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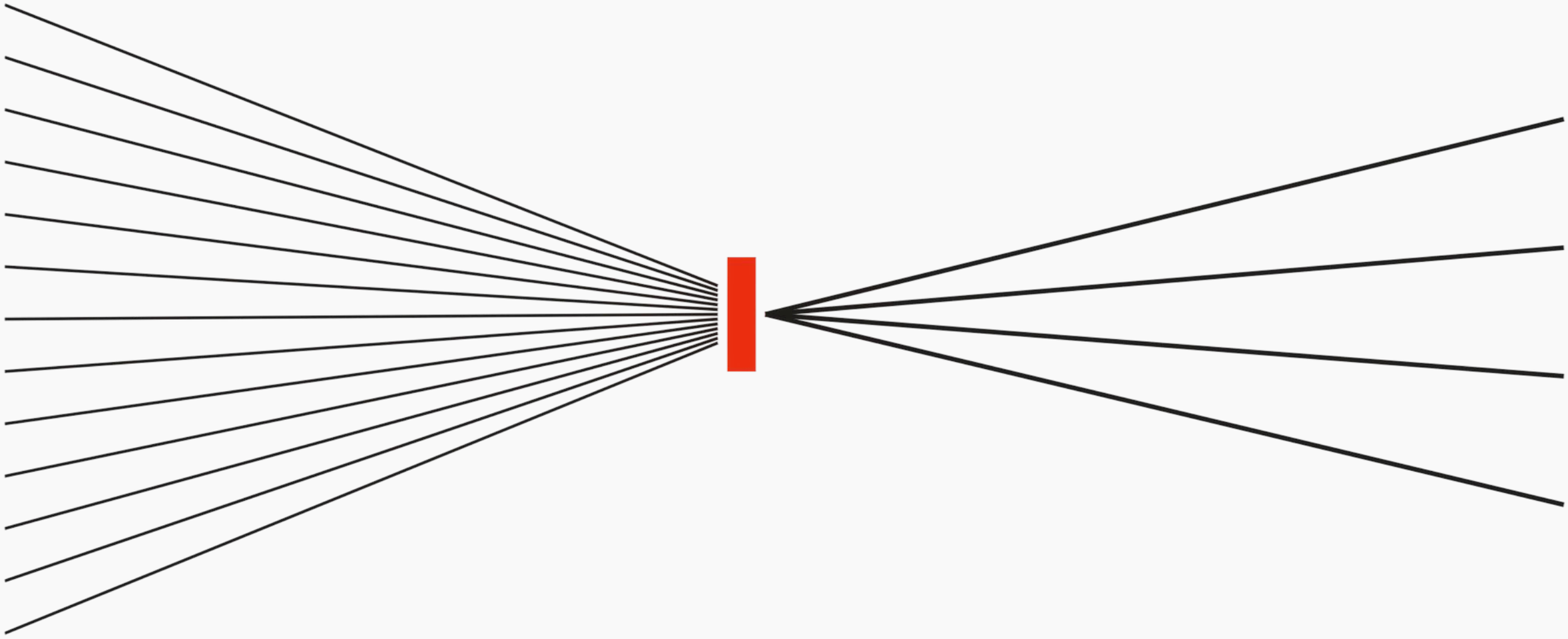
Defence Testing Infrastructure in India



Manufacturers, MSMEs, Startups

Procurement, fielding, export

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India's defence testing ecosystem is functional but fragmented, built for a time when government entities dominated the sector. Today, as the Aatmanirbhar Bharat push opens doors for private manufacturers, startups, and MSMEs, the testing infrastructure hasn't kept pace. DRDO's labs are world-class, but expensive, slot-constrained, and largely inaccessible to smaller players. Different agencies handle licenses, tests, and certifications in silos. A startup trying to get a product qualified for defence procurement can spend months just figuring out who to call.

This paper makes three arguments. Firstly, the current system actively disadvantages smaller innovators and therefore undermines the indigenisation goals it is supposed to serve. Secondly, the rest of the world has solved this; the US, Israel, South Korea, and the UK have all built models where startups and SMEs access testing infrastructure affordably and efficiently. Thirdly, India doesn't need to start from scratch; it needs to integrate what it already has, digitalise the process end-to-end, extend DTIS funding into a genuine distributed network, and make subsidised testing the norm rather than the exception.

> The 2022 KPMG survey said it plainly: **74% of Indian defence manufacturers are largely unaware of testing and certification requirements.** That's a system design problem rather than a knowledge problem.[1]

Introduction

02

India's defence sector is at an inflection point. The Aatmanirbhar Bharat push, the Defence Production Policy 2020, and a total budget of ₹6.81 lakh crore in the Union Budget of FY2025-26 for MoD are generating real momentum. Private manufacturers are entering the space. Startups are building for the Armed Forces. The pipeline is filling up.[2] [3] [25]

But there is a chokepoint that does not get enough attention:

Testing.

Before any defence product can be procured, fielded, or exported, it has to be tested and certified. That is not the problem; rigorous testing is non-negotiable. The problem is what that process looks like in practice: fragmented agencies with overlapping mandates, no unified portal, DRDO labs that are slot-constrained and priced for large contractors, and a certification trail that requires physically moving products between multiple sites. For a large PSU or prime contractor with a dedicated compliance team and an established relationship with the system, this is manageable. For a ten-person startup trying to get its first product qualified, it is often a dead end.

This paper examines the current state of India's defence testing ecosystem, benchmarks it against how leading nations have structured theirs, and proposes a concrete roadmap for making testing accessible, affordable, and centrally coordinated. Because without fixing this layer, all the policy intent upstream, the corridors, the iDEX funding, and the indigenisation mandates get stuck in a bottleneck that nobody built the infrastructure to handle.

Why Testing Infrastructure and Licensing Matters

03

Testing is the quality gate that ensures a weapon system, UAV, or communications platform performs to specification under conditions it will actually face, before a soldier depends on it. It is beyond being a formality or SOP. Rigorous testing verifies compliance with operational, safety, and reliability standards, and catches failures that would be catastrophic in the field.

Beyond quality assurance, a credible testing and certification framework is what gives indigenous products legitimacy in domestic procurement cycles and in export markets. Without internationally harmonised certification, a product tested in India may require complete retesting for export, doubling cost and time-to-market.[4]

For Aatmanirbhar Bharat to mean anything beyond policy documents, the testing layer becomes crucial to function at its best. Licensing and certification frameworks are essential for ensuring transparency, accountability, and regulatory compliance while promoting standardisation across diverse defence technologies.

These frameworks are vital for curtailing reliance on white-labelled and commercial-off-the-shelf (COTS) products, which may secure short-term tenders but undermine long-term strategic autonomy.
When testing and certification are too slow or expensive, manufacturers default to imported, commercial-off-the-shelf components that come pre-certified. A functional, accessible testing ecosystem is precisely what pushes companies toward indigenous solutions rather than reaching for the nearest certified import.[4]

Current State of India's Defence Testing Ecosystem

04

India does have testing infrastructure. DRDO operates over 50 specialised laboratories covering missiles, ballistics, electronics, vehicles, explosives, software, and naval systems. The Integrated Test Range (ITR) in Balasore, the Proof and Experimental Establishment (PXE) in Chandipur, and the Terminal Ballistics Research Laboratory (TBRL) in Chandigarh represent world-class capabilities in their respective domains. The recently established Defence Technology and Test Centre (DTTC) in Lucknow is designed specifically to serve the Uttar Pradesh Defence Industrial Corridor.[5] [6] [20] [21]

The problem is not the existence of these facilities. The problem is how they operate, who can access them, and at what cost. Access to sophisticated test ranges and defence laboratories disproportionately favors government entities and large contractors, creating substantial barriers for micro, small, and medium enterprises (MSMEs) and startups, which are key drivers of niche innovation.

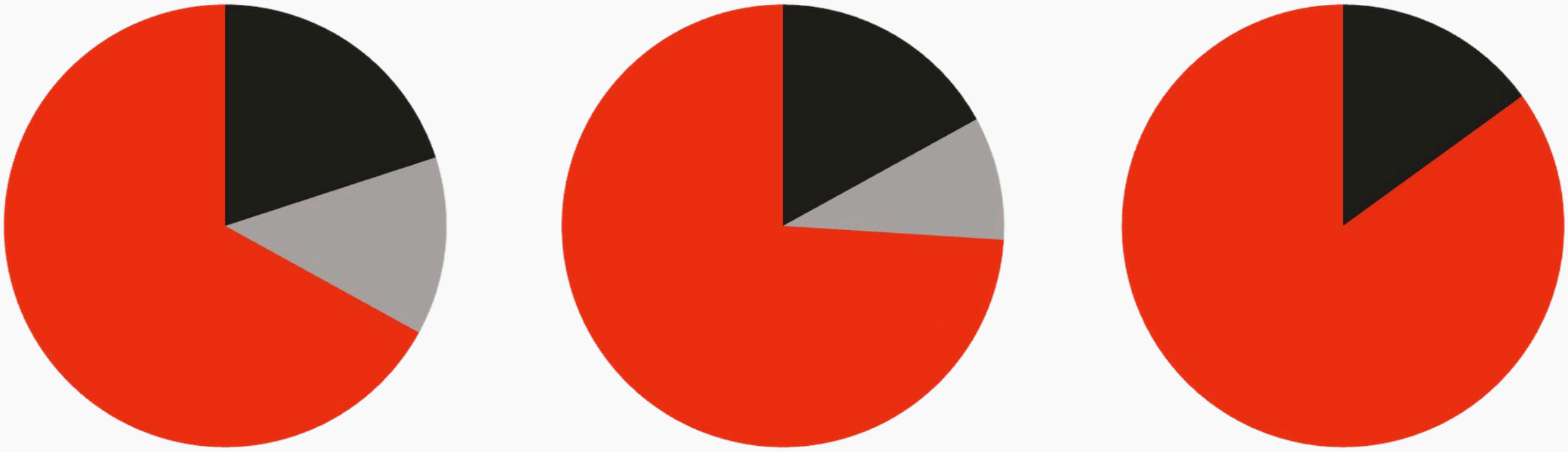
Each laboratory runs on its own protocols. There is no central platform for booking test slots, tracking submissions, or collating results across labs. The government acknowledged these gaps with the Defence Testing Infrastructure Scheme (DTIS), which funds greenfield private testing facilities in defence corridors across Tamil Nadu, Uttar Pradesh, and Telangana. Some of these are now operational. But new infrastructure alone does not fix fragmented workflows.[5] [6] [38]

The KPMG 2022 survey makes the knowledge and access gap concrete. Nearly two-thirds of Indian defence manufacturers, particularly MSMEs and startups, do not know what standards they need to comply with. Only 17% fully understand the testing and certification requirements applicable to their products, while 74% admit they are largely unaware of them. And 85% of industry stakeholders reported having no awareness of a single reliable source listing applicable standards. These are not fringe findings; they rather describe the baseline state of awareness across the sector.[1]

Slot access compounds the knowledge gap. Testing slots at premier DRDO labs are quite inclusive of public sector units and established contractors. Smaller companies face long wait times, high per-test costs, and no single point of contact. Geographic concentration makes it worse; most advanced facilities are in a handful of cities, which possibly can, in turn, make a manufacturer in a tier-II defence corridor spend more on travel and logistics than on the test itself.[1] [13]

FIGURE 1 · THE AWARENESS BASELINE

Three findings from the same 2022 industry survey. In each case the majority of respondents report no working knowledge of the requirements they are expected to meet.



FAMILIARITY WITH DEFENCE / MILITARY SPECIFIC STANDARDS

Not Familiar	67%
Fully Familiar	20%
Partially Familiar	13%

AWARENESS OF NECESSARY TESTING INFRASTRUCTURE REQUIREMENTS

Not Aware	74%
Fully Aware	17%
Partially Aware	9%

AWARENESS OF A REPOSITORY LISTING ALL AEROSPACE & DEFENCE STANDARDS

Not Aware	85%
Aware	15%

Source: KPMG, *Defence Standards and Testing Infrastructure — Critical Enablers in India's Indigenisation Journey*, 2022.

The DTIS, whose goal is to establish world-class greenfield testing infrastructure across India's growing defence corridors, not just in major hubs but in Tamil Nadu, Uttar Pradesh, and Telangana. Some of these facilities are operational and accessible to both large players and MSMEs. That said, building new labs is necessary but not sufficient. DTIS success ultimately depends on dismantling the silos: integrated access, digital workflows, and real-time coordination across the entire ecosystem. Building a 'one-roof' framework is the next big step, as having the right tools alone does not suffice, but turning them into world-class results is what truly counts.[3] [5] [6]

Testing Scope and Licensing Status 05

India's defence testing ecosystem encompasses a broad spectrum: ballistics, missiles, UAVs, electronic warfare, naval sensors, communications systems, vehicles, explosives, and emerging categories like AI-enabled systems and advanced materials. This scope maps to national operational requirements of the Army, Air Force, and Navy, as well as international benchmarks and regulatory accreditations from NABL and the Bureau of Indian Standards (BIS).[7] [8] [9] [1]

Licensing for manufacturing and proof-testing of firearms, ammunition, and select defence products is mandatory, administered by the Department for Promotion of Industry and Internal Trade (DPIIT) and the Department of Defence Production (DDP) through centralised portals. Manufacturers must demonstrate compliance with design, safety, and security standards, supported by documented technical expertise and quality assurance processes. Final trials and proof tests require oversight from government-designated agencies for inspection, auditing, and certification, alongside mandates to retain trial documentation and pursue periodic recertification.[7] [8]

FIGURE 2 · ONE PRODUCT, FOUR APPROVAL CHAINS

An armed UAV spans multiple domains. Each authority below runs its own protocols, approval chain, and access rules — with no coordinating body sequencing them.

ARMED UAV — SINGLE PRODUCT, SINGLE COMPANY

DRDO	AIR FORCE	MOCA	DGAQA
Lab testing and technical evaluation	Operational acceptance and field trials	Airspace and airworthiness clearance	Quality assurance and certification

No unified validation mechanism where approvals may run redundantly rather than sequentially. The MoD is examining a National Aerospace Testing Establishment (NATE) to address aircraft testing fragmentation.[10] [11]

Who's Doing It Better: Global Benchmarks

06

Every major defence-producing nation has had to figure out how to make testing infrastructure work for a broader base of manufacturers. It is not an exclusive problem faced solely by our nation. Although the approaches differ, the underlying logic is consistent: accessible testing has to be a designed feature.

FIGURE 3 · FOUR MODELS FOR STARTUP TEST ACCESS

COUNTRY	INSTITUTIONS	ACCESS MECHANISM
UNITED STATES	DoD, DARPA	SBIR grants and OTA agreements; cost-shared access to DoD test facilities
ISRAEL	DDR&D / MAFAT	Innofense unclassified track; prime-partner infrastructure; joint testing events
SOUTH KOREA	ADD, DAPA	Defence Startup Challenge; direct military field testing; tracked technology transfer
UNITED KINGDOM	DSTL, DASA	Approximately 30% of research spend to SMEs; RCloud open bidding marketplace

United States: SBIR, OTA, and Open-Access Testing

The US DoD (Department of Defence) uses Small Business Innovation Research (SBIR) grants and Other Transaction Authority (OTA) agreements to pull startups into the defence ecosystem with minimal bureaucratic overhead. OTAs bypass the full Federal Acquisition Regulation framework, enabling the DoD to prototype, test, and scale new technology through flexible contracts. Crucially, startups working under SBIR/OTA agreements access DoD test facilities through cost-sharing arrangements that significantly reduce the financial barrier. DARPA's model, funding high-risk innovation and fast-cycling through testing, has become a global reference for how to integrate non-traditional suppliers into a defence pipeline.[34]

Who's Doing It Better: Global Benchmarks

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Israel: DDR&D, MAFAT, and the Innofense Model

Israel's Directorate of Defence Research and Development (DDR&D/MAFAT) integrates startups directly into its defence testing and evaluation pipeline. Its Innofense programme lets startups work in an unclassified environment, removing cumbersome security overheads at the early stage. Promising startups can progress to purchase orders or co-development with Rafael, Elbit, or IAI, who open their own testing infrastructure as part of the partnership. Joint testing events, such as the DDR&D-coordinated anti-drone evaluations that put six startups on the same testing programme as the country's major primes, are deliberate policy, not exceptions. The result is a system where scale is not a prerequisite for access.[35]

South Korea: ADD, DAPA, and the Defence Startup Challenge

South Korea's Agency for Defence Development (ADD), under the Defence Acquisition Program Administration (DAPA), has set a target of nurturing 100 defence startups by 2030. The mechanism is not just funding; it includes a Defence Startup Challenge that gives startups direct access to military field testing for live feedback and validation, alongside technical co-funding and infrastructure access for qualifying companies. Technology transfers from state research institutions to qualifying startups are formalised and tracked, creating a clear progression path from innovation to production.[36]

United Kingdom: DSTL and DASA

The UK's Defence Science and Technology Laboratory (DSTL) allocates approximately 30% of its research spending to SMEs, with an explicit policy to engage "non-traditional" defence suppliers. Its Defence and Security Accelerator (DASA) funds innovations from smaller organisations and provides structured pathways into testing and procurement. The RCloud marketplace allows SMEs to register and bid for research opportunities without navigating a closed procurement system. The framework is designed to make access the default rather than the exception.[37]

What India can take from this?

None of these countries built accessible testing infrastructure by accident. Each of them made a deliberate policy choice to design for accessibility alongside capability. India has the policy intent, Aatmanirbhar Bharat, DTIS (Defence Testing Infrastructure Scheme), iDEX (Innovations for Defence Excellence), and TDF (Technology Development Fund Scheme). What is missing is the architecture that turns that intent into a system any qualifying startup can actually navigate.

The Challenges in Detail

07

Fragmentation

India's defence testing and certification ecosystem involves DRDO laboratories, the Armed Forces, multiple ministries, academic institutions, and private facilities, each operating under its protocols, approval chains, and access rules. There is no unified validation mechanism. A company testing a product that spans multiple domains, an armed UAV, for instance, may need approvals from DRDO, the Air Force, the Ministry of Civil Aviation, and DGAQA, with no coordinating body ensuring the process runs sequentially rather than redundantly. The Ministry of Defence is examining a proposal for a National Aerospace Testing Establishment (NATE) specifically to address aircraft testing fragmentation, an acknowledgement that the problem is real and costly.[10] [11]

Access

For startups and MSMEs, the players the government says it wants to attract, exists a compounding problem: high upfront costs, long wait times, limited awareness of which lab handles which category, and no single point of contact. iDEX and DRDO's MSME outreach have started to address awareness, but access to actual testing capacity remains largely unresolved.[12] [13] [14]

Duplication

Subsystems or components often undergo repetitive or iterative testing across facilities due to the absence of standardised, digital mechanisms for result sharing or cross-certification, inflating time, costs, and documentation burdens while extending market entry. Cross-certification protocols and a shared digital results repository would eliminate most of this duplication.[15]

Urban-Rural divide

Advanced testing infrastructure clusters in metropolitan areas and established defence hubs. A manufacturer in the defence corridors of Uttar Pradesh or Tamil Nadu, exactly the regional industrial base the government is trying to build, still faces logistical burdens that its counterparts near established DRDO labs do not. This disparity underutilizes peripheral industrial bases and constrains nationwide defence innovation growth.[13] [16]

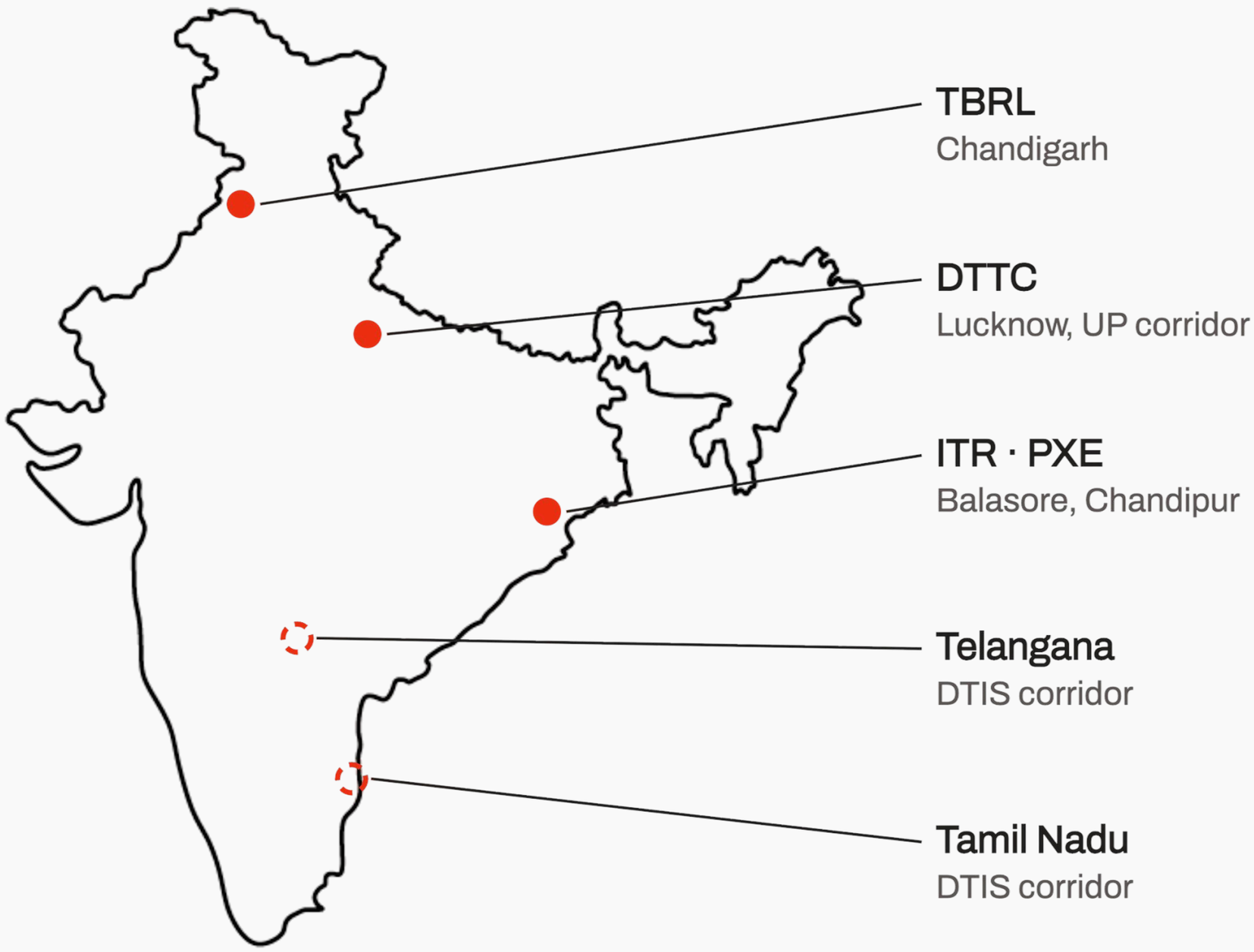
The Challenges in Detail

07

MSME Complexities

MSMEs operate on constrained working capital, irregular orders, and thin margins. The cumulative cost of iterative testing, failing a test, rectifying, re-testing, and filing an appeal is significant. When testing is expensive and slow, MSMEs either skip thorough validation, avoid the market entirely, or default to COTS components to sidestep the testing overhead. None of these outcomes serves the indigenisation goals.[14] [17]

FIGURE 4 . TESTING PROVISION CITED IN THIS PAPER



Solid markers are the four facilities this paper names: TBRL Chandigarh, DTTC Lucknow, ITR Balasore, PXE Chandipur. Dashed markers are indicative state locations for the Telangana and Tamil Nadu DTIS corridors as the paper names the corridors, not specific sites. Eastern and Western regions are named as underserved in Recommendation D and Phase 3. Representational outline, not to scale.

How Testing Requests and Certifications Currently Work

08

01 Application submission

Companies initiate the process by submitting digital or physical applications to DRDO or MoD-approved test facilities, per DRDO Standard Operating Procedures (SOPs) and industry guidelines. Requirements include comprehensive documentation, security clearances, legal agreements, end-user certificates, non-disclosure declarations, product specifications, and preferred time slots to ensure compliance and scheduling.[18] [19]

02 Review and slot allocation

Nodal officers review submissions for technical completeness and conformity, issue cost quotations, and allocate available testing slots while balancing demand-capacity across laboratories.[18]

03 Test execution

Following acceptance and payment confirmation, companies deliver products for testing under DRDO supervision, with industry representatives permitted to observe. The scope covers ballistic, environmental, electronic, or mechanical domains based on product category.[18]

04 Certification and license grant

Successful outcomes yield test reports or compliance certificates, forwarded to relevant authorities, for final audits alongside supporting documents. Compliant products result in manufacturing/supply licenses under DPIIT Arms Rules and MoD licensing norms.[8] [4]

05 Appeals and retesting

Manufacturers can formally appeal failures or request additional tests, providing mechanisms for rectification and fairness.[8]

How Testing Requests and Certifications Currently Work

08

FIGURE 5 · THE SAME FIVE STEPS, RE-ARCHITECTED

The process on the left is what a manufacturer navigates today, once per laboratory. The recommendations in the next section collapse it into a single coordinated intake.

TODAY — SERIAL, PER AGENCY

Apply · per-lab paperwork, physical or digital

Wait · nodal officer review, quotation, slot

Ship · move the product to each site

Certify · reports forwarded, audited separately

Repeat · retest at the next lab, no result transfer

PROPOSED — ONE PORTAL, ONE TIMELINE

CENTRAL PORTAL

One submission, one point of contact

Published concessional rate cards

Slot booking across all labs, public and private

Real-time status, full audit trail

Cross-certification: the credential travels with the part

Interoperable with JSS 55555, MIL-STD and CE databases; API submission from accredited private labs. [26][38]

Roles of DRDO, MoD, Private Labs, and Academia in Defence Testing

09

Defence Research and Development Organisation (DRDO)

DRDO, under the Ministry of Defence, leads the indigenous design, development, testing, and evaluation of advanced defence technologies and systems. Operating over 50 specialized labs focused on missiles, electronics, armaments, combat engineering, naval systems, and more, DRDO constitutes the core of India's defence testing infrastructure. DRDO also manages the Technology Development Fund (TDF), which provides a grant-in-aid of up to 90% of project cost (capped at ₹50 crore) for startups and MSMEs developing defence technologies from TRL 3 (Technological Readiness Level) onwards.[20] [21] [32]

Ministry of Defence

The MoD sets policy frameworks, manages licensing through DPIIT and DDP, and provides regulatory oversight. Defence Acquisition Procedure 2020 enables acceptance of vendor certifications and NABL-accredited lab results to expedite procurement. The MoD also runs the Defence Investor Cell, a single point of contact for investors, startups, and MSMEs navigating regulatory requirements, and oversees DTIS implementation.[4] [22] [33]

Private Laboratories

Private labs, including Intertek, UL Quality Assurance, and Modern Testing Services, handle materials testing, electronics evaluation, and structural testing. DGAQA approves select private labs under relevant standards, and NABL accreditation allows their results to be accepted in procurement processes, augmenting constrained government capacity.[23]

Academia

Academic institutions contribute through Defence Industry-Academia Centres of Excellence (DIA-CoEs), hosted at IITs and central universities. These centres foster collaborative research, innovation, and skill development in futuristic technologies, bridging basic research to defence applications. DRDO's Directorate of Futuristic Technology Management coordinates these efforts to expedite product validation.[24]

Recommendations for Improvement

10

A Integrated Hubs for Testing, Certification, and Licensing

Integrated hubs should consolidate product trials, compliance submissions, and license issuance under one roof, staffed by cross-disciplinary teams from DRDO, MoD, Armed Forces, quality assurance agencies, and DPIIT. One submission, one point of contact, one timeline. The inter-agency territory issues that make this difficult are real, but they are political problems, not technical ones.[1]

B Review and slot allocation

A unified platform should manage the full lifecycle: test requests, document submission, slot booking, real-time status tracking, result collation, certification issuance, and license approvals, with complete audit trails. It should be interoperable with standards databases (JSS 55555, MIL-STD, CE norms) and support API integration with private labs so results are submitted directly.[26] [38]

C Standardization via JSS 55555 and International Harmonisation

Companies targeting both domestic procurement and export markets currently test twice, once for JSS 55555, once for MIL-STD-810 or ISO/IEC equivalents. Mutual recognition agreements with international standards bodies would eliminate this overlap, reduce cost for exporters, and position Indian certification as globally credible.[27] [28]

D Regional Infrastructure Expansion Under DTIS

DTIS funding should be directed toward filling geographic gaps, not just adding capacity where infrastructure already exists. Eastern India is largely unserved. Tier-II cities in the defence corridors need labs that serve the manufacturers based there. Investments should be mapped to where the manufacturing base is and where it is expected to grow.[29]

E Expand Private Sector and Startup Access and Collaboration

NABL-accredited private labs and academic institutions should be formally authorised to conduct defence tests across a defined scope, with results accepted system-wide. Linking startup incubators and iDEX partner organisations directly to testing hubs would compress the gap between prototype and validated product. Co-funded testing programmes, modelled on DARPA challenge grants or Israel's Innofense partnerships, would accelerate applied R&D at lower cost to both government and industry. [30]

F Subsidised Testing for Startups via iDEX/TDF

The cost of testing is the most direct barrier for new entrants. All government labs should be required to offer concessional rates for startups and MSMEs, published, standardised, and accessible through the central portal. iDEX and TDF mechanisms should be extended to cover direct testing costs, not just R&D. The success of indigenisation depends not only on policy intent but also on ensuring that testing infrastructure remains financially accessible to emerging companies. [30] [31] [32]

Roadmap for Implementation

11

Phase 1: Foundation

- **Governance:** Establish a National Defence Testing and Certification Council with representation from MoD, DRDO, Armed Forces, MSME bodies, private industry, and regulatory agencies.
- **Portal:** Launch a minimum viable central digital portal covering test requests, scheduling, and certification tracking across all DRDO labs. Implement feedback loops and regular audits across hubs and digital platforms, involving government labs, start-ups, MSMEs, contractors, and academic experts.
- **Pricing:** Publish standardised, concessional testing rate cards for MSMEs and startups at all government labs.
- **Baseline:** Map existing lab capacity and demand gaps by region and product category to inform Phase 2 investments.

Phase 2: Integration

- **Private lab onboarding:** Extend the portal to include all NABL-accredited private labs and academic testing facilities, with standardised digital result submission.
- **Cross-certification:** Implement protocols to eliminate redundant retesting across labs for the same component or subsystem. Any component or subsystem presenting a valid certificate of conformity or pre-certification from an accredited facility should be accepted without repeat testing; the credential travels with the part.
- **Hub pilots:** Operationalise integrated testing, certification, and licensing hubs at Tamil Nadu and Uttar Pradesh defence corridors as proof-of-concept.
- **Standards harmonisation:** Initiate JSS 55555 mutual recognition negotiations with US, Israeli, and EU standards bodies.

Phase 3: Scale

- **Hub expansion:** Roll out the integrated hub model to all major defence corridors, including Eastern and Western regions that are currently underserved.

- **DTIS gap fill:** Direct DTIS-funded construction to regions with low testing infrastructure density, guided by Phase 1 gap mapping.
- **Grant scaling:** Scale iDEX and TDF testing grant mechanisms with published annual data on utilisation, wait times, and startup participation rates.
- **First full review:** Audit startup and MSME participation metrics against Phase 1 baselines and adjust policy levers accordingly.

Critical Success Factors

- Average test slot wait time for MSMEs (target: under 30 days)
- Percentage of certifications issued digitally (target: 100%)
- MSME and startup share of total testing volume (tracked quarterly)
- Number of products certified under internationally harmonised standards

FIGURE 6 · STAKEHOLDER ROLES

STAKEHOLDER	RESPONSIBILITY
MOD	Regulatory alignment, infrastructure oversight, inter-agency coordination, and DTIS funding decisions.
DRDO	Lab operations, portal development, TDF management, and cross-lab standardisation.
INDUSTRY & PRIVATE LABS	Infrastructure upgrades, digital integration, and co-funded testing programmes for startups.
ACADEMIA	Research into next-generation testing methods, simulation testbed development, and DIA-CoE expansion.

Conclusion

12

India is building the right infrastructure. DRDO's labs are world-class. iDEX is generating real innovation. DTIS is adding new capacity. The policy intent is genuine.

But if the testing process remains fragmented, expensive, and opaque, all of that upstream investment hits a wall. The startups and MSMEs building the next generation of Indian defence products, the ten-engineer company with a working drone prototype, the component manufacturer trying to break into a PSU supply chain, the deep-tech founder qualifying a sensor for defence use, cannot wait for a system that was not designed for them to catch up.

What needs to change is not hard to define. One portal. Affordable rates. Results that transfer between labs. Integrated hubs that handle testing, certification, and licensing without requiring a company to navigate three agencies separately. Regional infrastructure that follows the manufacturing base, not the other way around. A standards framework that gives Indian certification global credibility.

The question is not whether India can build great defence products. It demonstrably can. The question is whether it will build the infrastructure to certify them quickly, affordably, and at scale, so that the companies doing the building are not killed by the compliance process before they reach the market.

That is a coordination problem. India has solved harder ones. The 2047 deadline for defence self-reliance is not a soft aspiration; it requires treating testing infrastructure as a strategic enabler, not an administrative backlog.

References

01 Raghunathan, J., Bhandari, S., & Pathak, S. (2022). Defence Standards and Testing Infrastructure — Critical Enablers in India's Indigenisation Journey. KPMG.

02 Defence Testing Infrastructure Scheme. Drishti IAS.

03 Thomas, A. (2025). Defence Testing Infrastructure Scheme. India Filings.

04 Ministry of Defence, Acquisition Wing Secretariat. (2021). Use of Certification in Trials Evaluation Process of Defence Equipment.

05 Ministry of Defence to set up testing facility in Mechanical & Material domain in Tamil Nadu Defence Industrial Corridor.

06 DTIS Scheme. DDPMOD.

07 DPIIT. Licensing Management System.

08 Arms Rules. DPIIT.

09 Revised list of defence items requiring industry license.

10 Defence Ministry examining proposal for National Aerospace Testing Establishment (NATE). Indian Defence Research Wing.

11 Modernising India's defence. Drishti IAS.

12 Kumar, S. (2024). Empowering Innovation: The Role of MSMEs in India's Defence Sector. Electronics for You Business. electronicsforyou.biz

13 Koan Advisory. (2015). Challenges of Indian MSME Participation in the Defence Sector. FISME.

14 Samvad with MSMEs Manufacturing for the Indian Defence Sector. promfgmedia.com

15 DRDO News, October 2019. drdo.res.in

16 KPMG. (2021). MSMEs — An Untapped Force Multiplier for the Indian Defence Sector. assets.kpmg.com

17 Mohite, R., Chaurasiya, R., & Sharma, S. (2025). Start-ups in camouflage: the convergence of MSMEs, innovation, and Indian defense needs. Defense and Security Studies, 6(2), 103–112.

18 DRDO SOP for Test Facilities.

19 Guidelines for Use of Government Test Facilities by Defence Industry. (2019). Ministry of Defence.

20 DRDO.

21 Lata, Capt. Dr. (2023). Role of Defence Research and Development Organisation in Indian defence sector. Indian Journal of Applied Research, 13(03).

22 Ministry of Defence, Government of India. About the Ministry.

23 Approval of Test Laboratories. DGAQA.

24 Academia | DRDO, Ministry of Defence. DIA-CoEs.

25 Ministry of Defence. (2025). Technology Perspective and Capability Roadmap (TPCR) 2025. Business Today.n

26 Defence & Security Collective Responsibility. Raksha Mantri Statement. PIB.

27 K, S. (2025). Robust electronic and electrical equipment in military applications. Envitest Laboratories. envitestlab.com

28 JSS 55555-2000 Guidelines for Environmental Testing at CQAE WE Bangalore. Bharatshakti.

29 Department of Defence Production, DGQA. (2023). Request for Proposal: Development, Operation and Maintenance of Defence Testing Infrastructure for Mechanical and Material Tests under DTIS.

30 Innovations for Defence Excellence (iDEX). MyScheme / DDP.

31 Defence Startups. PIB.

32 Technology Development Fund (TDF). DRDO.

33 Defence Investor Cell. Department of Defence Production, Ministry of Defence.

34 US DoD SBIR/STTR Programme. defensesbirsttr.mil · DoD OT Guide, Office of the Under Secretary of Defense (2023).

35 How Israel's military is prioritising dual-use start-ups to accelerate defence tech. Breaking Defense. (2023). breakingdefense.com · MAFAT: How Israel's Defence Ministry funds startups.

36 South Korea to nurture 100 defence startups by 2030. UPI / Seoul Economic Daily. (2026).

37 Dstl Annual Report and Accounts 2024/25. UK Government. gov.uk · Dstl SME Action Plan.

38 DRDO Defence Technology and Test Centre (DTTC).

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