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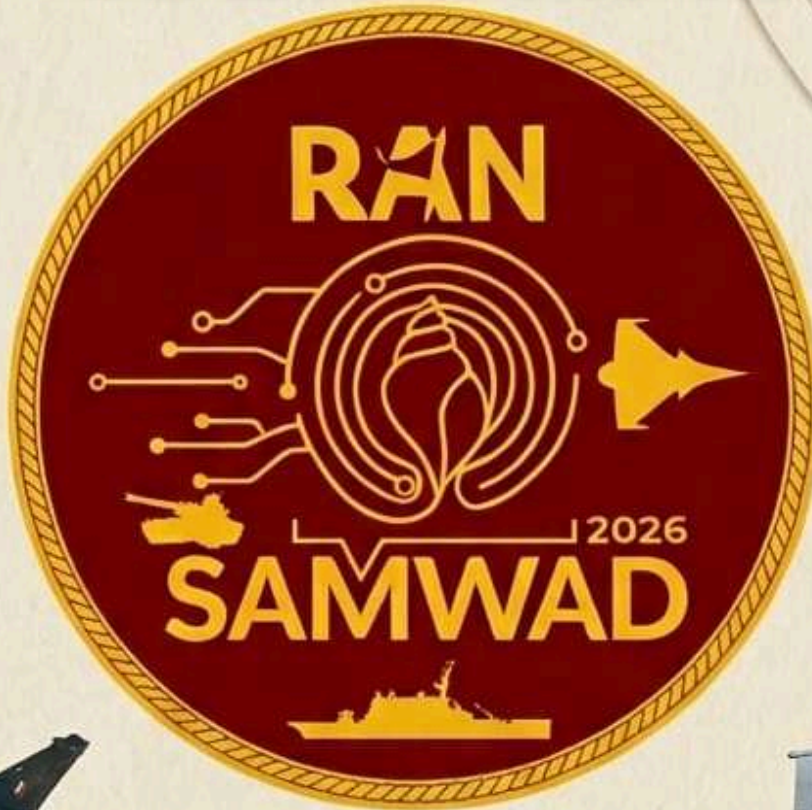
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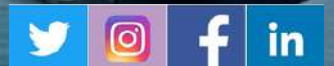
RAN SAMWAD 2026 KEYNOTE ADDRESS



AIR MARSHAL ASHUTOSH DIXIT



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RAN SAMWAD 2026 Keynote Address



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Distinguished Service Chiefs, Commanders, senior officers, veterans, members of the strategic community, officers from friendly countries, industry partners, scholars, and distinguished guests and members of the press—welcome to Ran Samwad 2026.

This is only the second edition of Ran Samwad, but what a beginning we have made. A tri-service seminar where practitioners — serving and retired — sit alongside think-tank scholars, industry leaders, and civilian defence experts to debate the hard questions about war and warfare. The Indian Air Force is rightly proud to host this edition, and the theme we have chosen could not be timelier: "Multi-Domain Operations: An Imperative for Addressing Conventional and Irregular Threats."

Before I get into the substance, let me take a moment to acknowledge something remarkable. We invited research papers on six topics —with no restriction on branch or rank. The response was over a hundred papers. That tells me something important: our officers think deeply about their profession, even when operational commitments

leave little time to breathe. That intellectual energy, that instinct to reflect and question —that is the foundation of everything we are trying to build here.

The Changing Face of War

Let me start with a simple question. When does a war begin today?

Not when the first shot is fired. By then, the adversary has already been inside your networks, shaping narratives, degrading your satellite links, and mapping your logistics. The opening moves of modern conflict are invisible, silent, and often deniable. And they happen across domains we barely acknowledged a few years ago — space, cyberspace, the electromagnetic spectrum, and the cognitive space of public opinion.

While the nature of war — a contest of wills conducted through organised violence — has not changed, its character is transforming at a pace we have rarely witnessed in history. The battlefield no longer unfolds sequentially or phase by phase. It unfolds simultaneously across every domain, where a single tactical action can produce strategic consequences within minutes.

What History Teaches Us

History reminds us that warfare has always evolved in sudden shifts when new technology arrived at the scene. Gunpowder changed fortifications. The internal combustion engine helped create mass armies. Airpower in the twentieth century expanded war vertically and shrank distances. The Second World War proved that integration of air, land, and sea — at Normandy, in the Pacific — was decisive. The 1991 Gulf War showed the world what precision-guided weapons, networked sensors and satellite-enabled command could do.

But here is the crucial point that history keeps making and that we must never forget: none of these transformations were merely technological. Blitzkrieg was not just tanks — it was tanks, airpower, and radio communications working as one. The Gulf War was not just precision weapons — it was joint integration enabled by a shared command network. Technology provided the instrument. Doctrine and organisation

provided the music. Both are required.

Today's transformation follows the same pattern. What we are witnessing is not modernisation for its own sake. It is convergence becoming the central principle of warfare.

Lessons From the Battlefield Today

Let me bring this out of the abstract and into the concrete.

In Ukraine, the early stages of the conflict showed how a smaller force — using commercial satellite imagery, space-based communications, secure digital networks, and precision fires — could impose disproportionate costs on a larger one. The decisive factor was not any single weapon. It was the integration of sensing, targeting, and strike into a coherent, real-time architecture. Conversely, forces that relied on centralised command nodes and exposed logistics proved deeply vulnerable. The lesson: resilience and convergence are not optional — they are the price of survival.

In the 2020 Nagorno-Karabakh conflict, synchronised drone strikes, electronic warfare, and precision targeting rapidly dismantled entrenched formations that had taken years to build. No single system did it. Cross-domain orchestration did.

And then there is what has unfolded as we speak — in the Middle East. The US-Israel conflict with Iran, which began in earnest in February 2026, is perhaps an instructive study in multi-domain operations. Consider what has been in play simultaneously: B-2 stealth bombers flying ultra-long-range strike missions; carrier strike groups providing sea-based air power; submarine operations in the Indian Ocean; Iranian retaliation using coordinated salvos of ballistic missiles and drones striking across nine countries at once; and Iranian restrictions on traffic through the Strait of Hormuz —weaponizing geography and economics as part of the same campaign. No single domain has been decisive. Every domain is contested. The conflict has also demonstrated how quickly regional instability reaches our doorstep — an Iranian naval frigate was recently sunk barely forty nautical miles from Sri Lanka, in waters where India has vital interests. For us, this is not a distant spectacle. It is a strategic lesson delivered in real time.

And closer home, our own experience with Operation Sindoor in May 2025 underscored, sharper than any doctrine document ever could, that jointness is the need of the hour. Integrated operations, coordinated across services and domains in real time, define the new standard. That lesson must now be embedded into how we train, how we equip, and how we fight.

A Lesson From the Cockpit

As someone who has spent a lifetime in aviation, let me offer a metaphor that I think cuts to the heart of what Multi-Domain Operations demands of us.

In an older generation fighter aircraft cockpit, the pilot is the integrator. Radar inputs, electronic warfare warnings, radio transmissions, and visual cues all arrive separately. The pilot must stitch them together mentally, under pressure, in seconds. It works — but it is cognitively demanding, slow and painfully error-prone.

In a fifth-generation platform, sensor fusion architecture does much of that work. It curates information, filters noise and presents the pilot with a single coherent picture. The result is not incremental. It is transformational. The pilot makes better decisions, faster. The aircraft's lethality multiplies — not because it carries more weapons, but because its architecture compresses the time between seeing and acting.

Multi-domain operations are exactly that — but at the topmost level. It is the deliberate integration of our capabilities, information flows, and command authorities so that the Indian Defence Forces can generate decision superiority across all domains simultaneously. Not because we have the most platforms but because we have the best architecture.

What MDO Is — And What It Is Not

Let us be honest with ourselves about what Multi-Domain Operations is not. It is not cosmetic jointness — three services talking to each other at conferences and meetings but planning separately. It is not about adding a cyber use annex to a service-specific plan. It is not about buying advanced platforms without thinking how they connect.

True MDO is architectural. It requires force structures, command relationships, data standards, training pathways, and industrial ecosystems to be built for interoperability from the very start. It is about thinking in terms of systems rather than platforms, effects rather than service equities, and speed of decision rather than tradition.

In short: MDO is not about what we own. It is about what we can do together — faster than the adversary.

India's Strategic Reality

India's environment makes this transformation urgent — not aspirational. We face threats that do not respect domain boundaries.

Along our northern borders, surveillance drones, satellite monitoring, electronic warfare, and rapid force mobilisation coexist in a state of permanent readiness. In the maritime domain, sea lines of communication intersect with space-based surveillance, undersea competition, and carrier-based power projection. On western borders the threat is evolving with each passing day. Hybrid threats — misinformation campaigns, cyber intrusions targeting power grids, drone swarms over sensitive installations — deliberately blur the line between peace and conflict.

These threats cannot be addressed by one service. They cannot be addressed sequentially. They must be addressed simultaneously, across domains, in a synchronised, coordinated response. The ongoing Middle East conflict is a sharp reminder that sea lane disruption, energy supply shocks, and regional instability can affect India's interests without a single adversary targeting us directly. Preparedness must be multi-domain from the outset. That is why MDO is not a future option. It is a present imperative.

Decision Superiority: The Objective That Matters

At the heart of MDO is only one objective: decision superiority. Not more data — better decisions and faster.

Information overload is as dangerous as information scarcity. Commanders drowning in unfiltered data are slow and paralysed. Our challenge is data orchestration —

ensuring that the right information reaches the right decision-maker at the right moment, across every service across every domain.

Ukraine demonstrated this vividly. Decentralised units equipped with real-time intelligence and digital targeting tools were able to exploit opportunities instantly. Units that compressed the sensor-to-shooter loop imposed disproportionate costs on adversaries. Rigid hierarchies with broken communications caused delay and disaster. For us, this means mission command must become real. Delegated authority, operating within clearly articulated strategic intent, supported by secure and resilient communications. Distributed decision-making —with preserved coherence.

This is why 2026 has been designated the Year of Networking and Data-Centricity by the army. It builds directly on 2025's Year of Reforms, which delivered our first formal MDO doctrine, established the defence, cyber and space doctrines, and pushed joint training through the framework of 'Joint Services Training Institutions' and enhancement of training curriculum in tri-service institutes. The direction is set. Now we must accelerate.

Building the Force

Capability convergence must drive how we design our forces. Three principles matter most.

First, interoperable kill chains. A target detected by one service must be prosecutable by another — without friction, without lost time. Sensor and shooter must be able to speak to each other seamlessly, regardless of which uniform they wear.

Second is resilience. In an era of long-range precision targeting and persistent surveillance, concentrated assets are exposed assets. Distributed operations, mobility, deception, and redundancy must be built into our force design from the ground up.

Third, technological sovereignty. Atmanirbharta in defence is not just about making weapons in India. It is about controlling architectures — software, encryption, data standards, and upgrade cycles. Without that control, we are dependent on others at the worst possible moments. The record defence exports of nearly ₹24,000 crore in 2024-25 and BrahMos missiles serving friendly countries tell us that Indian capability is recognised globally. We must build on that confidence at home.

The proliferation of drone technology across modern battlefields deserves special mention. From Eastern Europe to West Asia, relatively low-cost unmanned systems —when integrated effectively—have changed the calculus of conflict. The answer is not reactive procurement. It is architectural integration: layered air and missile defence, manned-unmanned teaming, and electronic warfare resilience baked into our force design.

The Human Dimension: Doctrine, Training, and Culture

Platforms and networks alone will not win future wars. People will. The future officer must be what we are beginning to call a hybrid warrior — deeply grounded in domain expertise but fluent in cross-domain effects. He or she must understand how a cyber operation can degrade an air defence network, how space-based ISR shapes maritime manoeuvre, and how an information narrative can shift escalation dynamics before a single round is fired.

These are not specialised skills for a few. They must become mainstream competencies. Joint professional military education must embed these linkages systematically. Career pathways must reward cross-domain exposure and joint appointments. Major powers have restructured around convergence. We must develop our own doctrinal synthesis - rooted in our geography, our political context, and our strategic culture. Not imitated uncritically. Not resisted reflexively and adapted intelligently.

Simulation and wargaming are indispensable in this journey. The complexity of multi-domain integrated conflict cannot be mastered through live exercises alone. Integrated simulation environments let us test doctrine under contested conditions, model degraded communications, experiment with distributed logistics, and refine

our decision cycles. They allow us to fail in controlled environments - so that we do not fail in combat.

And we must go further than the defence forces. Cyber-attacks target civilian power grids. Disinformation campaigns influence public morale. Space assets underpin navigation systems that both military and civilian users depend upon. A genuine multi-domain response must integrate intelligence agencies, space organisations, industry, law enforcement, and academia into our planning architectures. Crisis coordination cannot be improvised. It must be pre-designed.

Structure and Trust

Our move towards joint structures and theatre commands—with planning now reported to be more than 90 percent complete—is a historic opportunity. But let us be clear: structures alone do not guarantee synergy. Cultural integration is what makes structure come alive.

Jointness must evolve from mere coordination to genuine unity of effort. That requires transparency in information sharing, clarity of authority, and - most fundamentally - mutual trust. Technology connects systems. Trust connects people and should be built amongst all stakeholders.

Airpower occupies a distinctive position in the multi-domain matrix, as it is the glue that holds it together. Its speed, flexibility, reach, and precision enable rapid effects across depth. But the fighter cockpit of the future is not a lone platform. It is a node in a network. Its effectiveness depends on shared data, integrated targeting, and resilient communications. What is true of airpower is true of every service. Each member must see itself not as an independent actor but as a component of a national combat architecture.

As AI-enabled systems and autonomous platforms become more prevalent, we must also address a harder question: accountability. Command responsibility and compliance with the laws of armed conflict cannot be casualties of speed. Our doctrines must embed ethical safeguards within our technological architectures -

ensuring that legitimacy remains intact even under the highest tempo of operations.

How Do We Know We Are Getting There?

We should measure progress not by the number of platforms we procure or doctrine documents we publish but by effects we collectively generate that matter operationally. How quickly can we fuse multi-source data into a coherent operational picture? How fast does that picture translate into executable orders? How resilient are our networks under cyber or electronic attack? How well can degraded systems be reconstituted in the field?

Those are the benchmarks of genuine multi-domain integrated capability. Everything else is preparation for those questions.

The Moment We Are In

Ultimately, Multi-Domain Operations is a cultural transformation, not just a technical one. It demands intellectual humility to question legacy approaches and institutional courage to implement reform.

In high-performance test flying, we have an expression: operating at the edge of the envelope. It means pushing the aircraft's limits - deliberately, carefully, with rigorous preparation and disciplined confidence. You do not go there recklessly. You go there because the mission demands it and because you have done the work to be ready. India stands exactly at such a moment. The strategic environment around us will not wait. The convergence of domains, the proliferation of disruptive technologies, and the persistence of irregular threats — all of them compel us to build an integrated force capable of deterring credibly and responding decisively across the full spectrum of conflict.

This edition of Ran Samwad is more than a seminar. It is a forum for rigorous debate and candid assessment. Let us use it to challenge assumptions, refine doctrine, and align technology with strategy. Let us ensure that India's approach to multi-domain operations is distinctly Indian — rooted in our operational realities, informed by the lessons unfolding around us, and guided by strategic prudence.

Over the next two days, four sessions will bring together practitioners and thinkers, serving and retired, uniformed and civilian. CDS, service chiefs and senior military officers will share their perspectives and place these discussions in the broader national context. We also have the six selected papers being presented by their authors. The programme is curated to give equal weight to theory and practice — because neither alone is enough.

The world around us has changed more than anyone imagined, in ways both wonderful and terrible, often in ways no one anticipated. The sheer profundity of change in the past guarantees that change will continue. Now standing still is not an option, but participating in directing change is the best way ahead.

The men and women of our defence forces deserve structures, doctrines, and technologies that match their professionalism and courage. Our nation expects nothing less. And I am confident that this forum will move us closer to delivering exactly that. I wish the seminar all the success and now let's get started. Thanks very much for patient listening and

Jai Hind!

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