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**India's Rocket Force:
Can Artillery Divisions
Be the Launchpad?**

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India's Rocket Force: Can Artillery Divisions Be the Launchpad?

“Pakistan's Rocket Force was created to deter war, but India's operationalisation of rocket divisions and advanced missile systems compresses decision-making timelines dangerously”.

—Lt Gen Nauman Zakaria, Cdr, Pakistan

ARFC

Shangri La Dialogue (May 2026)

Abstract

Modern warfare has broken multiple myths that has been existing since the last century. Smaller and weaker nations have been able to bring strong militaries of larger states to standstill, make global economies bleed and force powerful states to look for off-ramps. Warfare is now no more a bean count of big platforms and soldiers but a wholesome of technology, innovation and disruption backed up by intangibles like national resilience and will to fight. War is no longer what it used to be. Battles once fought with massive armies and roaring tanks are now shaped by rockets and missiles that strike in minutes. From Ukraine to the Middle East, modern conflicts have proven that the future of warfare lies in long-range precision attacks rather than face-to-face combat. Recognising this shift, India has begun developing its Integrated Rocket Force (IRF), a move that goes beyond simple military reform. At the dawn of the 21st century, Theatre based Artillery divisions and Nuclear equipped Strategic Forces Command (SFC) were raised in the Indian Armed forces which provides a good launchpad for maturing the integrated rocket force envisaged now. This article attempts to analyse Drone-Rocket-Missile force of major nations globally, contextualise it as per Indian requirements and recommends suggested model for the Indian Rocket Force (IRF).

Keywords: Integrated Rocket Force, Artillery Divisions, 21st Century Warfare, Non-Contact-Kinetic Warfare, Drone-Rocket-Missile Force

Introduction

On September 2021, while the Indian Armed Forces and PLA were facing each other in a protracted standoff post Galwan incident, Late Gen Bipin Rawat, the then Chief of Defence Staff, stated that India was looking at creating a Rocket Force (Rawat, B. 2021). Subsequently, Pralay missile was tested twice by India on 22-23 December 2021, showcasing precision strike range of 400-500 kilometers. This missile coupled with already developed BrahMos supersonic cruise missile (300-800 Km) and extended range indigenous Pinaka rockets (45-120 Km) ignited debate of and Integrated Rocket Force for India as they were largely able to bridge the existing gap between conventional

artillery (30 - 40 Km range) and long-range ballistic missiles viz. Prithvi and Agni series (Bommakanti, K. 2023).

Operation Sindoor, in May 2025, proved to be a litmus test for indigenously developed rockets and missiles in Non-Contact-Kinetic domain. Missiles such as the BrahMos were employed jointly by all three services which revealed gaps in Pakistan's and, by extension, China's air defence systems. In addition, there was also offensive application of loitering munitions, drones as well as precision guided munition using 155mm ULH at longer ranges. The coordinated employment of all these vectors resulted in destruction of 07 terror bases exclusively by artillery. It was not achieved overnight but was a result of continuous training and doctrinal evolution.

Post Operation Sindoor, in the last one year, both India and Pakistan have done multiple changes in their employment doctrine, organisation, equipment profiling and training. The Indian Armed Forces have substantially enhanced firepower and ISR capability of artillery divisions as well as divisional artillery with induction of loitering munitions as well as correspondingly longer-range drones. DRDO has done three major tests (MIRV for Agni missile, SCRAMJET engine technology and Hypersonic missile development) in last one year which are going to be a game changer in India's missile capability. Pakistan also inducted loitering munitions at a scale, however, the most striking change was creation of the Army Rocket Forces Command (ARFC) directly under the office of the Chief of Defence Forces (CDF), headed by a Lt Gen rank officer (The Express Tribune, 2025). In the last one year, Pakistan has successfully launched 06 earth observation satellites for persistent ISR and tested Fatah-IV missile upto 800 km range under ARFC. This race to develop recce-strike complex on both sides has rekindled the debate of a Rocket Force for India, however, its exact structure is yet to be finalised (IDRW, 2026).

Why India needs Rocket Force?

- **Geography.** India has peculiar geography with rugged mountains in North, expansive deserts and manmade obstacles in the West, and jungles in the East. In the maritime littoral, India is straddled by Arabian Sea and Bay of Bengal. Trade between Europe/ Middle East and South East/ East Asia naturally passes through the Indian Ocean which is by default dominated by India. These expansive oceans and rugged land borders are required to be continuously kept under surveillance and acts upon whenever required. Recently, drones and missiles have proved to be potent weapons to achieve desired effects with reduced cost vis-a-vis big military platforms.
- **Turbulent Neighbourhood.** It seems that geography favours India, however, still the security situation in Indian subcontinent is precarious. This can be largely attributable to India's turbulent neighbourhood dominated by communist China with superpower ambitions and failed state Pakistan

waging self-assumed civilisational conflict with India. In the last one decade, there have been two major standoffs with China (Doklam 2017 and Galwan 2020) and 03 major conflict scenarios with Pakistan (Uri 2016, Pulwama-Balakot 2019 and Operation Sindoor 2025). In such an unstable neighbourhood, India cannot afford waiting to develop military capability required for the next conflict which would be characterised by compressed decision making and faster escalation. In such a scenario, Rocket Force offers suitable option to dominate the escalation ladder (Sharma, R. 2023).

- **Sino-Pak Collusivity.** India's security scenario has one historical constant i.e. assured Sino-Pak collusivity which was quite evident during Operation Sindoor. China has gradually become a major arms exporter for Pakistan overtaking USA (CSIS, 2026). It was clear in Operation Sindoor that Pakistan was getting battlefield visibility through Chinese satellites and targeting India using Bediou navigation system (China) {CSIS, 2026} which was guiding Turkish origin drones and Chinese made missiles fired by Pakistani soldiers. Post Operation Sindoor, Pakistan has realised the futility of nuclear sabre rattling and therefore, started focussing on conventional military prowess with Chinese assistance. In such a scenario, India needs to develop robust military capability dominated by drone missile firepower and quick decision making.

- **Changing Character of War.** Ongoing global conflicts has brought to the fore ever evolving character of 21st century warfare dominated by mass employments of rockets, missiles and drones. En masse crude rockets employed by Hamas in Operation Al Aqsa Flood on 07 October 2023 defeated five layered exquisite Iron Dome air defence of Israel, conversely, sophisticated drones and missiles supported by Chinese space capability used by Iran defeated sophisticated US technology. Russia and Ukraine are exchanging drones-missiles everyday targeting civilian lives as well as infrastructure. Drones and missiles are extensively being used as tool of coercion, deterrence, strategic as well as political messaging. Strait of Hormuz has been blocked by IRGC Navy through coordinated employment of drones, missiles, rockets and fast attack patrol crafts. India needs to contextualise these lessons from Indian security perspective and accordingly plan force development and employment doctrine.

- **Doctrinal Transformation.** Post Uri Surgical strikes (2016), India is gradually transitioning from Strategic Restraint to Strategic Assertion. Balakote (2019) was a step ahead wherein deep air incursions were made in Line of Control sector using air power. Operation Sindoor crossed all boundaries wherein sanctity of the IB was also violated with strikes as deep as Bahawalpur and Muridke. Space for conventional operations was created below the threshold of nuclear escalation

with employment of rockets, missiles, drones and loitering munitions. PM Modi's announcement of considering every terrorist attack emanated from Pakistan as 'an act of war' has further stamped policy of strategic assertion. In this kind of scenario, it's imperative for India to develop an integrated architecture for coordinated employment of these kinetic vectors. It should be aimed to achieve unity of effort and command among all three services.

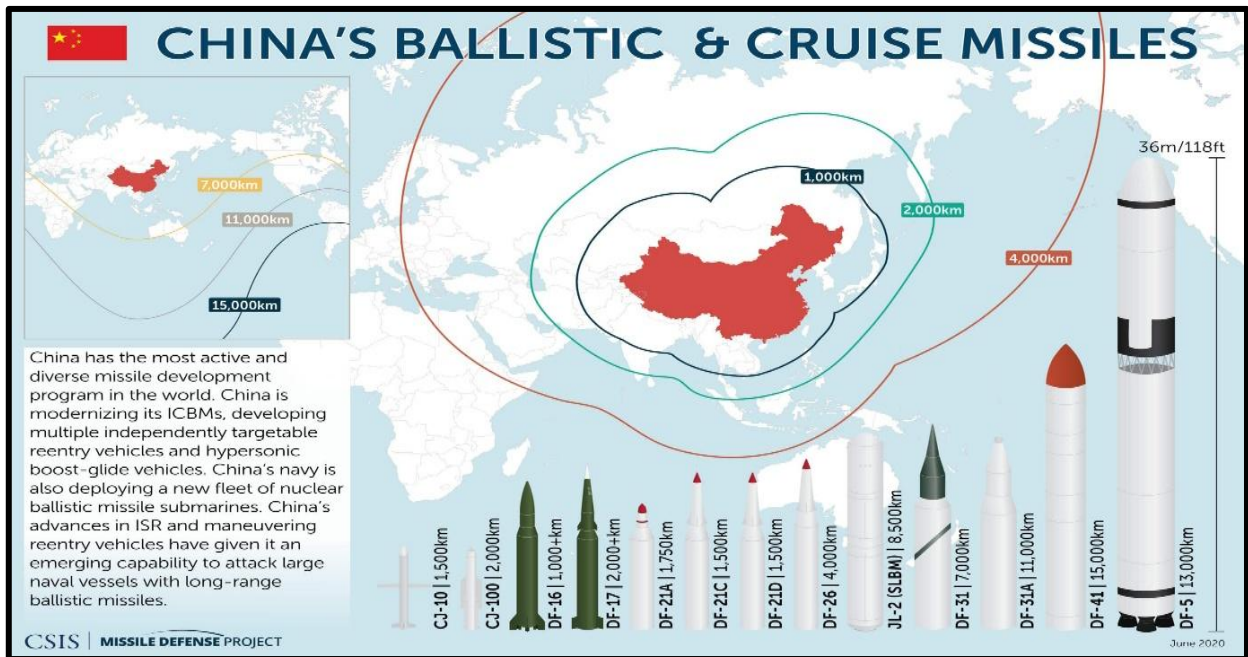
- **Aatmnirbharta in Defence.** One distinct lesson learnt from global conflicts and own experiences is that security of a nation cannot be hostage to capability provided by external powers. Imported technology is always conditional and guaranteed support is not assured in conflict scenario. Case in point is India's dependence on Russian military hardware which is under acute strain due to Russia-Ukraine conflict in its fifth consecutive year. Due to reliance on imported technology, the Indian Air Force is currently operating on depleted strength with fifth generation aircraft not in sight. However, rockets and missiles are the bright spots in Indian defence sector wherein adequate indigenous capability and technology exists. Pinaka rockets, BrahMos missiles and Akash missile systems form part of major defence exports of India. India's drone manufacturing sector is also moving at a fast pace with major contribution of the private sector. Therefore, it's logical that India should build upon its existing strength i.e. rockets, missiles and drones by creating a rocket force.

Global Rocket Forces: Comparative Analysis

People Liberations Army Rocket Force (PLARF)

In June 2026, footage was released by Chinese state media marking the 60th anniversary of the PLARF showcasing DF-17 hypersonic missile units taking part for the first time. The PLARF is a separate service branch of the People's Liberation Army, directly subordinate to the Central Military Commission and ultimately reporting to its chairman with operational control exercised through the Joint Staff Department. It is the largest ground-based missile force in the world, with over 2,200 conventionally armed ballistic and cruise missiles and enough anti-ship missiles with enough firepower to dominate US forces in South China Sea (Center for Strategic and International Studies, n.d.) . The missions of PLARF includes strategic deterrence, suppression of enemy air defences, and anti-access/ area denial operations (A2/AD).

Figure 1: PLA RF Missile Arsenal



Source: <https://missilethreat.csis.org/country/china/>

Strategic Rocket Forces of Russia (RVSN)

Established in the year 1959, RVSN was the primary Soviet force for delivering nuclear strikes which persisted even after the USSR's dissolution. It is a separate service branch of the Russian Armed Forces, subordinate to the Ministry of Defence and ultimately reports to the President as Supreme Commander-in-Chief with operational control exercised through the General Staff. It operates the land-based ballistic missiles that form the ground component of Russia's nuclear triad (CSIS, 2026). The mission of RVSN includes strategic nuclear deterrence, and anti-access area denial operations, ensuring secure second-strike capability as the backbone of Russia's nuclear triad.

Complementary strategic forces within Russia includes the Russian Aerospace Forces' Long-Range Aviation and the Russian Navy's ballistic missile submarines. All three completes the nuclear triad for Russia.

Figure 2: Russia's RVSN Missile Arsenal



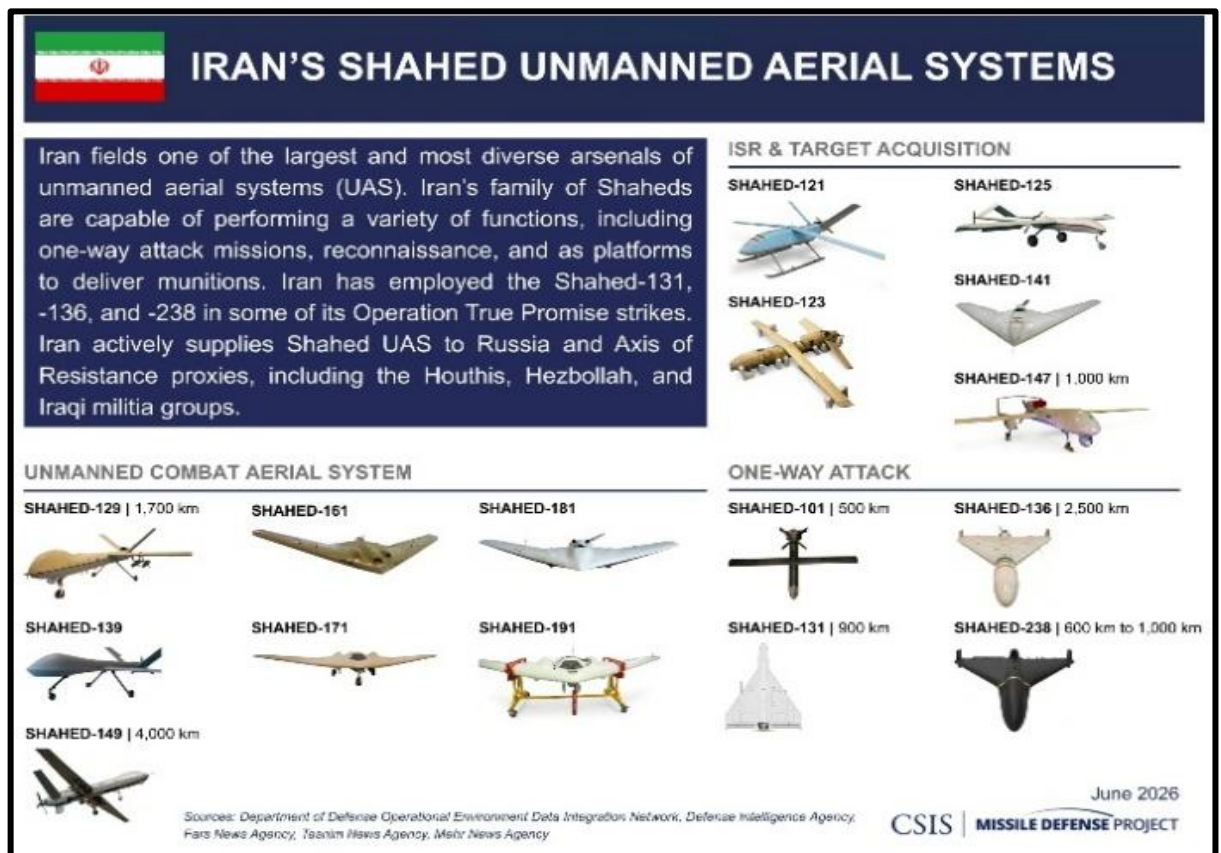
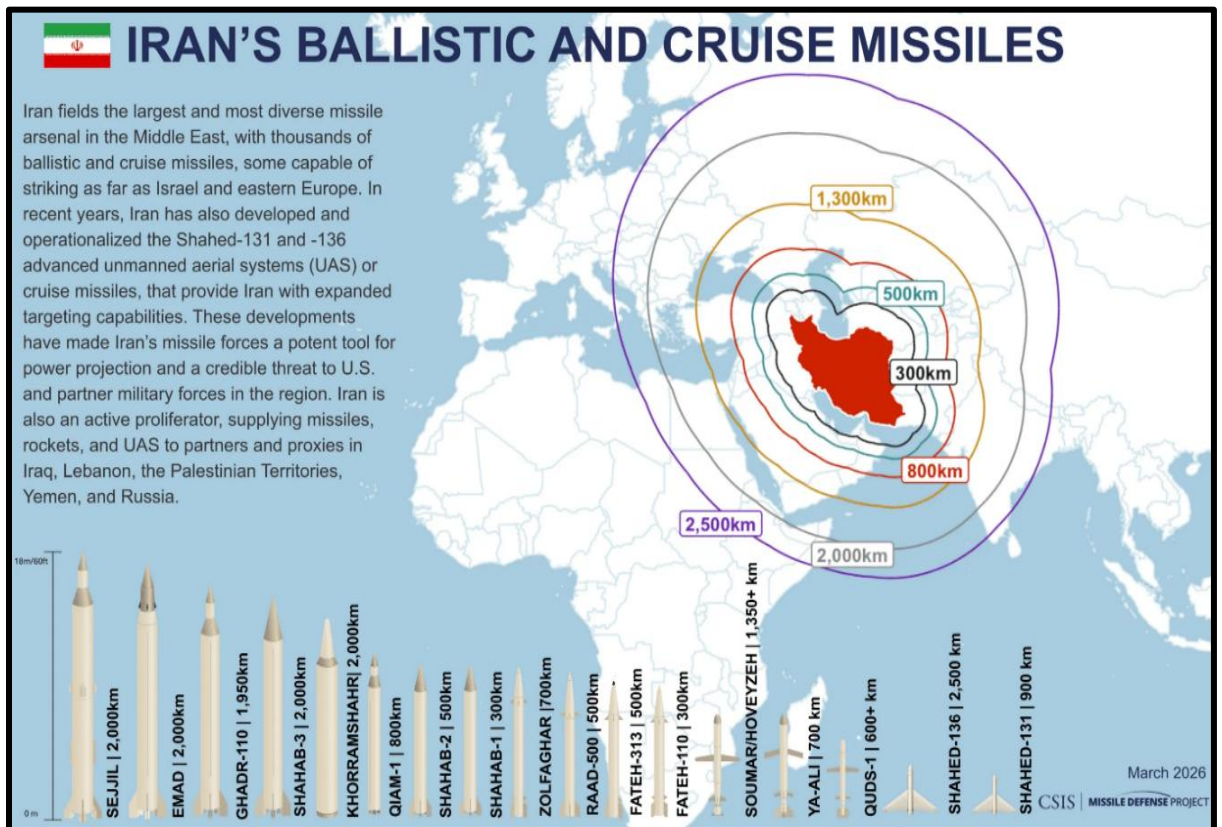
Source: <https://missilethreat.csis.org/country/russia/>

Iran's Aerospace Force

Iran's development of its missile program, despite the western sanctions, is largely driven by its awareness of their devastating effects witnessed during the Iran-Iraq war in the 1980s wherein Iraqi forces bombarded Iranian cities with Soviet Scud missiles. Established in 2009 by merging existing missile and air defence units, the Aerospace Force is the primary arm of Iran's Islamic Revolutionary Guard Corps (IRGC) responsible for missile (Ballistic as well as Cruise) operations, military drone program and space capability. It is a separate branch within the IRGC, subordinate to the Supreme Leader as Commander-in-Chief, with operational control exercised through the IRGC General Staff. Its missions include strategic deterrence, suppression of enemy air defenses, and anti-access/area denial operations across the Persian Gulf and wider Middle East (CSIS, 2026).

Iran possesses the largest and most diverse missile arsenal in the Middle East, with an estimated 2,500 ballistic missiles and 3,500 drones /cruise missiles at the start of US-Iran conflict in year 2026. Iran's dispersed manufacturing network spans dozens of facilities, many underground or hardened.

Figure 3: Iran's Missile & Drone Arsenal



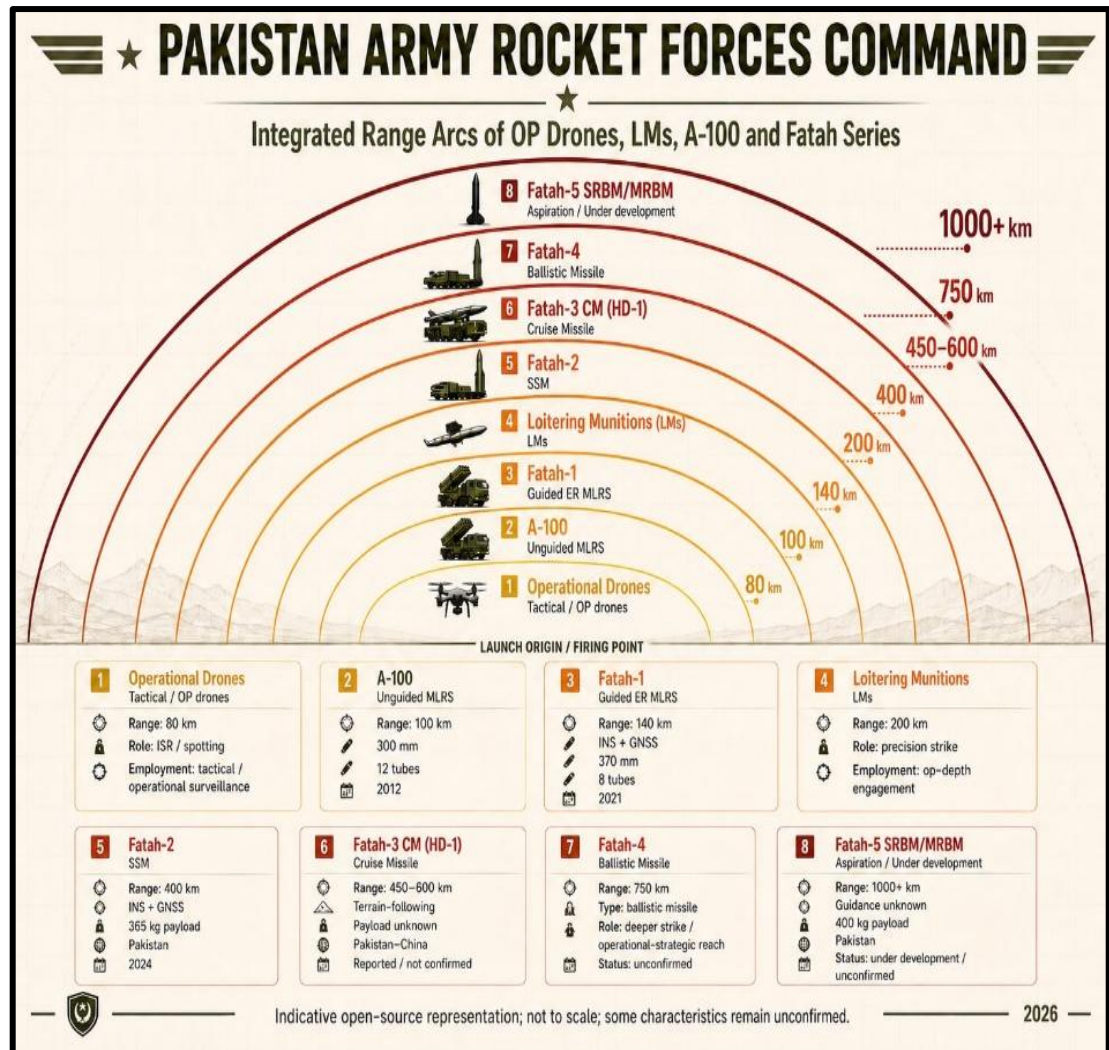
Source: <https://missilethreat.csis.org/country/iran/>

Army Rocket Forces Command (ARFC) of Pakistan

During Operation Sindoor, Pakistan fell extremely short of conventional response to India's deep manned/ unmanned strikes due to lack of integrated structure of its missiles and rockets. The Pakistan Army Strategic Forces Command existed since long; however, Pakistan could not utilise as its four declared nuclear threshold conditions (large scale military incursion, comprehensive military defeat, economic strangulation and total political destabilisation) were not breached. Post Operation Sindoor, Pakistan perceived that India was able to create sub-nuclear conventional space for conflict and Pakistan was not having adequate capability to counter it. Therefore, it announced creation of the Army Rocket Force Command (ARFC) directly under the Chief of Defence Forces (CDF) modelled largely on China's People's Liberation Army Rocket Force (PLARF) but with only conventional missiles and rockets upto operational depth. To develop capacities, Pakistan tested Fatah series missiles upto range of 750 km in year 2025 as well as first half of 2026. They have also declared development of Fatah V MRBM with range of 1000 km+ giving them capability to strike deep inside India. The mission of ARFC is likely to be conventional strategic deterrence, deep precision strikes and anti-access/ area denial operations, however, its capabilities as on today is limited in terms of vectors as well as support ecosystem.

The ARFC consolidates Pakistan's conventional missile arsenal in addition to drones and rockets, and is commanded by a three-star general which displays the importance attached to this force (South Asia Times, 2025). The current ARFC commander, Lt Gen Nauman Zakaria represented Pakistan in Shangri La dialogue held in May 2026 at Singapore. The same event was last attended in year 2025 by Chairman of Joint chief of staff committee of Pakistan – Lt Gen S S Mirza, who was four star general. It reflects the importance attached by Pakistan to ARFC and strategic signalling (The Express Tribune, 2025). During his speech at Shangri La dialogue, Lt Gen Nauman Zakaria, cautioned that future conflicts in South Asia will be decided in seconds rather than minutes due to advanced missile capabilities. He also highlighted the compressed decision timelines facing nuclear-armed neighbours with limited strategic depth.

Figure 4: Pakistan's ARFC Rockets and Drone Arsenal



Source: Prepared by the Author

Comparative Analysis

The major global rocket forces which have been discussed above are compared on the basis of their role, task, command & control architecture and organisational hierarchy (Ransing, M. 2025). The same is tabulated as under:-

Table 1: Comparison of Major Global Rocket Forces

Factor	PLA Rocket Force (PLARF)	Russia Strategic Rocket Forces (RVSN)	IRGC Aerospace Force (Iran)	Pakistan Army Rocket Forces Command (ARFC) (South Asia Times, 2025)
Role	Hybrid role - nuclear deterrence as well as conventional precision strikes	Purely nuclear deterrence (land-based ballistic missiles)	Strategic missile, drone and space force	Purely conventional for strategic deterrence
Tasks	Strategic deterrence Suppression of enemy air defences Anti access Area denial	Strategic nuclear deterrence Anti access/ Area denial Second strike capability	Strategic deterrence Suppression of enemy air defences Anti access/ Area denial	Strategic deterrence Deep precision strikes Anti access/ Area denial
Organisation Hierarchy	Full PLA service branch (equal to Army, Navy, Air Force); ~120,000 personnel; structured into missile bases (51–68)	Separate combat arm of Russian Armed Forces; ~50,000 personnel; organized into rocket armies	IRGC branch (since 2009); ~15,000 personnel; brigades by missile type/geography; underground “missile cities”	Separate force under development since Aug 2025. Likely Save and Raise model integrating resources of Artillery divisions, Pak unmanned force and ISR/ EW groups
Command and Control	Directly under Central Military Commission (CMC); dual authorisation for nuclear launch; warheads stored separately at Base 67	Reports to Russian President (Supreme Commander-in-Chief); centralised under Ministry of Defence; strict nuclear launch protocols	Reports directly to Supreme Leader; bypasses civilian government; delegated launch authority to Brigade commanders in wartime	Directly under (CDS) without civilian oversight.

Note. All Rocket Forces are centrally controlled with execution decentralised through missile Groups/ Brigades.

India's Rocket Force: What to Expect?

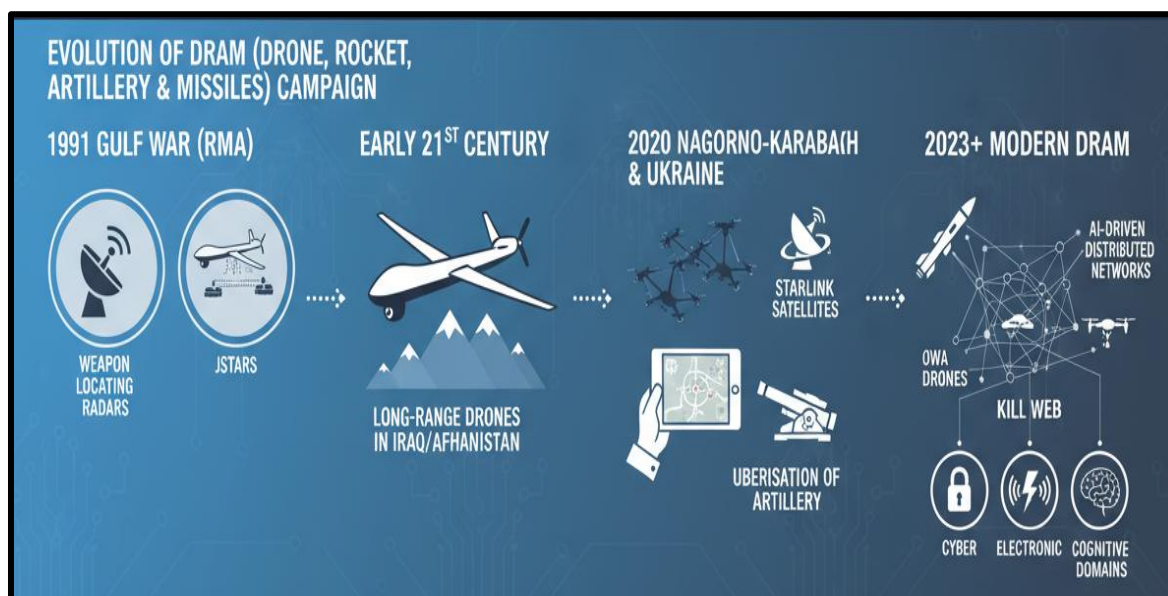
DRAM (Drone, Rocket, Artillery and Missiles) Landscape. Firepower and ISR has always been two important pillars of faster execution of the OODA loop (Observe by ISR and Act by firepower).

World over armed forces have focused upon achieving faster Observe-Act loop, also called 'sensor-shooter integration'. Over time, ISR and firepower kitty is ever growing with new equipment and technology. The Gulf War of 1991 brought revolution in military affairs with successful validation of weapon locating radars, autonomous artillery gun system, precision munitions & joint surveillance and target attack systems (JSTARS). Further, Afghanistan and Iraq campaign at the dawn of 21st century brought long range drones to the battle field for ISR as well as precision targeting, but at a small scale.

Nagorno- Karabakh conflict of 2020 was a watershed moment wherein large-scale employment of Turkish drones brought victory for Azerbaijan in a short intense period. Later in Russia-Ukraine conflict, the variety of drones were used in conjunction with long range artillery as well as multi- barrel rocket launchers. Ukrainians were also able to automate their sensor-shooter integration using an application colloquially known as "Uberisation of Artillery" riding on Starlink communication. It revolutionised the kill chain mechanism by reducing timelines from 'observe to act' to single digit minutes.

From the year 2023 onwards, in the Middle East crisis, it is increasing observed that missiles have joined this structure at scale to make it a complete DRAM campaign. The recent conflicts have demonstrated a different operational paradigm - one defined by long-range missile strikes and OWA drones, swarms, distributed launch networks, and AI based automated kill chains to obviate bad optics of losing human life and big platforms. Therefore, greater emphasis is being laid on prosecution of DRAM (Drone, rockets, artillery and missiles) campaign to carry out deep precision strikes on high value targets at minimum cost with maximum effect. Such DRAM campaigns are well coordinated in respective theatres supported by invisible domains viz. cyber, electronic and cognitive. ISR is a vital component of DRAM campaign which requires to be seamless integration of satellites, aerial assets, ground assets as well as open-source intelligence. Artificial intelligence is driving these kill webs by quick creation of targets and engagement (Nadimi, F. 2026).

Figure 5: Evolution of DRAM Warfare



Source: Prepared by the Author

Indian DRAM Scenario. Operation Sindoor was a test bed for Indian DRAM campaign over a short period of 88 hours. Opening salvo of Indian DRAM was opened by artillery (long range autonomous gun system with precision munitions), loitering munitions, BrahMos cruise missile and precision stand off engagement by Air Force. Pakistan later retaliated by using Fatah MLRS, loitering munitions, swarm drones and mass employment of cheap Turkish Songar drones (The Express Tribune, 2025). Certain lessons learnt in this short intense engagement are as under: -

- **First**, non-contact-kinetic domain will have primacy which will be led rockets, missiles and drones. Manned air assets have limited survivability.
- **Second**, faster decisions will be required to be made. Too much of centralisation may lead to loss of fleeting opportunities. Automated kill web based on AI, military autonomy and algorithmic warfare cannot wait.
- **Third**, static firepower assets will not survive the first contact. Shoot and Scoot will be new normal.
- **Fourth**, invisible domains (cyber, electronic and cognitive) are no more force multipliers but the essentials.
- **Fifth**, theatre based integrated geographic capacities needs to be created to endure and sustain prolonged conflict in future.

Role for the Indian Rocket Force

- **Strategic Deterrence.** India, being a responsible nuclear power, has stated policy of “No first use”; however, we are facing belligerent neighbours especially Pakistan which is

irrational and has no qualms in openly playing the nuclear card. Time and again, irresponsible statements echoes from Pakistan military as well as political hierarchy threatening India as well as global stability. Post Operation Sindoor, the nuclear bluff of Pakistan has been called out and therefore, Pakistan has started rapidly building up conventional capability with foreign assistance. On the Northern front, Chinese PLARF is building new capacities with stated DRAM doctrine (Drone, rocket, artillery and missile) campaign in case of conflict with India. In such a hostile evolving neighbourhood, India cannot be sitting on the sidelines with only Strategic Forces Command (SFC) which may not get a chance to perform due to nuclear escalation threat. Therefore, a Rocket Force, once created, will act as strategic deterrence (do not act or face unacceptable costs) without reaching nuclear escalation (Sharma, R. 2023).

- **Politico-Military tool of Coercion.** US-Iran conflict has shown the world as how power asymmetry can be achieved investing in ballistic missiles and drones backed up by robust ISR. US could never fathom before the commencement of war, that a 33 km wide waterway i.e. the Strait of Hormuz will be effectively blocked by IRGC which will offer immense political leverage to Iranian regime (Akbarzadeh, S. 2024). Also, Iranian targeting of civil-military assets in neighbouring gulf nations using one way attack Shahed drones was justified politically by Iranian regime by careful orchestration of narrative (Nadimi, F. 2026). Similarly in North Korea as well as Taiwan straits, the missiles are increasingly being used as political tool of coercion to generate pressure on adversaries. Therefore, rocket force can act as a tool available with political dispensation to coerce adversaries in order to change the belligerent behaviour, thus avoiding conflicts.

- **Deep Precision Strikes.** Mass Vs Precision debate is gaining momentum globally with every new war breaking out. Countries are developing new technologies to achieve sub metre accuracy on the targets with varied platforms i.e. drones, loitering munitions, aircrafts and missiles. It has been evident in recent skirmishes between India and Pakistan since 2016 that commencement of conflict will be in non contact-kinetic domain, the length of which cannot be predicted. In this kind of scenario, precision strikes at varied ranges and platforms will be required. Sustained DRAM campaign with precision capability may obviate the need to launch ground offensive or facilitate in early capture of territory with minimum casualties. Such deep precision strikes can only be achieved with an organisation like Rocket Force integrating all long-range assets of all three services.

- **Firepower Accretion.** In recent conflicts, it has been realised that firepower will never go out of the fashion despite technological advancements in invisible domains (cyber, EW, cognitive) and development of drones/ LMs with precision capability. Dumb munition of artillery will always remain relevant as it cannot be jammed and offers good accuracy if target acquisition is accurate. During conventional operations, artillery resources will always be inadequate and field commanders will demand for additional resources for assured break in by ground forces. Currently, this shortage is made up by artillery divisions which are organised for this task. Rocket force may also have to undertake this task which will relatively be easier due to longer ranges of artillery guns and rockets.
- **Manoeuvre by Firepower.** Due to widespread employment of missiles, rockets, drones and artillery in global conflicts, it is being increasingly realised that the erstwhile concept of firepower supporting manoeuvre by ground forces (Infantry and Mechanised forces) may require a review. Politico-military planners are discussing worldwide the utility of big platforms and massed infantry assaults in an increasing narrative-based warfare wherein optics of human and platform casualty are too bad to manage. However, gradually firepower is becoming an indispensable resource with enhanced ranges, precision and automated kill webs. In such kind of scenario, rocket force may become a game changer to achieve manoeuvre by firepower to quickly achieve politico-military objectives.

India's Evolving Artillery Divisions and Firepower

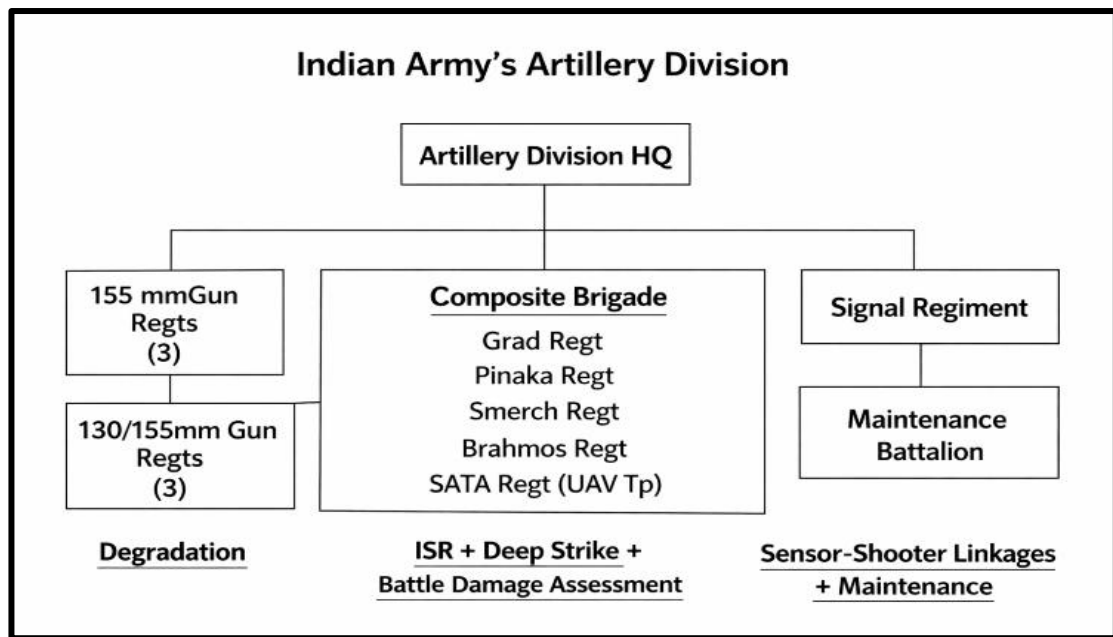
Artillery Divisions

Evolution. At the dawn of the 21st century, while learning hard lessons from Kargil conflict and Operation Parakram, the Indian Army raised its first Artillery Division with long range guns and rockets supported by integral ground as well as aerial surveillance assets. Later, two more such divisions were raised catering for requirement of large geographic spread of Western theatre facing Pakistan. Post Galwan in year 2020, the Indian Army executed force rebalancing wherein one of the artillery division was allotted to Northern front facing China. Though the artillery divisions were initially raised as theatre resource, however, gradually its role was reduced to support Strike Corps operations due to non-availability of adequate rockets and missile as well as drones. Further, the Israeli drones (Searchers and Herons) available with the Artillery Division were re-allocated to Army Aviation Corps, thus, detaching firepower from corresponding ISR assets.

Organisation. The organisation of Artillery Division was customised to create Recce-Strike complex with two long range Gun Brigades and one Composite Brigade (Rockets + Missiles + ISR assets)

supported by a Signal regiment and requisite logistic elements. Sensor to shooter integration was thus inherent in the organisation of these Divisions. The staff structure in Division Headquarters is designed to prosecute deep strikes inside enemy territory over a longer duration before the contact battle commences. Therefore, the artillery divisions are trained to carry out target selection, target weapon matching and continuous review of theatre target lists in coordination with the air force. Once contact battle starts, the artillery divisions are equipped to provide assured break in by Strike Corps.

Figure 6: Organisation of Artillery Division



Source: Prepared by the Author

Artillery Divisions Post Operation Sindoor. The Indian Army brought sweeping changes post Operation Sindoor in last one year with primary focus on equipping all arms with drones and loitering munitions at scale. Infantry Battalions are given Ashni Platoons (Short range drones and counter drone systems), Armored Regiments now have Shaurya Squadrons (Swarms and Loitering munitions), Divisional Artillery Brigades given Divyastra Batteries (Operational range loitering munitions and drones) and recently Baaz Battalions (Operational range drones) raised as part of Army Aviation Corps (Banerjee, A. 2026).

Most profound change has been observed in re-organisation of Artillery Divisions by equipping them with operational and strategic loitering munitions. A new Drone Regiment i.e. Shaktibaan has been created on “Save and Raise” model in each Artillery Division. The Surveillance and Target Acquisition (SATA) Regiments have been equipped with long range drones for ISR as well as loitering munitions. The Composite Artillery Brigades have been rechristened as RISAT Brigades which has both ISR and long-range firepower (Rockets and Missiles) under it. Therefore, the Artillery Divisions

have been further strengthened to execute long range DRAM campaign deep inside the enemy territory.

Pillars of India's Firepower. Integrated guided missile development programme (IGMDP), commenced in year 1983, has proved to be one of the most successful programmes of India which is not only enhancing security but also boosting defence exports. Recent breakthroughs made in missile technology includes hypersonic missiles, scramjet technology and multiple independent re-entry vehicles (MIRV). Following are the pillars of firepower for India's Rocket Force:-

- **Pinaka Multi-Barrel Rocket Launcher (MBRL):** Indigenously developed with an extended range of up to 90 km, Pinaka is already in service and also forms major part of our defence exports. Research is underway to inject Ramjet Propulsion technology which will enhance range further to 250 Km (Kunde, R. 2026).
- **Pralay Missile:** A short-range ballistic missile with a striking range of 150–500 kilometres, Pralay was specifically developed by DRDO for precision strikes against fortified enemy installations. Its canister-based launch system ensures rapid deployment and operational mobility (Bommakanti, K. 2023).
- **BM-04 Missile:** It can engage targets located at a maximum distance of up to 1,500 km, with a 500 kg conventional warhead, and has a 30-meter circular error probability (CEP). The BM-04 is canisterised, which allows the warheads to be mated with the delivery systems in advance, thus reducing the time required to fire the projectile (Ransing, M. 2025).
- **BrahMos Supersonic Cruise Missile:** Developed jointly with Russia, BrahMos remains the crown jewel with supersonic speed and ranges nearing 800 km. It can be launched from land, sea, and air platforms and provides 10 meter accuracy which was witnessed in Operation Sindoor (IDRW, 2026).
- **Nirbhay Cruise Missile:** Subsonic cruise missile with a range of around 1,000–1,500 km, designed for terrain-hugging, low-altitude flight paths, significantly enhancing its stealth and survivability against enemy radars. Nirbhay's role is strategic-intended for deep, strategic strikes against enemy infrastructure and command (IDRW, 2026).
- **Long Range Anti-Ship Missile (LRAShM):** Currently under rapid development, this hypersonic missile aims for blistering speeds up to Mach 10 with ranges exceeding 1,500 kilometres potentially reshaping naval warfare doctrine (IDRW, 2026).

Figure 7: India's Pillars of Firepower for Rocket Force



Source: Prepared by the Author

How Artillery Divisions Can Be Customised into the Rocket Force?

As evident from the arguments above, artillery divisions of the Indian Army provides basic foundation for the requirement of a Rocket Force due to its already matured command and control architecture, employment doctrine and equipment profile (Deb, S.2021). Certain modifications are required to be carried out to transform it into a potent non-contact-kinetic instrument which can be effectively used below the nuclear threshold to achieve politico-military objectives.

- Integrated Theatre Architecture.** The Indian Armed Forces are on path of transformation with long awaited Integrated Theatre Command already in the offing. In each theatre command, a Rocket Division can be created by integrating long range Firepower and ISR resources of all three services i.e. ballistic and cruise missiles, rockets and long-range drones as well as loitering munitions. For example, newly formed Baaz Battalions of the Army Aviation Corps may be integrated with Rocket Division. In order to transform it into a truly multi-domain force, Electronic Warfare Brigades and Cyber resources can also be integrated for optimum utilisation of all resources at disposal of the Theatre Commander.
- Distributed Lethality.** India's vast continental as well as maritime geography demands customised Rocket Division catering for specific needs of theatre as well as terrain. Iranian 'Mosaic Defence Doctrine' has highlighted need for distributed networks which can operate independently in contingency and survive a prolonged conflict. Therefore, there is a need to create terrain specific Rocket Force formations equipped to perform in that particular

geography. For example, certain drones and rockets may not be able to operate in mountains but very effective in plains. Accordingly, Rocket Force elements can be customised. In order to enhance survivability and maintain surprise, there is also a need to create underground dispersed operational as well as logistics infrastructure enmeshed with civil elements.

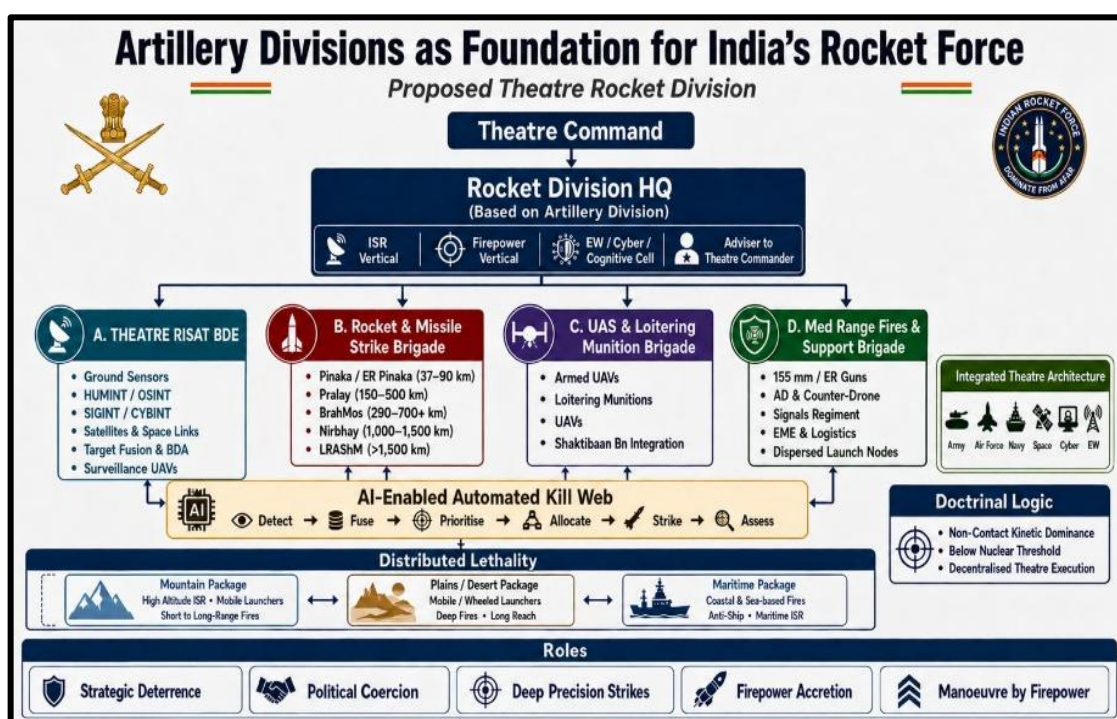
- **Automated Kill Web.** AI-enabled target identification, weapons allocation, and kill-chain acceleration in global conflicts has attracted attention of military planners. Widespread proliferation of AI based automated kill webs has been observed i.e. Gospel & Lavender by Israel, Project Maven based on Claude AI by USA and Ukraine's Delta (Nadimi, F. 2026). These softwares have reduced detection to engagement timelines from hours to single digit minutes for thousands of targets per day. The Indian Rocket Divisions needs to be equipped with AI based automated kill webs because any future conflicts will have dangerously compressed decision-making timelines and any delay will prove fatal. There are multiple automated softwares exists in Indian Artillery which needs to be integrated and be made more responsive and user friendly. AI models take long time to develop, case in point is Ukraine, which has since 2022, aggregated two million hours of drone footage, equivalent to approximately 228 years of continuous observation to train AI models on combat tactics and target recognition. Operation Sindoor should not be taken as baseline for any future engagement which would be more intense, faster and violent.
- **Integrated ISR Structures.** The gamut of ISR has enhanced with the advent of new technologies and its tactical application. From a civilian holding smartphone which can click photo/ video to a satellite in GEO/ LEO orbit – everything and in any form can give a vital intelligence input for military operations. Firepower will only be effective, if its supported by a robust integrated ISR structure and faster decision-making tools. Therefore, there is a need to integrate all ISR elements (ground troops, ground sensors, human intelligence, signal and cyber intelligence, drones, satellites) in a theatre with automated analysis to translate raw information pieces into credible actionable intelligence inputs. Case in point is Project Maven (Joint project of Palantir and Pentagon), which fuses intelligence from drones, satellites, ground sources, radar, and thermal imaging, presenting commanders with AI generated targeting options that improve with each engagement (Nadimi, F. 2026). Similarly, Ukraine's Delta system uses AI to help with target selection, faster multi- sensor data analysis and decision making.
- **Staff Re-Organisation.** Currently, the Artillery Divisions are organised to execute tactical and operational level targeting using guns, rockets and cruise missiles. There is a need

to transform them into truly multi-domain force by creating necessary staff structures. Two separate holistic staff verticals - ISR and Firepower, needs to be created in addition to fusion of electronic warfare, cyber and cognitive domain experts. There may also be a need to create a dedicated senior staff appointment at Theater Command Headquarters as staff adviser to Theater commander on employment of Rocket Division.

- **Doctrinal Review.** Significant lessons which has been learnt from Operation Sindoor as well as global conflicts is that any future war will have primacy of non-contact-kinetic domain because of increasing hesitation to accept large body bags expected in contact battles. Therefore, there is a need to review existing doctrines of employment of Artillery Divisions so as to dominate the escalation ladder without breaching the nuclear threshold. Probably in next such engagement, such operations are not controlled centrally from Delhi but decentralised for execution by Theatre Commanders. The current doctrine does not support such kind of application and therefore, needs to reviewed and further validated through field exercises.

- **Military-Industrial Complex.** Recent US-Iran conflict showed that the United States expended an estimated 150 of its THAAD rounds, out to total 190-290. At their purchasing rate of 12 new THAAD interceptors per fiscal year, replacing a single month of conflict consumption will require more than 12.5 years of uninterrupted industrial output. Contrary to this, Iran was able to sustain better due to well protected underground missile and drone manufacturing facilities which could produce at scale. Russia's escalating campaign of mass drone strikes, now average between 3,000 - 5,000 long-range attack drones per month, which is countered by Ukraine's cheap, mass-produced, rapidly adaptable interceptor drones(Nadimi, F. 2026) . It is only possible with mass manufacturing capability. There is a deep lesson in this related to India's Rocket Force - indigenous capability exists in both public and private sector, however, there is a need to achieve complementarily at scale to sustain prolonged conflicts in future. The military industrial complex needs to be created for the same.

Figure 8: Proposed Rocket Force Division at Theatre Level



Source: Prepared by the Author

Conclusion

Multiple stand-offs/ skirmishes in last one decade has shown us that ‘peace is fragile’, ‘conflict trigger is easy’ and ‘escalation is faster but its control is difficult’. Drone-missile-rockets will be unresistingly employed in Non-Contact-Kinetic domain which may or may not transition into contact battle. The new baseline set during Operation Sindoor will be the start point in any future conflict. For Indian security planners, it is time to evolve an organisation which can swiftly adapt, organise, equip, train and perform in any such future warfare. Artillery Divisions, as argued in this article, are suitable launch pads to create a future Rocket Force and therefore, temptation to create new structures should be resisted.

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