadership structure also involves bodies like the Defence Acquisition Council (with service chiefs and civilians) for major purchases, and the Defence Planning Committee (chaired by the National Security Advisor) for strategic guidance. These aim to institutionalize inter-service consultation, but the last comprehensive Defence Planning Committee meeting was in 2021. Some experts call for a formal National Security Council Secretariat review process, which India still lacks.

On the political oversight side, the Prime Minister and Cabinet hold the ultimate authority. The Modi government has been unusually hands-on with military affairs, seen in the annual release of policy documents and regular press briefings on defense deals. Parliament exercises oversight through the Standing Committee on Defence and question sessions, but classified details remain restricted. India has not had a formal parliamentary debate on security policy akin to National Security Acts in some countries.

INTER-SERVICE COORDINATION AND JOINTNESS

India's warfighting capability increasingly depends on joint operations. Historically the services competed for resources and maintained independent command cultures. The creation of the CDS and DMA, as discussed, is an explicit attempt to break down these silos.

Before 2019, meaningful integration was limited. Some joint bodies existed: the Integrated Defence Staff (IDS) office and the Andaman & Nicobar Command (CINCAN) were tri-service, and the Joint Planning Committee coor-

dinates requirements. Still, for decades India fought wars in a disjointed manner. Civil-military scholar Arun Vishwanathan argued that *"until very recently"* India's defence management lacked coordination, producing rivalry between the MoD and the Services. The Modi reforms aimed to change this. The CDS is meant to be the single military adviser to the Defence Minister and to coordinate between the services. In practice, the June 2025 empowerment of the CDS to issue joint orders moves from mere coordination to actual command.

The Eurasia Review analysis highlights how this could transform planning. For example, it notes that with a empowered CDS, the planning for a Land Theatre Command would require explicit air and naval input from the start. It also cites an ongoing initiative, the Joint Air Defence Centre, which under the new order will integrate the Army's and IAF's radar and missile assets into a unified grid. In essence, what was once "Afterthought Air Support" is now being made part of initial planning. This institutionalizes the idea that *"the joint fight must begin before the first missile is launched"*.

Challenges remain. The analysis warns that even with these changes, the *cultural* shift will take time. Army commanders are used to unilateral authority in their domains, and the Navy and Air Force have unique needs (maritime strategy vs air superiority). Service chiefs have publicly voiced concern: for instance, the IAF Chief in 2022 suggested an Integrated Air Defence Command might be counterproductive, fearing dilution of IAF roles. The Army, the largest and land-focused service, worries that jointness should aid frontline troops, not complicate command.

However, incremental progress is visible. The June 2025 order explicitly allowed the CDS to issue binding orders, a first in India's history. This *"single-point authority for joint planning"* now legally exists, even if its full use will unfold over years. Training is adapting too: tri-service institutions (like the Army War College's NCC) now routinely include officers from all services, and war games increasingly feature all three services simulating networked operations. India's defence magazines have been calling for a Goldwater-Nichols-type jointness law, and while that explicit law is missing, the legal changes in 2023 do reinforce that inter-service organizations (e.g., DCA, DSA) must operate under all service acts. This means no service gets special leeway, a potential step toward equal status in joint commands.

INDIGENIZATION OF DEFENSE MANUFACTURING

Developing a robust indigenous defense industry has been a centerpiece of reform. This involves public and private sector initiatives, technology procurement policies, and collaborative projects. Key aspects include:

Arms Import Reduction: India historically imported 70–75% of its arms. Today, official reports claim 65% of equipment is now made domestically. This shift is bolstered by a requirement that 75% of capital acquisition projects be domestically produced. State-owned DPSUs and ordnance factories now produce tanks (Arjun), artillery (Dhanush, ATAGS), missile systems (Akash, LRSAM), and parts of aircraft (HAL's SU-30MKIs and Tejas). Private firms (L&T, Tata, Mahindra) are entering the fray, often through strategic partnerships. For example, Tata Advanced Systems co-produces BrahMos missiles, and L&T builds helicopter fuselages for Airbus. Foreign OEMs like Dassault and Boeing must in return establish local manufacturing lines for critical components.

SRIJAN and Indigenization Portal: In 2021 the government launched the *SRIJAN* portal explicitly for indigenization. All major DPSUs and some services publish their lists of components they import on SRIJAN, inviting bids from Indian companies. This transparency is novel. For instance, HAL has posted thousands of imported airframe parts on SRIJAN for MSMEs to develop locally. The Lok Sabha Standing Committee reported that over 26,000 items were identified on SRIJAN by companies like HAL[13]. Success stories include local manufacture of 155mm artillery shells and aircraft tires that were earlier imported.

Offset Policy: Earlier mandatory offset (e.g. 30% of contract value to be invested in India) has been reoriented. Now offsets can include co-development arrangements, technology transfers, and investment in Indian R&D. The idea is to attract foreign defense companies to build production lines in India. The government states offsets reforms now *"thrust on attracting investment and Transfer of Technology"*. For example, in the Rafale deal France agreed to help India build components of the jet locally, such as aircraft brakes at HAL. Critics argue offset projects are slow, but they have led to some joint ventures (e.g. Boeing-HAL for P-8I sub-assemblies).

Start-ups and Innovations: Recognizing that new threats require innovation, India launched iDEX (2018) and a

13 [PDF] Day1 - Vayu Aerospace and Defence Review https://www.vayuaerospace.in/aero-show/show-daily-2025-day-1.pdf

Defense Innovation Organization (DIO) to fund start-ups. Dozens of start-ups have developed products like swarm drones, AI-based surveillance, and communication gear under government grants. The Defense R&D Fund (₹80,000 crores announced in 2020–21 budget) is being used to incubate technologies (e.g. directed-energy weapons, indigenous chips). This influx of private R&D is an important supplement to the DRDO-centric model.

Challenges in Indigenization: Despite these steps, full self-reliance remains distant. The Stimson memo bluntly states that *"Make in India: Challenges"* include *"poor designs, insufficient investment, weak manufacturing"*. In practice, many indigenized systems are incremental improvements on legacy Russian designs, rather than cutting-edge leaps. The private sector still lacks scale for high-end projects (no private Indian company has built a fighter jet or submarine independently). Coordination between labs, academia, and industry is improving but was historically weak; efforts like DRDO's Mission Defspace (national defense space mission) aim to address such gaps.

Nevertheless, momentum is high. India's armed forces are now mandated to procure domestic alternatives wherever possible. In 2023–24, nearly 70% of procurement was from Indian sources, with only urgent unmet needs filled by imports. Major foreign purchases now include large orders like S-400 air defenses and additional Rafales, but these are mostly for strategic reasons (technology gap) rather than routine armaments. The long-term goal is that India's factories and designers become a net exporter – the leap from 686 crore exports in FY2013–14 to ₹21,083 crore in FY2023–24 suggests this strategy is bearing fruit.

COMPARATIVE INSIGHTS

For perspective, India's modernization can be compared to regional peers and global patterns. China's military transformation has been more rapid: its defense spending now surpasses India's by roughly four times. China has already implemented theater commands (five regional commands) and aggressive force buildup, while India is just initiating theater command concepts. Analysts note China's *"proactiveness"* in reforms has given the PLA and PLAN greater capabilities and reach. In budgeting, China continues to average 7% annual increases, whereas India's growth has been in the single digits in recent years (except spurts).

Pakistan, on the other hand, spends much less (about $10 billion in 2024). Its military is smaller but oriented toward India (active-duty ~600,000). Pakistan's challenges (an insurgent economy, US aid cuts) mean it acquires arms more slowly, though China remains a key supplier (JF-17 jets, diesel subs). Thus, India's modernization relative to Pakistan is significant – it maintains a much larger, better-equipped force – but Pakistan's history of proxy warfare and terrorism means India must still be vigilant.

Globally, India's effort parallels other powers shifting to joint forces and tech-centric militaries. The establishment of a CDS and joint structure can be seen as converging with U.S. and UK models. India's increasing use of AI, drones, and networked C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance) is part of the worldwide trend toward multi-domain operations. Unlike some major powers, India has opted for an *"objective civilian control"* model (apolitical military under civilian authority), which emphasizes democratic oversight but sometimes at the cost of slower decision-making. Compared to other South Asian states, India's democratic processes give it stability but at the expense of quick reform – for example, unlike an autocratic system, India must forge consensus (e.g. passing the 2023 inter-service bill through Parliament) even for security matters.

In sum, India's path reflects a hybrid approach: learning from others (U.S. goldwater-nichols style oversight, Chinese emphasis on joint forces, Israeli emphasis on tech) while also dealing with its own political and organizational realities. The modernization drive may not match China's scale, but it aims to make India's armed forces more capable of coalition operations and high-tech warfare than they have been in the past.

PERSONNEL, TRAINING, AND WELFARE

Human resources are a critical pillar of modernization. The Indian military is reforming its personnel policies and training regimens to create a more professional and technically-savvy force.

Recruitment and Retention: India continues to expand recruitment to fill gaps. The Army, traditionally open only to male volunteers, has begun inducting women into non-medical combat roles (e.g. Corps of Engineers, Air Defense) from 2020. For the first time, women officers were commissioned as fighter pilots (in 2016) and as infantry (2020). The Agnipath scheme (launched in 2022) created a short-term enlistment track ("Agniveers") to rapidly bring in young personnel on four-year terms. This controversial policy is a cost-saving measure (shortening pension obligations) and attempts to refresh the age profile. While Agnipath is focused on attrition reduction, it also means the services will now have a rotation of veterans re-entering civilian life every few years. Integrating these "Agniveers"

into society and ensuring they have employable skills is an ongoing welfare challenge, addressed by promised job facilitation for top performers and educational support.

Professionalization and Training: Recognizing that future wars will be technology-driven, the armed forces have upgraded training. Common Defence Services Staff College (DSSC) now conducts more joint courses (including the Army, Navy, Air, and some civilian officers together). The National Defence Academy (NDA) and other academies have increased focus on technical education (electronic warfare, cyber subjects, language skills). Simulation centers – from flight simulators to wargame rooms – are proliferating. The Wargaming seminar of 2026 underscores an institutional push: India now wants "wargaming" (turning real scenarios into predictive models) to be part of officer curricula. Joint exercises are used not only for strategy but to train commanders in cooperation. For example, *Exercise Maitree* (2019, India-Thailand) included cross-learning on jungle warfare and humanitarian aid.

Welfare and Morale: The government has implemented policies to improve personnel welfare, aimed at morale and retention. Pay commissions periodically raise salaries and allowances (the 7th Pay Commission's recommendations were implemented over 2017–2020, increasing income levels for officers and soldiers). Housing allowances and medical facilities (through ECHS) have been expanded. Importantly, One Rank One Pension (OROP) – the equal-pay for pension promise – was implemented in 2015, fulfilling a long-standing veterans' demand. Ex-servicemen welfare is now handled by a separate government ministry (separate from MoD) to focus on veterans' issues. New policies allow more NGOs and corporate schemes for veterans' rehabilitation.

However, challenges endure. Mental health and PTSD awareness is still limited in the forces, and support systems (counseling, rehab) are being built gradually. There have been unfortunate instances of high-profile suicides in barracks, highlighting that extreme stress persists among troops in counter-insurgency areas. The government has ordered setting up mental health units in military hospitals and stress counseling hotlines, but the stigma and capacity are still works in progress.

Overall, India is modernizing its people practices in parallel with hardware. The emphasis on simulation, joint training, and improved living conditions is aimed at creating a more agile and motivated force. Yet the mix of career soldiers and short-service Agnipath recruits adds a new dynamic; the long-term success will depend on how well the services integrate these cohorts and maintain unit cohesion.

CONCLUSION

India's military modernization and reform is a multifaceted endeavor, evolving at the intersection of grand strategic imperatives and domestic institutional realities. This paper has shown that India has embarked on ambitious changes: it has increased defense spending, pursued domestic production, restructured its military leadership, and introduced cutting-edge technologies (AI, drones, cyber tools). Formal initiatives like the creation of the CDS, launch of Make in India in defense, and reworked procurement rules indicate a strong commitment to transformation. Case studies – from the construction of indigenous fighters and guns to the handling of China's LAC incursions – demonstrate India is applying new methods and capacities on the ground.

Yet, we find that deep-rooted challenges temper these advances. The defence bureaucracy (the HDO) remains prone to turf battles and outdated procedures. Jointness has improved on paper, but cultural and legal hurdles slow implementation. Budget growth, while healthy in recent years, still leaves only about 30% for new kit, and procurement delays mean force upgrades often lag behind schedules. Furthermore, Pakistan and China continue to modernize (the former with China's assistance) in ways that keep India vigilant.

In sum, India's military today is *"ready, relevant, and resurgent"* – to borrow CDS Anil Chauhan's phrase – but with caveats. It has become far more capable and self-reliant than a decade ago, gaining world-class submarines, rockets, and a modern Indian Air Force. However, its full potential will only be realized if institutional reforms catch up with hardware improvements. Strong legislative backing for joint commands, streamlined procurement law (akin to a localized Goldwater–Nichols act), and sustained investment in R&D are critical. Likewise, ensuring the welfare and professionalism of personnel will determine how effectively these platforms are used.

As India's political leadership stated, bolstering *"synergy within the Higher Defence Organisation*" is essential. In practical terms, that means civil-military trust must grow, budgets must continue to emphasize capability over routine spending, and the defense industry (public and private) must deliver on its promises. Only then will the vision of a modern Indian military, suited for multi-front future conflicts, be fully attained.

In closing, the direction is clear: Indian defense reforms are pushing the armed forces into a more modern era – one where joint, high-tech, and self-reliant capabilities form the core of national power. Whether this transformation succeeds will depend on political will, bureaucratic reform,

and the armed forces' ability to adapt. As one analyst cautioned, *"the measure of reform is not in the order issued from Delhi, but in the clarity it delivers to a soldier facing the enemy"*. The coming years will show if India's modernization delivers that clarity.

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