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Abstract

Operation SINDOOR by the Indian Armed Forces, showcased the country's growing focus on integrated and technology-enabled warfare. The shift from traditional, close combat to a battlespace characterised by precision strikes, cyber tools, and stand-off engagements is now obvious. For tactical commanders, this change has made the conduct of operations far more complex, requiring decisions that account for kinetic action alongside cyber, electronic, and information-related challenges. The idea of non-contact warfare carries weight for the Indian Army. Insights from Operation SINDOOR and other modern conflicts point to the same lesson. New domains are shaping the battlefield. Unmanned aerial systems, electronic warfare, and the fight for information are no longer peripheral. They are the central domains, today. Yet training, doctrine, and institutions have not fully kept pace. The Army aims to be network-centric, but gaps remain.

Bridging these gaps will require more than the acquisition of advanced systems. The central requirement is to prepare and empower tactical commanders, from Captains to Colonels, with the flexibility, knowledge, and institutional backing to operate across multiple domains. Practical reforms in training and education, coupled with command philosophies that promote initiative and adaptability will provide them the ability to respond effectively in volatile operational environments. Strengthening this cadre of mid-level leaders is essential if the Indian Army is to succeed in the era of non-contact, multi-domain warfare.

Keywords: Operation SINDOOR, Non-contact warfare, Tactical leadership, Mid-level officers, Hybrid warfare, Indian Army Modernisation, Multi-domain operations, Drone & Counter UAS Systems, Electronic warfare (EW), Cyber threats, Military transformation, Leadership training

"In today's warfare, you cannot win with yesterday's weapon systems. Today's warfare has to be fought with tomorrow's technology."- General Anil Chauhan, CDS

Introduction

Warfare today is no longer tied to trenches or fixed frontlines. Cyber tools, drones, and real-time surveillance have reshaped the battlefield into a multi-layered, contactless space. For the Indian Army, which has long operated in terrain-driven and conventional settings, this marks a profound shift. The Chief of Army Staff, General Dwivedi, recently described future battlefields as places "where boots must share space with bots". Rather than relying solely on boots on the ground or direct firepower, modern operations increasingly involve tools that disrupt communications, deceive sensors, and exploit vulnerabilities without ever physically engaging the enemy. Operation SINDOOR illustrated this reality. It was a joint forces response that demonstrated India's recognition of this changing character of war.[1]

While such operations highlight the transformation of the Indian Armed Forces, they also reveal the demands placed on tactical commanders in this new setting. These officers, often responsible for sub-unit or unit-level choices, must now act on real-time intelligence, coordinate with electronic warfare and drone elements, and lead in highly networked environments. Yet training systems and command structures have not fully caught up with these requirements. This issue brief analyses the strategic and operational implications of non-contact warfare for the Indian Army's mid-level officers, drawing from the context of Operation SINDOOR.

Figure 1: Op SINDOOR; *Source: ADGPI*

Operation SINDOOR: A Glimpse into Future Warfighting

Launched on May 7, 2025, Operation SINDOOR was India's rapid military response to the Pahalgam terror attack that killed 26 civilians[2]. It brought together elements from the Army, Air Force, and Navy, underlining the shift toward integrated, tri-service operations.

The Indian Air Force played a leading role, conducting precision strikes on strategic targets deep within Pakistani territory. High-value assets like the Nur Khan and Rahimyar Khan air bases were targeted using long-range capabilities coordinated via the Integrated Air Command and Control System.[3] Support did not come from technology alone. A layered defence network covered these operations. Modern platforms such as the Akash surface-to-air missile system was employed alongside legacy weapons like the L-70. The mix of old and new underlined a force in transition, one drawing strength from both heritage and modernization[4].

Operation SINDOOR stood out for more than its use of firepower. What defined it was the integration of non-kinetic means alongside kinetic action. Unmanned aerial vehicles provided real-time surveillance, targeting data, and post-strike assessment. At the same time, counter-UAS units were employed to blunt hostile drones, a reminder that even the tactical airspace is now contested.

Beyond the strikes, information warfare became a battlefield in itself. Both India and Pakistan employed cyber tools, psychological campaigns, and electronic deception. The aim was to disrupt communications, sway public opinion, and secure psychological advantage without a direct clash[5]

Throughout the operation, tactical commanders had to stitch together these diverse elements in real time. While the technological tools enhanced situational awareness and lethality, their effective utilisation depended heavily on commanders' ability to lead hybrid teams, process ISR inputs, and make swift decisions. The lessons from the operation are clear – mid-level leaders need exposure and clarity to integrate digital tools with maneuver tactics. These insights highlight the crucial need for reforms in doctrine, leadership development, and technology integration at the tactical level, to adapt and evolve in order to exploit the full potential of emerging contactless warfare capabilities[6].

The Rise of Non-Contact Warfare

Warfare today extends well beyond line-of-sight encounters. Power is projected through precision fires, cyber interference, electronic warfare, and control of the information sphere. What was once theory has become practice. Non-contact warfare is now central to military planning and operational design[7].

Figure 2: Major Elements of NCW

Source: Infographic synthesized by author

Operation SINDOOR clearly demonstrated India's evolving capability to engage the enemy without direct combat. Indian forces struck critical targets from stand-off ranges, combining missile and air strikes with real-time intelligence gathered by drones. The effect was twofold: risk to soldiers on the ground was reduced, while the psychological and strategic impact on the adversary was maximized.

Information operations were just as critical as kinetic force. Both India and Pakistan ran psychological campaigns, engaged online propaganda, and spread misinformation. This underlined the rise of the “grey zone”, that contested space between peace and open conflict. In this arena, perception management, cyber deterrence, and media control serve as strategic weapons. From a doctrinal standpoint, India’s adversaries, particularly China has already embraced this approach. Its doctrine of “intelligentised warfare” embeds artificial intelligence, big data, and electronic disruption as tools for dominance. The aim is clear: build an edge in contactless warfare and extend it across the spectrum of conflict[8]. For India, matching this effort is not optional. It is necessary for deterrence and for maintaining balance in the region.

Yet, the shift to NCW is not without friction. The Indian military’s current structure is still largely optimized for conventional engagements. While the senior leadership may grasp the nature of the digital battlefield, this understanding thins out at lower levels. Mid-level commanders are left with the task of bridging old doctrines and new realities. They must adapt with limited resources, partial autonomy, and gaps in training. The burden on them is heavy, yet their role is decisive.

Implications for Mid-Level Commanders

This new era of warfare places far greater demands on the Indian Army’s mid-level leadership. Young Captains and Majors, along with experienced Lieutenant Colonels and Colonels, are now expected to lead complex operations that draw on both kinetic and non-kinetic means, often with limited direction and under high-pressure conditions.

- **Decision-Making in a Multi-Domain Context**. During Operation SINDOOR, Mid-level commanders were no longer limited to manoeuvring troops and coordinating fire support; they were also tasked with processing ISR feeds, liaising with cyber and air assets, and managing counter-UAS protocols in real time[9]. This level of responsibility demands more than tactical instinct. It calls for digital fluency, an ability to absorb inputs across domains, and quick decision-making under heavy operational stress.
- **Training and Institutional Preparedness**. The current training structure for Indian Army officers is robust in traditional leadership and fieldcraft. Officers commanding

at the tactical level are expected to exploit space-based surveillance, neutralise drone swarms, and maintain operational linkages without constant direction from senior headquarters. Meeting this expectation requires reform. Professional military institutions such as the Infantry School, the Army War College, and the Defence Services Staff College need revised curricula. Modules that provide exposure to networked operations, artificial intelligence–supported decision-making, and practical cross-domain integration would ensure officers are equipped to meet the challenges of modern battle.

- **Command Autonomy and Decentralisation**. Modern digital battlefields rarely allow the luxury of waiting on centralised chains of command. Operation SINDOOR exhibited this clearly. Wherever mid-level commanders were given space to act, outcomes improved. Empowered decision-making, backed by quick access to intelligence, allowed them to adapt faster than the adversary. To make this agility permanent, authority must be delegated deliberately. Rules of engagement for digital and psychological warfare need to be clarified. Tactical data fusion centres at brigade and battalion levels would further ensure that decision-making remains timely and well-informed.
- **Psychological and Ethical Strain**. The pressures of non-contact battle are not only technical but also human. The enemy may not be visible, yet officers and troops are constantly exposed to information attacks and digital manipulation[10]. Misinformation spreads quickly, eroding morale and confidence. Public opinion and political expectations can shift overnight, and commanders must manage the impact on their units while continuing the fight. On top of this, they face questions of ethics, particularly in the use of tools such as AI-enabled targeting. Leadership at this level demands resilience and clarity of judgement. It is not enough to master systems and processes. Mid-level officers, therefore must be adaptable under stress and firm in applying moral responsibility even in ambiguous conditions.

Advancing Preparedness: Lessons from Operation SINDOOR

Operation SINDOOR reinforced the adaptability and professionalism of India's forces while also offering clear lessons for future readiness. By showcasing strengths and identifying areas for enhancement, it has created momentum for more joint, technology-enabled, and multi-domain approaches to warfare. It has highlighted not only the strengths of current training systems but also areas where further emphasis can enhance effectiveness in future conflicts. Certain areas of development are as under: -

- **Legacy Foundations and Evolving Doctrinal Priorities**. The Indian Army's foundations lie in contact-based warfighting. Training has long centered on infantry, armour, and artillery maneuver, with doctrine shaped by conventional threats. This approach built strong core competencies, but it was grounded in a world where the enemy was visible and the battlefield largely physical. As warfare continues to evolve, marked by the increasing relevance of cyber operations, cognitive effects, and cross-domain coordination, there is a growing opportunity to adapt existing frameworks to incorporate these emerging domains[11]. The opportunity is to adapt rather than discard. Traditional strengths in maneuver and fieldcraft should continue, but they must be layered with digital proficiency and cross-domain understanding. Preparedness for both conventional and non-contact battle will allow the force to remain agile, resilient, and attuned to the demands of contemporary warfare.

- **Expanding Focus on Non-Contact Threats**. Premier institutions such as the Defence Services Staff College and the Army War College still hold deep expertise in conventional warfare. At the same time, they have started to expand. Modules now cover cyber denial, drone swarming, and space-based ISR. These are no longer supplementary subjects. With continued focus, they are moving into the core of the curriculum, giving tactical commanders the exposure needed for hybrid and decentralised battle. The trend is visible in the numbers. The grouped bar chart below illustrates the current variation between training time allocation and expected officer familiarity across key domains of warfare.[12] It clearly shows that

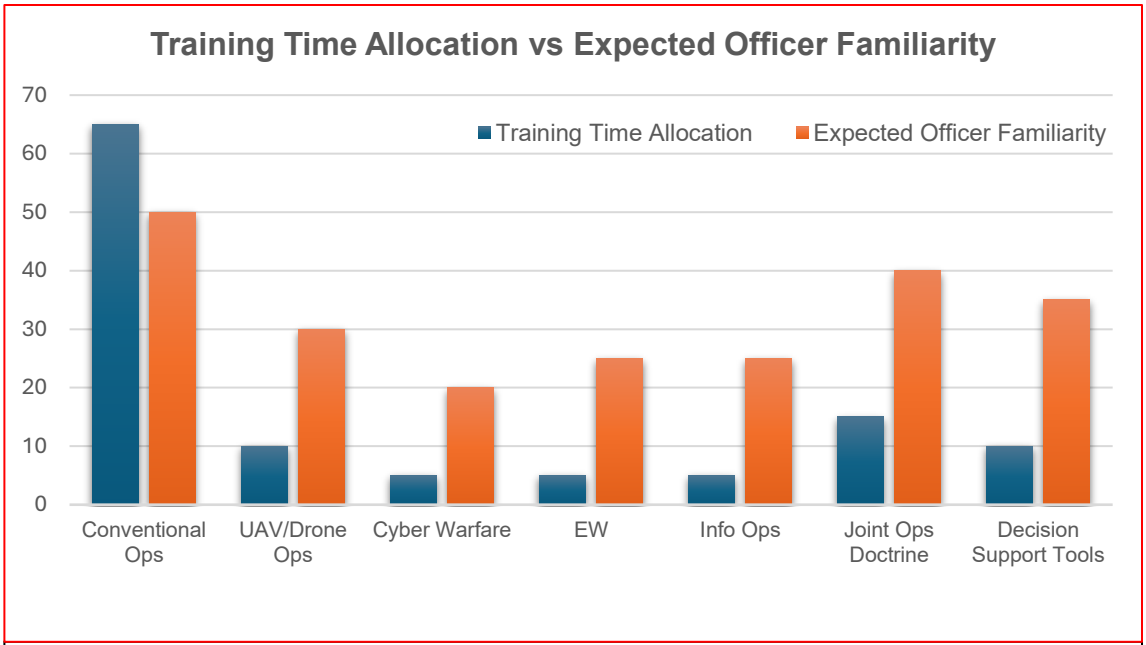

Figure 3: Training Time Allocation vs Expected Officer Familiarity

Source: 'Digital leadership practices in global military forces: insights for governance and technological adaptation in defense organizations', Journal of theoretical accounting research; Data synthesized by author.

while major training curriculum still focuses on conventional operations, familiarity with emerging domains like cyber, UAVs, and information warfare remains low.

- **Technology Integration at Tactical Level**. Emerging tools such as UAV swarms, electronic warfare systems, and cyber capabilities are being fielded with increasing frequency. Yet, consistent exposure at battalion and brigade levels is still limited. Unlike conventional weapons, which are deeply embedded in training routines, non-kinetic and digital assets often remain concentrated in specialist units or

higher headquarters[13]. This leaves many tactical leaders without regular, hands-on familiarity. Expanding direct engagement with these systems across wider echelons is essential. Only then, adaptability and responsiveness will improve in technology-heavy battle scenarios.

- **Leadership in Complex Multi-Domain Teams**. Future combat teams will not be uniform. They will bring together cyber detachments, UAV operators, signals units, intelligence cells, and conventional combat elements. For commanders trained primarily in terrain-focused leadership, this creates new layers of complexity. Managing such hybrid groups demands more than tactical skill. It requires communication across disciplines, the ability to grasp technical inputs, and the confidence to make decisions in a multi-domain setting[14]. Leadership here is about integration as much as command.
- **Integrating Advanced Technologies**. The Armed Forces have successfully inducted advanced systems, ranging from UAVs and long-range artillery to secure communications. However, often they have been introduced in isolation without an integrated doctrinal or tactical framework. Without an integrated doctrinal or tactical framework, commanders encounter them in operations but lack clear guidance on how to use them to full effect. Building on these rapid acquisitions, the next step is to unify these capabilities within a broader doctrinal framework[15]
- **Strengthening Cross-Domain Training**. Operation SINDOOR offered practical lessons in coordinating with EW units, drone detachments, and psychological operations cells. Such instances show the value of early integration. Expanding opportunities for mid-level officers to plan alongside specialised elements will build familiarity before combat demands it. Attachments, joint planning modules, and repeated exposure will help ensure agility when the need arises[16].
- **Fostering a Joint Training Culture**. India's training system has long emphasised service-specific strengths. Moves toward jointness are gaining traction, but much remains to be done. Extending this emphasis to battalion and company-level exercises will allow mid-level commanders to practice integrated planning in realistic settings. By embedding joint culture throughout the training pipeline, the

Armed Forces can nurture a generation of leaders who are both agile and accustomed to working seamlessly across domains.

Recommendations and the Way Ahead: Tactical Focus for Mid-Level Commanders

The transformative nature of warfare, as seen in Operation SINDOOR, calls for a ground-up recalibration of how tactical leaders are trained, equipped, and empowered. Company and Battalion Commanders form the crucial link between higher-level directives and battlefield execution. Their ability to adapt to non-contact warfare will directly shape the Indian Army's operational effectiveness. The bar chart below represents the current and conceptual target capability across various key NCW domains.

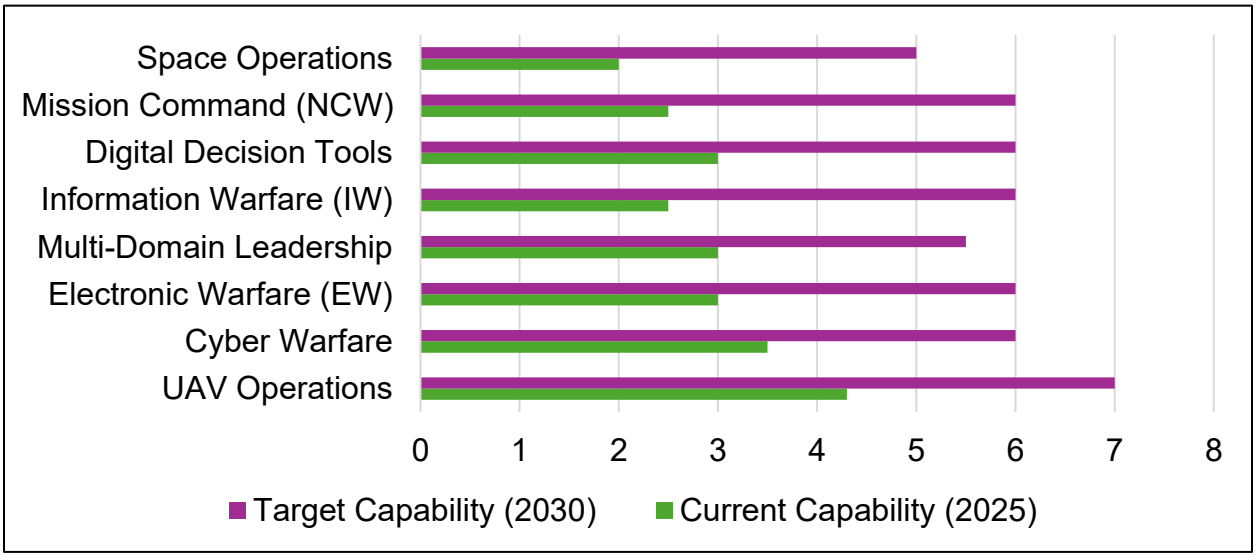

Figure 4: Readiness of Mid-Level Officers Across Key NCW Domains

Source: Current & Target Domain readiness capabilities. Data synthesized by author.

- **Reforming Officer Education and Staff Courses.** A root-level overhaul of curricula at the Junior Command, Staff, and Higher Command courses is essential[17] Modules on UAS, cyber warfare, artificial intelligence, spectrum operations, and information warfare should no longer be treated as electives. They must become part of the core syllabus. Tactical wargames should reflect contemporary threats, simulating drone swarms, cyber denial, disinformation, and even satellite-denied environments.

- **Institutionalising Cross-Domain Command Training.** The Army can also experiment with Cross-Domain Combat Teams (CDCTs). These would combine electronic warfare, UAVs, signals, artillery, and combat arms under unified tactical command. Officers from each of these branches would serve together, learning to integrate their specialities in real time. Mid-level commanders could rotate through such units during their staff postings, giving them direct exposure to multi-domain planning and execution[18]. Tactical commanders must undergo mandatory familiarisation modules during their sub-unit and unit-level tenures. This could include:
    - Short attachments (1 - 2 weeks) with signal regiments, drone & counter drone detachments, or EW units.
    - Participation in live or virtual exercises simulating cyber denial, drone swarms, and GPS spoofing.
    - Cross-functional training capsules & live field firing with newly inducted platforms, ensuring hands-on exposure to tools and countermeasures relevant to modern battlefield threats.
- **Tactical Empowerment and Mission Command Doctrine**. The principle of Mission Command, where subordinates are trusted to achieve intent-based objectives using their own judgement, must be actively reinforced. In the context of non-contact warfare, this requires more than rhetoric. It demands a reworking of command protocols so that greater autonomy is delegated to tactical leaders operating across digital and kinetic domains. During Operation SINDOOR, prompt responses were often a result of decentralised decision-making. Empowering tactical commanders with clearer mandates in such domains would increase agility and responsiveness. Recommendations include:
    - Pre-briefed mission orders allowing officers to engage in EW, drone, or info-warfare capabilities without repeated authorisation.
    - Delegation of limited cyber and UAV tasking to battalion level ops rooms.
    - Tactical SOPs enabling real-time decision-making by ground leaders in hybrid environments.

- **Tech Familiarisation and Wider Induction**. Access to modern tools must not remain confined to specialised units. Every battalion should be equipped with basic drones, jamming devices, and cyber-defense kits. Officers should train regularly with these systems through field trials, live simulations, and joint integration exercises.
- **Incorporation of Multi-Domain Tactics in Exercises**. Brigade and battalion exercises must routinely include non-contact warfare elements. Doing so will embed multi-domain thinking at the grassroots and reduce over-reliance on conventional fire and movement templates[19]. The exercises may include scenarios such as:
    - Drone reconnaissance and counter-drone operations.
    - Electronic deception and jamming.
    - Scenario-based cyber disruptions (e.g. communication blackouts, spoofed ISR).
- **Non-Kinetic Enablers at Battalion level**. Introduce organic EW and drone elements at battalion level with clear tasking responsibilities. Mid-level officers should aim to gain expertise in these domains. Certain recommendations are:
    - Every battalion should have a trained Drone Platoon / UAV team and at least one EW/ counter UAS detachment.
    - Cyber defence drills and social media monitoring are integrated into routine ops room functions.
- **Digital Decision Support and Data Literacy**. Officers must be able to use data-driven tools with confidence. Predictive insights are no longer optional. Field-level refresher courses should cover databases, battle management systems, and GIS overlays. Unit training ought to include tablet-based wargaming and decision-making exercises that draw on real ISR feeds. Regular exposure will make digital decision support a natural part of daily command practice[20].
- **Tactical Information Warfare Awareness**. Adversaries have already shown how misinformation, deepfakes, and online influence campaigns can shape perceptions. Commanders must be educated on these methods and trained in countermeasures. The aim is not only to preserve morale within units but also to

safeguard wider public trust when information environments are contested. Awareness and resilience in this domain will be just as vital as competence with weapons.

- **Short Courses and Micro-Credentials**. Short-term certifications and micro-courses offer a practical route for officers to keep pace with rapid change. Areas such as cyber security, drone and counter-drone operations, tactical data analysis, and GIS can be pursued individually or supported institutionally. Career progression frameworks should reward such efforts, linking adaptability to professional advancement. The Indian Army has already taken steps in this direction through its domain specialisation drive, which has encouraged officers to expand their technological expertise[21]

Conclusion

SINDOOR was more than a display of India's expanding technological reach. It was a call to rethink how the Army prepares its tactical leaders for tomorrow's battlefield. The shift away from traditional, contact-heavy engagements toward dispersed, digital, and multi-domain conflict has already begun. Captains, Majors, Lieutenant Colonels, and Colonels sit at the centre of this change. They are the operational backbone of the Army. Their ability to lead, adapt, and integrate kinetic and non-kinetic tools will decide the outcome of modern conflicts. Therefore, bridging doctrinal, training, and cultural divides at the tactical level is imperative. This transformation cannot stop at updated syllabi or new equipment. It requires a change in mindset. Initiative must be encouraged. Digital fluency must be normal. Leadership must be decentralised enough to thrive in fast-moving, contested environments.

As the Army prepares for an era defined by contactless warfare, its most decisive investment will not be in platforms or systems. It will be in people. Empowering tactical commanders with the skills, exposure, and authority to act decisively is the surest path to readiness in the battlefields of the future.

DISCLAIMER

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