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TECH

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Tracking the next generation of combat and
defence technologies across India's armed forces

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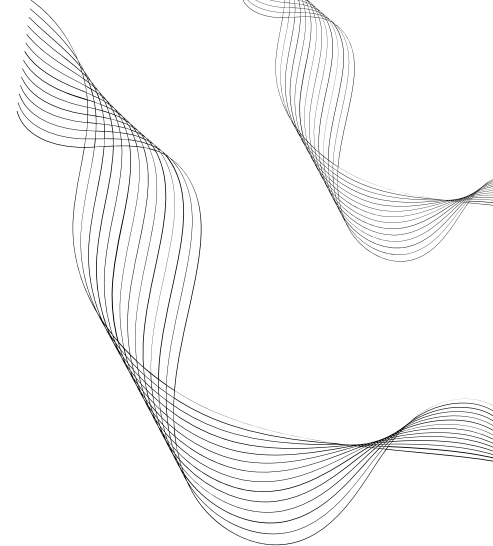


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Executive Summary: Key Highlights at a Glance

Defence Technology in India: From Strategic Capability to National Infrastructure

A selective, infrastructure-led defence tech ecosystem is taking shape in India.

India's defence technology landscape is transitioning from fragmented innovation and import substitution toward an execution-driven capability infrastructure. Defence tech is no longer defined by individual platforms, but by integrated systems spanning AI, autonomy, ISR, secure communications, and manufacturing depth. Policy reforms, rising defence budgets, and geopolitical imperatives are positioning defence technology as national infrastructure, linking military readiness, industrial capacity, and long-term economic value.

Startup formation is broad, but scale is highly selective.

India hosts 206 defence tech startups, yet funding and scale are concentrated within a narrow cohort. While early-stage experimentation is extensive, fewer than 10% of startups progress to Series A or beyond. This steep filtration reflects structural realities, long development cycles, trials-driven adoption, and procurement risk, rather than weak innovation. The ecosystem is moving from idea density toward capability depth.

Non-combat systems dominate participation; strategic value concentrates downstream.

Nearly 74% of startups operate in non-combat systems such as ISR, communications, counter-drone systems, and mission enablement, driven by lower regulatory barriers and dual-use potential. In contrast, participation is materially lower in combat platforms, training & simulation, and system integration due to higher capital requirements, longer development and trial cycles, and stricter certification and procurement thresholds. These segments are more tightly linked to formal induction programs and multi-year defence contracts, resulting in fewer participating firms but greater depth of engagement once adoption occurs.

Capital is large in aggregate, but sharply concentrated.

Over \$711M in all-time funding has flowed into India's defence tech ecosystem, with more than half absorbed by the top five companies. Mega rounds and rising median deal sizes signal a shift from venture-style experimentation to infrastructure-style conviction. Investors are pre-selecting future defence suppliers, prioritizing manufacturing readiness, certification progress, and long-duration procurement alignment over broad portfolio exposure.

Geographic clusters reflect execution advantages, not startup density.

Bengaluru leads as India's leading defence tech cluster, securing \$216M through ecosystem breadth across R&D, integration, and manufacturing, while Noida and Navi Mumbai reflect single-platform capital concentration. Manufacturing-led clusters in Tamil Nadu and emerging corridors elsewhere add supply-chain depth. The ecosystem is converging toward specialized regional strongholds anchored by a small number of platform leaders.

The government and armed forces are active ecosystem architects.

Procurement reforms under DAP 2020 and institutional mechanisms like iDEX have embedded innovation directly into defence demand cycles. Trials, pilots, and early deployments function as the true market, converting prototypes into procurement-ready systems. Adoption is shaped by survivability under operational conditions, not demonstration success.

Exits signal institutional maturity, not hyper-scaling.

Since 2010, the ecosystem has recorded 3 Acquisitions and 5 IPOs which remain limited but are strategically meaningful. Exit pathways reward system-level relevance, procurement credibility, and endurance rather than rapid growth, reinforcing defence tech as a long-horizon industrial sector.

Consolidation around capability anchors.

India's defence tech ecosystem is entering a consolidation phase where capital, policy, and procurement converge to scale a small set of execution-proven platforms. The next decade will be defined less by startup proliferation and more by the ability to convert indigenous innovation into repeatable, deployable, and export-ready defence capability.

1. Defence Technology: From Strategic Capability to National Infrastructure

1.1 The Global Defence Technology Landscape

The global defence technology landscape is no longer about hardware alone, it is an ecosystem of innovation, deterrence, and geopolitical influence. Advanced capabilities in AI, autonomous systems, cyber resilience, and emerging domains such as hypersonics, quantum-enabled sensing, are now key levers shaping military power and strategic posture worldwide. These technologies are redefining deterrence from static arsenals to dynamic digital and networked capabilities that can sense, decide, and act faster than adversaries¹. As these shifts reshape how military advantage is generated globally, they are also redefining where and how defence technology ecosystems emerge. Within this context, India is increasingly positioning itself as a major emerging defence technology market, combining indigenous innovation with selective global partnerships to accelerate capability development in air and missile defence, unmanned platforms, and secure, resilient communications.

Two critical structural shifts mark this era:

- **From platforms to systems-of-systems:** Defence capabilities are increasingly being shaped by integrated networks that combine AI, multi-domain sensors, and decision-support systems, reducing reliance on standalone platforms and placing greater emphasis on connectivity, coordination, and timely decision-making.
- **From imports to innovation value chains:** Leading powers are increasingly investing in domestic R&D, manufacturing depth, and resilient supply chains to ensure continuity of access to critical technologies and reduce exposure to external dependencies.

In sum, the global landscape is less about individual weapons and more about technological ecosystems that support national strategies, interoperability with partners, and resilience against disruption.

1.2 The Core Problems Defence Technology Is Solving for India

For India, defence technology is solving three strategic challenges that simple procurement cannot address:

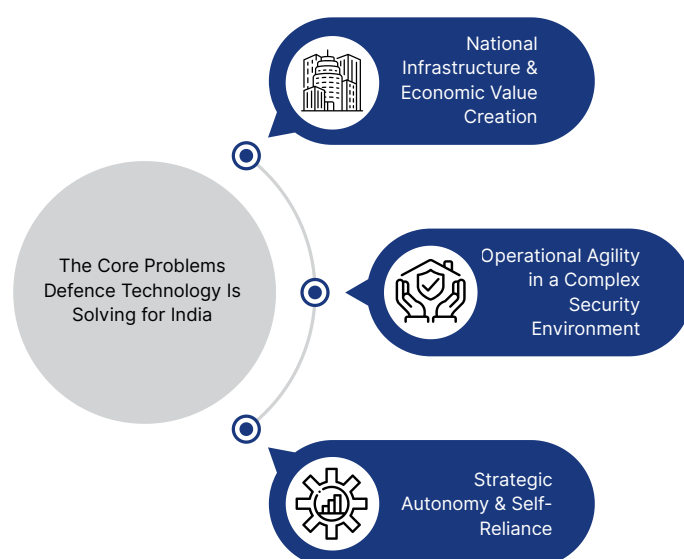
- **Strategic Autonomy & Self-Reliance:** India historically depended on foreign systems for high-end capabilities. This exposes strategic vulnerabilities, especially when geopolitical winds shift. Indigenous tech development from drones and precision weapons to counter-drone systems reduces reliance on external suppliers and strengthens autonomy in crisis response².

- **Operational Agility in a Complex Security Environment:** Contemporary conflicts in South Asia and beyond increasingly feature rapid, multi-domain threats, including UAV swarms, cyber operations, and space-enabled disruptions alongside conventional force-on-force engagements. Technology integration, such as AI-enabled decision aids, networked sensors, and layered air-defence systems, allows Indian forces to anticipate and adapt more effectively across this expanded threat spectrum, strengthening operational responsiveness and deterrence³.
- **National Infrastructure & Economic Value Creation:** Defence technology is increasingly a national infrastructure, where manufacturing corridors, advanced R&D clusters, and private sector innovation create jobs, deepen industrial capability, and enable exports. This transforms defence from a budgetary liability into a strategic economic asset, linking security with industrial growth⁴.

In essence, India is shifting from buying capability to building strategic infrastructure—a transition that embeds defence technology within national resilience, economic development, and geopolitical agency.

Exhibit 1

Core Problems solved by Defence Tech



2. Startup Landscape and Ecosystem

2.1 Ecosystem evolution and maturity distribution

India's defence tech startup ecosystem has evolved rapidly from infancy to a vibrant innovation landscape over the past half-decade. What began as a scattered set of ventures addressing niche problems is now a structured, multi-tier ecosystem spanning ideation to scale-ups driven by policy, capital, and strategic necessity.

Evolution Stages

- **Emergence (Pre-2018)** -Early pioneers worked in silos on autonomous systems and robotics, with limited recognition or formal support.
- **Policy Catalysis (2018-2020)** -The launch of iDEX (Innovations for Defence Excellence) in 2018 created open challenge platforms⁵, grants⁶, and incubation supports incentivizing startups to focus on defence problems directly⁷. Recent data shows iDEX has secured hundreds of innovation contracts worth 3000 crores, signalling tangible transition from prototype to procurement⁸. iDEX isn't just a fund, it has become the primary structured innovation-to-prototype interface between the armed forces and startups, with defined pathways for transition into mainstream procurement frameworks.
- **Growth & Diversification (2021-2023)** -Startups proliferated across drones, AI, cybersecurity, and advanced sensors, enabled by defence and commercial dual-use opportunities⁹.
- **Maturing Ecosystem (2024-Present)** The current phase is defined by the coexistence of seed to Series A/B, scaling startups, and publicly listed defence and defence-tech companies that anchor the ecosystem. While venture-backed firms increasingly engage in defence procurement and early exports, listed players in drones, electronics, simulation, and defence manufacturing contribute scale, credibility, and market signaling. Policy clarity, supply-chain localization, defence industrial corridors, and a stronger export orientation are accelerating the shift from experimentation to execution and commercialization¹⁰.

Maturity Distribution

- **Ideation & Early Stage:** A large base of startups are in proof-of-concept and prototype stages, often supported by incubators (iDEX, academic labs) and early grants. These tackle core tech gaps in autonomy, perception systems, secure comms, and simulation¹¹.
- **Growth & Scaling:** Significant cohort has progressed with venture capital backing, market validation, and initial contracts-especially in *UAVs, counter-drone systems, and AI-enabled decision tools*¹².

- **Mature & Export-Oriented:** A few leaders are graduating to international certifications and export readiness, emerging as credibility anchors for India's defence exports¹³.

Ecosystem Characteristics and Trends

- **Policy as an Engine:** Initiatives like iDEX and defence startup challenges have been core enablers of ecosystem formation, lowering barriers to entry and aligning innovation with armed forces' needs¹⁴.
- **Deep-Tech Anchors:** Startups increasingly embed AI, autonomy, and secure networking as default capabilities not features reflecting a systemic shift in what constitutes "defence tech" today¹⁵.
- **Capital Infusion and Validation:** Investment activity has transitioned from grant dependence to venture capital engagement, with funded scale-ups driving ecosystem legitimacy¹⁶.

The ecosystem's maturity distribution is skewed toward early-stage ventures, but the directional velocity, rapid progression toward growth and export-oriented companies signifies an evolving innovation pipeline that is beginning to influence strategic capability, not just tactical problem solving. This implies India is moving from a startup ecosystem of ideas to a defence innovation infrastructure with strategic depth.

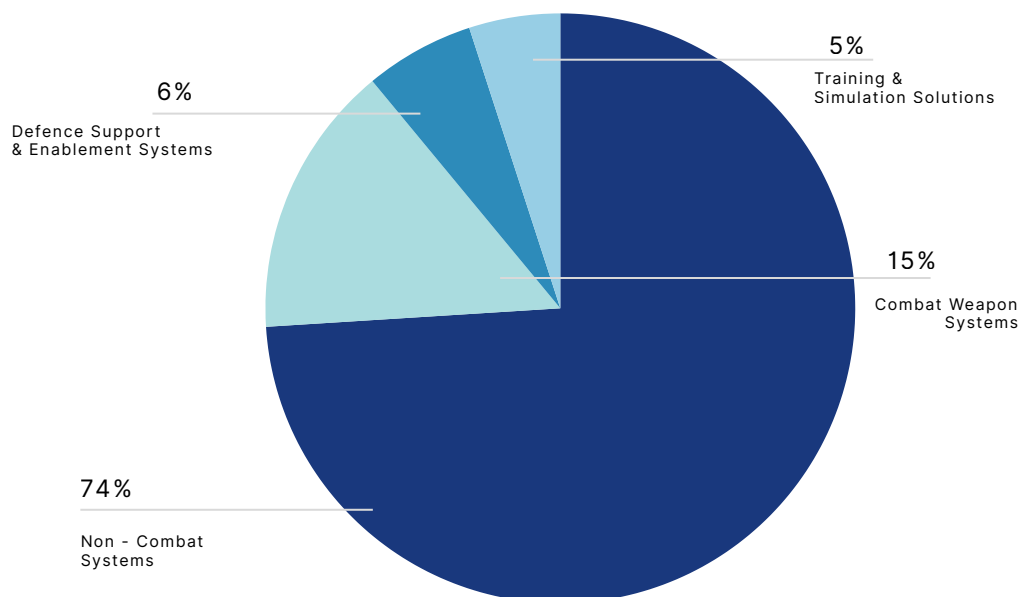
2.2 Market Concentration by Value Chain

The distribution of startups across the Indian defence-tech value chain highlights an ecosystem that is heavily skewed toward non-combat capabilities, reflecting the structural realities of defence procurement, regulatory constraints, and capital intensity. With **206** identified companies, the market is characterized by broad participation in surveillance, intelligence, and mission-support technologies, rather than direct weapons development, indicating an ecosystem that is still maturing toward full-spectrum defence capability creation.

Non Combat Systems dominate the landscape, accounting for 74% (153 companies). This concentration underscores that innovation in Indian defence tech is primarily focused on C4ISR, surveillance, counter-drone systems, communications, and intelligence platforms, where barriers to entry are comparatively lower than in kinetic weapon systems. These technologies benefit from dual-use applicability, faster iteration cycles, and clearer commercial adjacencies with

Exhibit 2

Market Concentration by Value Chain



Source: Tracxn

civil, homeland security, and industrial markets. However, this dominance also signals intensifying competition and overlap, in ISR drones and sensor-led platforms, where differentiation increasingly depends on system integration, deployment credibility, and defence procurement relationships rather than core technology alone.

In contrast, **Combat Weapon Systems represent only 15% (30 companies)** of the ecosystem, reflecting the high regulatory, capital, and certification barriers associated with offensive and strike-oriented platforms. This smaller concentration suggests that while interest in weaponised UAVs, loitering munitions, and combat platforms is rising, participation remains restricted to a limited set of players capable of navigating long development cycles and defence acceptance processes. As a result, value creation in this segment is likely to be more concentrated, with a smaller number of firms capturing disproportionate strategic relevance through platform adoption rather than volume proliferation.

Defence Support & Enablement Systems account for 6% (12 companies) of the ecosystem, delivering application- and solution-led capabilities that support defence operations across areas such as defence healthcare, logistics and cargo delivery, procurement enablement, counter-drone protection, advanced personal armour, and veterans-focused support platforms. Although numerically small, this segment plays a

critical role, supporting survivability, operational continuity, and ecosystem sustainability. The relatively low startup density here indicates that these areas are often addressed through incumbents, public sector entities, or diversified industrial players, leaving selective whitespace for startups with strong domain specialization.

Training & Simulation Solutions comprise 5% (11 companies) of the ecosystem, reflecting a niche but strategically important segment focused on combat readiness and skill development. The limited number of players suggests high technical specialization and longer sales cycles, but also points to potential platform consolidation, as immersive and synthetic training systems become embedded into long-term defence modernization programs.

Overall, the value-chain distribution indicates that commercial and innovation activity is concentrated upstream of direct combat, with startups gravitating toward systems that enhance awareness, coordination, and enablement rather than lethality. While Non Combat Systems dominate numerically, long-term strategic and financial value is likely to accrue in segments with higher entry barriers, particularly Combat Weapon Systems and select Training & Simulation platforms. As defence procurement increasingly prioritizes indigenization and system-level integration, the ecosystem is expected to transition from startup proliferation toward consolidation, partnerships, and platform-led dominance, especially within overcrowded non-combat segments.

3. Funding Trends

3.1 Funding Cycles and Structural Shifts in Defence Tech (2016–2025 YTD)

The Defence tech-India has 200+ active startups, yet funding penetration remains selective. Of these 80+ are funded, highlighting a significant filtration effect at the funding stage. This selectivity intensifies sharply beyond initial validation. Around 65 startups (~80% of funded companies) have progressed to Seed or later-stage funding, indicating that early proof-of-concept and pilot traction are achievable for a majority of funded entrants. However, only 22 startups, roughly 27% of funded companies and less than 10% of the total active ecosystem have secured Series A or later funding, highlighting a steep drop-off as companies move from prototyping into procurement-led scaling.

This space has garnered \$711M in all-time equity funding from 232 rounds. Over the past decade (2016–2025 YTD), funding activity has been cyclical rather than linear, reflecting the sector’s dependence on policy momentum, procurement readiness, and geopolitical demand rather than conventional venture growth curves. Annual funding grew

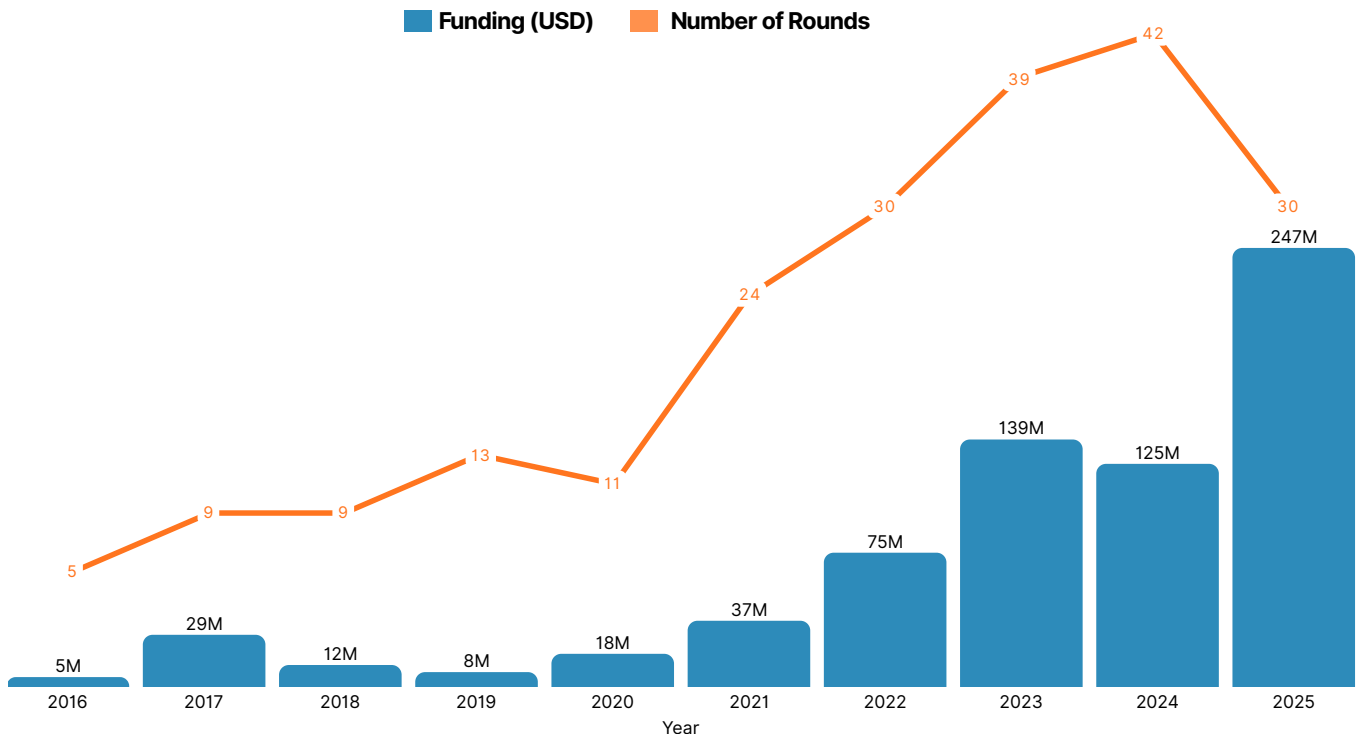
from a modest \$5M in 2016, to landmark highs of \$247M in 2025. India’s defence tech sector saw a step-up in capital inflows, with funding rising from \$37M in 2021 to \$75M in 2022.

This shift is visible in the funding step-up from \$75M in 2022 to \$139M in 2023, despite only a moderate increase in the number of rounds. The momentum sustained into 2024 (\$125M across 42 rounds) and accelerated sharply in 2025 YTD (\$247M across 30 rounds), indicating that average round sizes expanded materially even as deal velocity stabilized. The peak in 2025 was largely driven by Raphe’s landmark mega deal of \$100M, raised in Series B round, highlighting growing investor preference for companies transitioning from capability development to scaled production.

Large rounds during this period reflect investor prioritization of platform-led defence companies with demonstrated progress across key execution milestones, including system-level integration, indigenized manufacturing, qualification with defence users, and export relevance¹⁷.

Exhibit 3

Defence Tech India - YoY Funding & Funding Rounds



Source: Tracxn

At the same time, public-sector demand signals and policy frameworks played a critical de-risking role. Continued procurement engagement through the armed forces, iDEX-linked programs, and Make-in-India defence initiatives provided validation for private capital, supporting investment despite long sales cycles and regulatory complexity. Post-2022, funding rounds also saw growing participation from strategic investors, defence-aligned corporates, family offices, and mission-driven capital, supplementing traditional venture capital and reinforcing a shift toward patient, execution-focused funding¹⁸.

The net outcome has been a widening divergence between funding volume and deal count. While the number of annual funding rounds rose steadily from 30 in 2022 to 42 in 2024, total capital deployed expanded at a faster pace, driven by fewer but significantly larger rounds. By 2024–2025 YTD, funding patterns increasingly resemble scale-up and late-stage growth capital rather than exploratory venture funding. This shift signals that India's defence tech sector is being positioned as long-term strategic capability platforms and production-ready enterprises, moving beyond experimentation toward sustained deployment and institutional adoption without implying legacy or offline industrial structures.

Annual funding rounds increased from 5 in 2016 to 42 in 2024—an increase of 37 rounds over the period. The 2025 YTD has recorded 30 rounds so far.

3.2 Funding Leaders Defining India's Defence Tech Scaling Trajectory

The concentration of capital among India's most highly funded defence tech startups reveals how investors are increasingly framing the sector not as a broad venture category, but as a selective industrial scaling and national capability race with a limited number of credible execution platforms. Rather than backing a wide universe of experimental technologies, capital has clustered around companies demonstrating the ability to transition from innovation to production, certification, and long-duration defence contracts.

Raphe emerges as the clear funding leader, with \$154M raised, representing over 21% of total sector funding on its own. This includes India's only \$100M+ mega round to date, raised at the Series B stage in 2025, which marks a watershed moment for the sector. Unlike earlier large rounds oriented toward R&D or prototyping, this transaction reflects capital being deployed toward industrial-scale outcomes, including manufacturing capacity expansion, system integration, certifications, and long-term production readiness. The size, stage, and purpose of this round signal growing investor willingness to commit infrastructure-style capital to defence platforms that have demonstrated execution capability and defence user validation¹⁹.

The next tier of funding leaders reinforces this pattern. NewSpace Research and Technologies, with \$73M raised (~10% of total sector funding), represents a strategic bet on high-end aerospace platforms and advanced aerial systems tailored to military use cases. Its funding trajectory signals investor preference for companies capable of operating at the intersection of platform engineering, mission customization, and sovereign capability development, rather than pure component supply²⁰.

ideaForge, now a publicly listed company with \$53M (~8% of total funding) in total funding prior to listing, stands out as an early validation of defence tech's transition into public-market infrastructure. Its success reflects investor and market confidence in companies that achieve operational deployment with defence and homeland security users, converting early innovation into repeatable procurement-driven revenue²¹.

Garuda Aerospace, having raised \$49M (~7% of total funding), illustrates a complementary scaling thesis focused on unmanned systems with applications across defence, surveillance, and dual-use operations. Its funding highlights investor appetite for platforms that can bridge military demand with adjacent commercial and public-sector markets, improving capital efficiency while retaining defence relevance²².

CoreEL, with \$46M raised (~6% of total funding), rounds out the top cohort and signals growing interest in specialized defence manufacturing and system integration capabilities. Its inclusion among the top-funded players underscores the importance of supply-chain depth, indigenized production, and execution reliability as capital allocation criteria²³.

Across the ecosystem's \$711M in all-time equity funding, the top five defence tech companies alone account for approximately \$375M—nearly 53% of total capital deployed. This level of concentration underscores a sharply narrowing investment thesis, where a small cohort of companies is absorbing a disproportionate share of investor conviction and late-stage capital. Taken together, these funding leaders account for over half of all capital deployed in India's defence tech ecosystem, revealing a highly intentional and selective investment pattern. Capital is being concentrated into a small set of platform-led companies that combine system-level integration, manufacturability, procurement readiness, and credible export or dual-use pathways. This marks a clear shift away from exploratory venture investing toward high-conviction, long-horizon bets, where investors are effectively pre-selecting which startups are most likely to evolve into enduring defence suppliers.

Table 1

All time Top Funded Companies

| SL No. | Startup | Company Stage | Founded Year | Total Equity Funding (USD) |
|--------|----------------------------------|---------------|--------------|----------------------------|
| 1 | Raphe | Series B | 2017 | 154M |
| 2 | Newspace Research & Technologies | Series B | 2018 | 73M |
| 3 | ideaForge | Public | 2007 | 53M |
| 4 | Garuda Aerospace | Series B | 2015 | 49M |
| 5 | CoreEL | Series B | 1999 | 46M |

List of All-Time Top Funded Companies in Defence Tech-India. (Source: Tracxn)

What These Companies Reveal About India's Defence Tech Trajectory

The behaviour of India's most highly funded defence technology companies reveals how capital is increasingly being deployed not to discover innovation, but to industrialize it. Unlike early-stage venture patterns that prioritize technological novelty, late-stage funding in defence is converging around companies that demonstrate manufacturing readiness, certification progress, and alignment with long-duration defence procurement cycles.

Capital Is Selecting for Industrial Platforms, Not Experiments - The dominance of Raphe with \$154 million raised, including the ecosystem's only \$100 million-plus round, marks a structural inflection point. This funding was not oriented toward exploratory R&D, but toward scaling production capacity, system integration, certification, and long-horizon delivery commitments. Investor willingness to deploy capital at this scale signals a transition from venture-style optionality to infrastructure-style conviction, where platforms with proven execution are treated as future industrial anchors rather than startups in discovery mode.

A similar pattern is visible in **NewSpace Research and Technologies**, whose \$73 million funding trajectory reflects investor appetite for aerospace platforms capable of sovereign capability development rather than

component-level participation. The company's positioning at the intersection of advanced aerial systems, mission customization, and defence-grade manufacturing highlights why capital is concentrating around firms that can absorb complexity across the full system lifecycle.

Public-Market Validation as a Signal of Institutional Maturity - The inclusion of ideaForge among funding leaders, even after its transition to public markets underscores that capital markets are rewarding defence companies only after prolonged operational validation. With \$53 million raised prior to listing, ideaForge represents one of the earliest examples of defence tech transitioning from innovation-driven growth to procurement-backed revenue stability. Its public-market success reinforces a core theme: defence IPOs and late-stage capital are accessible only to companies that have crossed the threshold from product innovation to repeatable institutional deployment²⁴.

Dual-Use Scalability as a Capital Efficiency Lever - **Garuda Aerospace**, with \$49 million raised, illustrates a complementary scaling thesis where defence relevance is strengthened, not diluted by adjacent commercial and public-sector demand. Investor confidence here reflects the ability to amortize manufacturing, training, and operational infrastructure across multiple use cases while retaining military-grade capabilities. This dual-use pathway improves capital efficiency without compromising defence applicability, making such platforms more resilient to procurement cyclicity.

Manufacturing Depth as a First-Class Investment

Criterion- The presence of CoreEL among the top-funded cohort signals a maturing appreciation for defence manufacturing as a strategic bottleneck rather than a commoditized function. With \$46 million raised, CoreEL's funding reflects investor recognition that indigenized production, supply-chain control, and execution reliability are as critical to defence readiness as frontline platforms themselves. This marks a shift away from software-only or prototype-centric funding toward investments that strengthen the physical backbone of India's defence industrial base.

Strategic Implication: Capital as a Consolidation and Pre-Selection Mechanism

Collectively, the top five funded companies, accounting for nearly 53% of all defence tech capital deployed in India, demonstrate that the ecosystem is scaling vertically rather than broadly. Venture capital is no longer functioning primarily as a discovery engine for novel ideas; it is acting as a filtering and consolidation mechanism, pre-selecting a small number of companies most likely to evolve into enduring defence suppliers.

Funding leadership increasingly correlates with a company's ability to convert early innovation into certified, manufacturable, and deployable systems capable of sustaining long-duration defence programs. This concentration of capital is actively shaping the future contours of India's defence industrial base reinforcing scale, reliability, and mission alignment over incremental experimentation. In effect, India's defence tech funding landscape now reflects a deliberate industrial logic: capital flows toward companies that can anchor national capability, absorb institutional risk, and operate as long-term partners within the defence procurement ecosystem rather than transient technology vendors.

3.3 Geographic Clusters, Capability Hubs & Capital Concentration

India's defence tech ecosystem is geographically concentrated rather than evenly distributed, with capital and capability clustering around a limited number of urban hubs that combine engineering talent, defence institutions, manufacturing ecosystems, and proximity to procurement stakeholders. Funding data reinforces that these clusters are not accidental; they reflect execution advantages across R&D, systems integration, manufacturing, and defence engagement.

Bengaluru emerges as India's leading defence tech cluster, securing \$216M across 61 funding rounds, making it the most capitalized and broad-based ecosystem in the country. Its dominance is underpinned by a dense concentration of aerospace and defence institutions including DRDO labs, HAL, ISRO, and CAIR alongside deep software, AI, and robotics talent. The presence of multiple funded companies across stages, such as NewSpace Research & Technologies

(\$73M) and CoreEL (\$46M), indicates a full-stack cluster spanning early innovation through scale-ready defence manufacturing and platform development. Established research centres like the Centre for Artificial Intelligence and Robotics (CAIR) anchor advanced work in secure communications, intelligent systems, and robotic autonomy²⁵.

Noida represents a capital-intensive but narrow cluster, having raised \$168M across just 19 rounds, driven overwhelmingly by Raphe's \$154M funding. Unlike Bengaluru's breadth, Noida functions as a single-platform scale hub, where regional capital concentration is shaped by the presence of a dominant, production-oriented aerospace and UAV company. This pattern highlights how late-stage defence manufacturing platforms can disproportionately influence local funding profiles.

Chennai has emerged as a manufacturing-led defence cluster, raising \$88M across 26 rounds, anchored by Garuda Aerospace and Big Bang Boom Solutions. Its role is reinforced by Tamil Nadu's defence and aerospace corridor, port access, and industrial policy support, positioning the city as a UAV, components, and systems manufacturing base rather than a pure R&D hub. Across Chennai, Hosur, Salem, Coimbatore, and Trichy, defence-related manufacturing (components, drones, systems) is gaining scale, supported by industrial policy and export-oriented clusters²⁶.

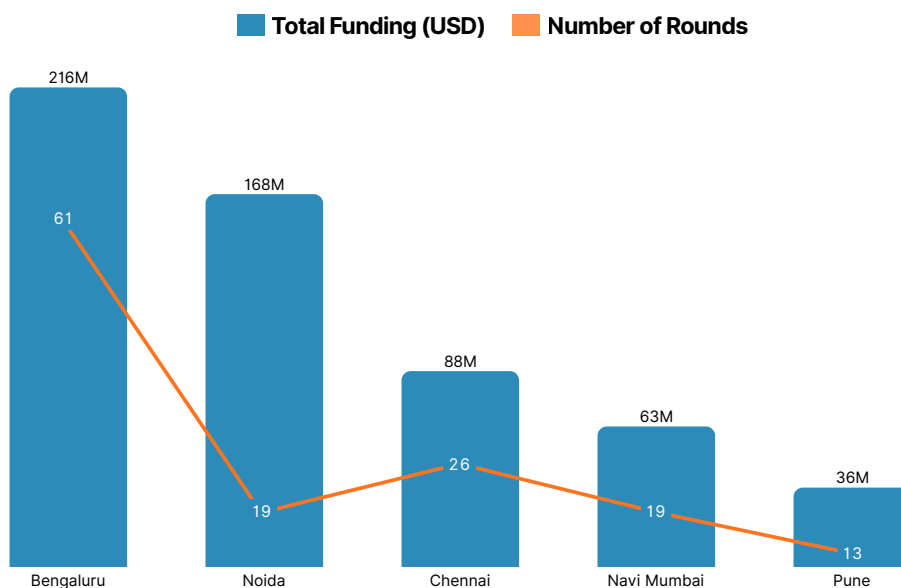
Navi Mumbai forms a compact but capital-heavy cluster, raising \$63M across 19 rounds, primarily anchored by ideaForge (\$53M). Similar to Noida, this cluster reflects a single-champion dynamic, where funding concentration mirrors the presence of a mature, publicly listed defence UAV company with established defence and homeland security deployments.

Pune, with \$36M across 13 rounds, represents a smaller but strategically relevant cluster, led by Sagar Defence Engineering (\$30M) and DroneAcharya (\$4M). Pune's ecosystem reflects strength in naval systems, engineering services, and defence training, supported by proximity to defence establishments and a strong industrial base.

Beyond these major hubs, industrial corridors in Uttar Pradesh and Tamil Nadu, along with emerging centres such as Bhubaneswar²⁷, Trivandrum (K-Space Park)²⁸, and Tirupati²⁹, are extending defence innovation into manufacturing, electronics, space-defence convergence, and dual-use technologies. These regions are less funding-dense today but play a critical role in supply-chain depth, redundancy, and export readiness.

Exhibit 4

Defence Tech India - Top 5 All time Funded Cities



Source: Tracxn

Taken together, India's defence tech geography reveals a bifurcated clustering model: cities like Bengaluru exhibit ecosystem breadth across multiple companies and stages, while Noida and Navi Mumbai demonstrate capital depth concentrated in execution-heavy platform leaders. This pattern aligns with broader funding dynamics in the sector, where capital increasingly favours localized industrial capability, procurement adjacency, and production readiness over distributed startup density. As defence tech funding continues to shift toward manufacturing scale and export orientation, geographic proximity to defence infrastructure and industrial ecosystems is likely to become an even stronger determinant of capital concentration.

The implication is that India's defence tech ecosystem is not converging toward a single national hub, but rather toward specialized regional strongholds, each anchored by a small number of platform companies capable of absorbing industrial-scale capital. As funding increasingly prioritizes manufacturing, certification, and export readiness, geographic proximity to defence infrastructure and production ecosystems is likely to become an even stronger determinant of capital concentration.

3.4 Stage-Wise Capital Allocation and Gaps

India's defence tech ecosystem exhibits a sharply skewed stage-wise capital distribution, shaped by long development cycles, certification requirements, and procurement-led risk.

As of 2025 YTD, funding activity is heavily front-loaded: Seed-stage companies have raised approximately \$118M across 174 rounds, Early-stage companies have absorbed \$527M across 56 rounds, while Late-stage funding totals just \$66M across only 5 rounds. This distribution highlights a wide experimentation funnel at entry stages that narrows dramatically as companies move toward manufacturing scale, defence adoption, and sustained production.

At the Seed stage, defence tech funding is oriented toward technical feasibility and defence relevance, rather than near-term commercial traction. The \$118M deployed across 174 Seed rounds reflects a large base of early experimentation, enabled by grants, angels, and early venture capital willing to underwrite engineering depth, prototyping, and initial testing cycles.

Notably, several Seed rounds are materially larger than typical Indian venture norms, such as Indrajaal (\$5M), DroneAcharya (\$4M), and Gamma Rotors (\$3M) indicating that even at inception, defence startups require meaningful capital to support hardware development, validation, and regulatory readiness. This underscores that early defence tech funding is less about speed-to-market and more about establishing credibility for downstream defence engagement.

Table 2

All time Seed Stage Funding Rounds

| SL No. | Startup | Round Date | Round Name | Round Amount (USD) |
|--------|--------------|-------------|------------|--------------------|
| 1 | Indrajaal | 12 Apr 2025 | Seed | 5M |
| 2 | DroneAcharya | 17 Feb 2022 | Seed | 4M |
| 3 | Gamma Rotors | 10 Jan 2025 | Seed | 3M |

Top 3 All-Time Seed-Stage Funding Rounds in Defence Tech-India (\$ = USD). (Source: Tracxn)

The Early-stage funding absorbs the largest share of capital—\$527M across 56 rounds, despite a much smaller number of companies, signaling a sharp concentration of investor conviction. At this stage, funding shifts decisively from experimentation to execution readiness, with capital increasingly backing platform-led companies capable of scaling production and integrating into defence programs.

This dynamic is exemplified by unusually large “early-stage” rounds such as Raphe mPhibr’s \$100M Series B, NewSpace Research & Technologies’ \$33M, and CoreEL Technologies’ \$30M raises. These rounds function less as incremental validation and more as long-horizon commitments to manufacturing capacity, system integration, and certification, reflecting the capital-intensive realities of defence platforms rather than conventional venture-stage progression.

Table 3

All time Early Stage Funding Rounds

| SL No. | Startup | Round Date | Round Name | Round Amount (USD) |
|--------|------------------------------------|-------------|------------|--------------------|
| 1 | Raphe mPhibr | 25 Jun 2025 | Series B | 100M |
| 2 | Newspace Research and Technologies | 11 Apr 2023 | Series B | 33M |
| 3 | CoreEL Technologies | 23 Dec 2025 | Series B | 30M |

Top 3 All-Time Early-Stage Funding Rounds in Defence Tech-India (\$ = USD). (Source: Tracxn)

Late-stage funding in India’s defence tech ecosystem is both scarce and highly selective, with only \$66M deployed across 5 rounds. While few companies reach this stage, those that do attract outsized capital relative to their peers, indicating that defence risk is not retired gradually across stages but consolidated into a small number of execution-proven firms. Large late-stage rounds, such as Big Bang

Boom Solutions’ \$29M Series C, Tonbo Imaging’s \$20M Series D, and ideaForge’s \$7M Series C, reflect investor willingness to back companies that have demonstrated survivability across procurement cycles, manufacturing scale-up, and operational deployment. Rather than broad-based scale capital, late-stage funding represents high-conviction bets on endurance and institutional trust.

Table 4

All time Late Stage Funding Rounds

| SL No. | Startup | Round Date | Round Name | Round Amount (USD) |
|--------|-------------------------|-------------|------------|--------------------|
| 1 | Big Bang Boom Solutions | 20 Sep 2024 | Series C | 29M |
| 2 | Tonbo Imaging | 3 Apr 2025 | Series D | 20M |
| 3 | ideaForge | 7 Jun 2023 | Series C | 7M |

Top 3 All-Time Late-Stage Funding Rounds in Defence Tech-India (\$ = USD). (Source: Tracxn)

Taken together, the stage-wise funding profile reveals that capital scarcity in India's defence tech ecosystem does not lie at the innovation layer, but at the scale-up transition. While early experimentation is well-funded and early-stage platforms can attract substantial capital, only a handful of companies are able to progress into late-stage financing. This reinforces the sector's evolution away from a venture-led discovery model toward a selective, production-oriented pipeline, where the ability to absorb execution-heavy capital and deliver against long-duration defence programs ultimately determines survival and scale.

3.5 Normalizing the Market: Trends in Median Deal Size

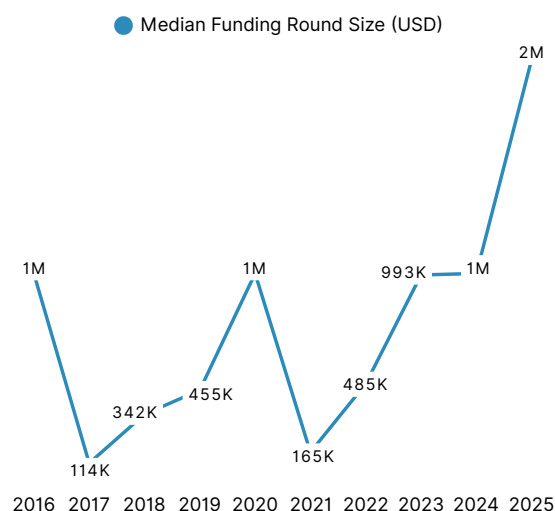
Median round size in India's defence tech ecosystem has increased structurally over time, rising from sub-\$500K levels between 2017 and 2019 to \$1M in 2024 and \$2M in 2025 YTD. In multiple recent years, median round sizes have met or exceeded the long-term median of \$723K. This increase is reflected in the median rather than being driven by a small number of outlier rounds, indicating that the typical funded startup is now raising materially larger cheques. This shift implies a tightening funding funnel: fewer companies are able to raise capital, but those that do must demonstrate the capacity to absorb larger investments. In a defence context, this typically requires evidence of technical maturity, alignment with defence use cases, and progress toward procurement or production readiness. As a result, rising median round sizes point to a more selective capital deployment environment, where funding is increasingly concentrated in startups that clear higher execution and credibility thresholds rather than being spread across a broad base of early-stage experimentation.

The elevated median observed in 2025 YTD should be interpreted in context. While based on 30 rounds, materially higher than the historical annual median of ~18 rounds

(2016–2025 YTD)—the increase reflects a market where fewer companies are raising capital, but those that do are securing significantly larger cheques. This pattern is reinforced by the concentration of funding in later-stage rounds, the emergence of large Series B financings, and capital clustering around platform-led companies with demonstrated defence user engagement, manufacturing readiness, and integration into procurement pathways. Rather than signaling renewed risk appetite, median trends point to capital discipline and consolidation, with investors prioritizing conviction-led deployment into companies positioned closer to production, certification, and long-duration defence programs, and showing reduced tolerance for speculative early-stage experimentation.

Exhibit 5

YoY Median Round Size



Source: Tracxn

3.6 Infrastructure Dominance: How Capital Is Distributed Across the Defence Tech-India Value Chain

Capital allocation across India's defence technology ecosystem reveals a distinctly platform- and asset-heavy market structure, where investor confidence is concentrated in systems that directly align with force modernization, procurement visibility, and sovereign capability development. Of the \$711M in total disclosed funding across defence-tech startups, Non-Combat Systems account for \$551M, nearly 78% of all capital deployed, underscoring a clear preference for infrastructure-oriented, dual-use, and deployment-ready capabilities over high-risk combat platforms.

Table 5

Capital Distribution Across the Value Chain

| Value chain layer | Total Funding Across Value Chain Layer (USD) |
|--------------------------------------|--|
| Non-Combat Systems | 551M |
| Combat Weapon Systems | 106M |
| Defence Support & Enablement Systems | 27M |
| Training & Simulation Solutions | 27M |
| Total | 711M |

Non-combat systems spanning logistics, surveillance, communications, counter-drone systems, space-based ISR, cybersecurity, and command-and-control enablement operate closer to recurring procurement cycles, civilian spillovers, and export-friendly classifications. Investors are effectively treating this layer as the backbone of defence modernization, where technology adoption faces fewer regulatory bottlenecks, shorter validation timelines, and broader customer applicability across defence, homeland security, and strategic enterprises.

The Combat Weapon Systems layer, despite its strategic centrality, has attracted a comparatively modest \$106M (15%) of total funding. This asymmetry is not indicative of weak interest, but rather of structural capital constraints. Combat platforms are characterized by long gestation cycles, classified testing environments, dependence on government trials, and limited addressable buyers. As a

result, capital deployment in this layer remains selective and milestone-driven, often favoring precision subsystems, guided munitions components, or niche battlefield technologies rather than full-stack weapons platforms. Funding here signals capability validation rather than scale readiness.

Defence Support & Enablement Systems, with \$27M, and Training & Simulation Solutions also, at \$27M, together account for less than 8% of total funding. While strategically important, these layers function largely as force multipliers rather than primary value owners. Simulation, digital twins, and training technologies are increasingly recognized as critical to readiness and cost optimization, but their commercial leverage remains tightly coupled to adoption by armed forces and integration with existing platforms. Consequently, capital inflows remain cautious, favoring pilots, niche deployments, and services-led models over aggressive scaling.

The resulting funding distribution highlights an ecosystem where capital follows procurement gravity rather than technological ambition alone. Investors are prioritizing layers where regulatory friction is lower, demand visibility is clearer, and technologies can be positioned as infrastructure assets rather than standalone products. Much like other strategic sectors, India's defence-tech market remains supply-constrained and institution-led, with infrastructure readiness dictating both adoption velocity and venture scalability.

As the ecosystem matures, incremental capital is likely to flow downstream into training, simulation, and support layer, but only after foundational non-combat and enabling systems achieve deeper institutional embedding. For now, value creation in Defence Tech-India remains firmly anchored in infrastructure dominance, not rapid platform proliferation.

3.7 The Investors Shaping India's Defence Tech Ecosystem

Around 116 VC firms have participated in India's defence tech funding to date. India's defence tech investor landscape is shaped by a relatively concentrated set of VCs, that pursue strategies grounded in long-term technological relevance, strategic alignment with national priorities, and founder support beyond mere capital. Rather than purely speculative bets, these investors tend to prioritise deep tech enablement, dual-use applications, and startups that can navigate complex regulatory/procurement pathways.

Table 6

Most Active VCs by Number of Rounds

| Most Active VCs | No. of Rounds | No. of Portfolio Companies | Recent Investment as Investor (Non-Exhaustive List) in USD |
|---------------------------|---------------|----------------------------|--|
| Venture Catalysts | 6 | 4 | Garuda Aerospace (Jun 11, 2025, Series B ,1.3M) |
| Hda Tech Growth | 5 | 1 | Newspace Research and Technologies (Apr 11, 2023, Series B, 33M) |
| Inflection Point Ventures | 5 | 2 | BonV Aero (Jan 30, 2025, Seed, 1.5M) |
| Accel | 5 | 2 | UNMANND (Sep 30, 2025, Seed, 2.0M) |
| Firstport Capital | 4 | 2 | BonV Aero (Jan 30, 2025, Seed, 1.45M) |

List of Most Active VCs by Number of Rounds (Non-Exhaustive List) (\$ = USD). (Source: Tracxn)

Venture Catalysts plays a foundational role in India's defence tech ecosystem by acting more as an early-stage ecosystem builder than a conventional venture fund. Its model combines capital with incubation, mentorship, and network access capabilities critical for defence-adjacent startups navigating long development cycles and fragmented demand. Rather than prioritizing immediate sector-specific returns, it focuses on enabling product-market fit and early traction in areas such as drones, robotics, and security, making it a key entry-point investor for founders building dual-use platforms with gradual defence relevance³⁰.

HDA Tech Growth represents a patient-capital archetype in India's defence tech funding landscape, operating with a family-office-style orientation focused on long-term value creation rather than rapid exits. Its thesis targets capital-intensive, complex technologies, particularly in aerospace, autonomous systems, and advanced hardware that require sustained funding, strategic partnerships, and hands-on support. By backing founders through regulatory, testing, and integration challenges, HDA Tech Growth signals credibility and long-term commitment in a sector where capital endurance is as critical as technical innovation³¹.

Inflection Point Ventures operates as a broad-based early discovery platform, democratizing access to seed capital through its large angel investor network. While not defence-specific, it plays a meaningful role in the defence tech value chain by funding early-stage teams and technologies that may later evolve into defence-relevant platforms. Its sector-agnostic, stage-flexible approach enables founders to secure initial validation and mentorship before engaging with more specialized or patient defence-focused investors, thereby expanding the top of the defence tech funnel, particularly for dual-use and deep-tech ventures³².

Publicly stated mandates across these investors converge on one pattern: support for long-horizon, execution-heavy company building, either through ecosystem-style early-stage platforms (Venture Catalysts), angel-network discovery capital (IPV), patient transformative-tech capital (HDA), or selective mainstream VC participation when category leadership is plausible (Accel). This helps explain why defence-tech funding in India tends to be relationship- and milestone-driven, with repeat participation clustering around companies that can show credible progress through validation gates (testing, integration, production readiness) rather than purely speculative tech narratives.

4. Government, Armed Forces & Industry Adoption

4.1 Role of MoD, Armed Forces & Procurement Frameworks

The Indian Ministry of Defence (MoD) has shifted from a regulator/buyer to an active orchestrator of innovation pathways, embedding defence startups and new tech directly within procurement and capability planning. Four interconnected mechanisms illustrate this strategic role:

1. Procurement is no longer just acquisition, it's innovation adoption infrastructure - Under the Defence Acquisition Procedure (DAP) 2020 and now evolving procurement reforms, the MoD has created explicit pathways for startups, MSMEs, and innovators to plug into defence demand cycles, shortening timelines and lowering traditional barriers. The iDEX framework is formally recognised within DAP 2020, allowing innovative solutions by startups and MSMEs to be formalised into contracts with the armed forces³³.

This transforms procurement from a transactional buying process into a strategic innovation pipeline where capability needs to drive contestable problem statements and co-creation, not just vendor bids.

2. iDEX functions as the primary institutional bridge between defence innovators and the armed services - Within the current procurement and innovation architecture, iDEX translates service-defined capability gaps into structured challenge programs, milestone-linked grants, and prototyping engagements with startups, MSMEs, and R&D entities. Crucially, it provides a formal pathway for successful solutions to transition beyond pilots into defence production and induction. The scale and continuity of iDEX-linked contracts running into hundreds of engagements and a growing pipeline of prospective contracts indicate that the mechanism has moved beyond experimentation into repeatable adoption. In practice, iDEX now operates as the primary interface through which operational requirements are converted into deployable technologies, with defined handoffs to acquisition councils and user services³⁴.

3. Operational requirements articulated by the Armed Forces now influence the defence innovation agenda. Under the Ministry of Defence's flagship iDEX (Innovations for Defence Excellence) framework, challenge problem statements are often sourced directly from the Indian Army, Indian Navy, and Indian Air Force, and incorporated into initiatives such as the Defence India Startup Challenge (DISC). These problem statements define real capability gaps and direct innovators toward solutions that respond to actual service needs, rather than abstract technology goals. Startups participating in these challenges receive funding and technical mentorship to develop prototypes that address these specified operational requirements, aligning their

technology roadmaps with mission outcomes and future readiness vectors³⁵.

4. Procurement frameworks are being retooled for speed and inclusion - Recognising structural delays and entry barriers in traditional defence acquisition, the Ministry of Defence has progressively recalibrated procurement mechanisms to enable faster contracting and broader participation by startups and MSMEs. Reforms under the Defence Acquisition Procedure (DAP) 2020, subsequent procurement simplifications, and the institutionalisation of iDEX as an authorised procurement pathway have introduced clearer timelines, smaller contract structures, and innovation-linked acquisition routes. Collectively, these measures reduce procedural friction that historically disadvantaged domestic innovators and embed startups more directly into defence demand cycles rather than relegating them to peripheral pilot programs³⁶.

Faster procurement cycles and dedicated startup lanes don't just accelerate delivery, they reshape market expectations around what "defence readiness" means in a technology era.

The MoD, armed forces, and procurement frameworks are shifting from buyers of finished goods to architects of collaborative innovation flows. This reorientation embeds startups and emerging tech into the lifecycle of capability development, turning policy levers and procurement decisions into strategic adoption pathways rather than bureaucratic hurdles.

4.2 DPSUs, Private Primes & Strategic Partnerships

The defence industry in India is no longer binary-public vs private but increasingly synergistic, with DPSUs, private primes, and strategic partnerships co-creating capability and driving commercial scaling. This hybrid structure is a key arbiter of how technology moves from lab to battlefield.

1. DPSUs as Capability Anchors with a Strategic Expansion Mandate

Public sector defence undertakings (DPSUs) remain foundational, producing the bulk of India's defence hardware and increasingly shaping R&D, production, and indigenisation. In FY 2024-25, DPSUs contributed around 72 % of total defence production, showcasing their central role in the industrial backbone³⁷.

DPSUs are transitioning from legacy production units to innovation integrators and ecosystem enablers, mandated not just to produce platforms but to partner with startups and private firms through tech transfers, joint ventures, and R&D collaborations. This shifts their role from "makers of

equipment" to platform integrators and capability orchestrators, crucial for scaling complex technologies.

2. Private Primes Drive Technology Infusion and Competitive Pressure

With policy liberalisation and the Make in India push, private sector participation has grown significantly in defence production and innovation, supported by simplified licensing and market access reforms³⁸.

Private primes bring:

- Capital and management agility, enabling faster tech development and scaling.
- Dual-use innovation muscle, often building on commercial advances (e.g., AI systems, networked sensing) and adapting them to defence contexts.
- Credibility through partnerships-private startups often link with primes to gain faster access to procurement channels and credibility buffers³⁹.

The private sector isn't just an alternate supplier, it is competitive pressure that catalyses DPSU transformation, raising quality, accelerating timelines, and broadening capability horizons.

3. DPSU-Private / Hybrid Strategic Partnerships

Strategic partnerships are becoming the connective tissue of the defence ecosystem:

- Many DPSUs are actively entering MoUs and JV arrangements with private manufacturing firms and startups, aligning capabilities to reduce import dependencies and co-develop technologies⁴⁰.
- National platforms like the SRIJAN indigenisation portal (linking government/industry needs with potential suppliers) and Technology Development Fund (TDF) are explicitly designed to finance joint DPSU-industry development projects⁴¹.
- The iDEX framework itself is collectively managed by DPSUs (such as HAL and BEL) and engages private innovators, serving as a formal institutional bridge between public platform integrators and private technology creators⁴².

These hybrid linkages are a systemic ecosystem accelerator blending DPSU strength (scale, heritage systems knowledge, production infrastructure) with private agility (tech adaptability, rapid iteration, commercial acumen), creating a *modular industrial pipeline* rather than isolated "public vs private" silos.

4. Enabling a New Delivery Model Through Partnerships

The emerging model isn't about competition alone but about co-creation networks:

- DPSU-startup partnerships for system upgrades and next-gen modules
- Private primes acting as prime contractors with DPSU support
- Hybrid R&D projects funded through government schemes (e.g., iDEX + TDF)

The true value of these partnerships lies in shared risk and shared capability creation where risk capital, production capacity, technical expertise, and procurement pathways are co-owned, reducing the traditional barriers between innovation and capability acquisition.

DPSUs, private primes, and strategic partnerships are no longer parallel tracks but an interlinked capability fabric for India's defence tech ecosystem. By co-developing technologies, aligning incentives through structured funding and policy frameworks, and integrating across production and procurement pipelines, this tripartite model accelerates technology adoption and enhances India's self-reliance posture in strategic defence capability.

4.3 Pilot Programs, Trials and Early Deployments

In India, pilot programs and user trials are the real "market" for defence tech. A solution isn't validated when it works in a demo, it's validated when it survives service-defined conditions, instrumentation, documentation, and repeatability. This is why adoption is less a funding problem and more a trial-to-procurement conversion problem.

1. Trials are the credibility gateway-not a formality

Defence procurement is built around lifecycle risk ("womb to tomb") and complex supplier constraints, so trials function as risk-compression: they convert uncertainty (performance, safety, maintainability) into evidence. This is explicitly embedded in the Defence Acquisition Procedure's framing of defence procurement as non-commercial and risk-heavy⁴³.

India's biggest adoption bottleneck isn't lack of innovation, it's that too few prototypes are "trial-shaped" (built for evaluation protocols, not just performance).

2. The system is moving from multi-stage trials to faster "trial bundles"

MoD has been simplifying the Make-II pathway by introducing Single Stage Composite Trials (and reducing steps like quantity vetting/scaling in delegated cases) specifically to cut time between acceptance and contract⁴⁴.

This is a structural shift: trials are being redesigned from "gatekeeping rituals" into throughput mechanisms because speed is now part of capability.

3. "Early deployment" is increasingly the real pilot

The Make/Innovation procurement chapter explicitly positions prototype development in close consultation with Service HQs and links successful development/trials to contract and production⁴⁵.

At the high end, India also uses user evaluation trials as a bridge to induction (e.g., DRDO's Pralay trials cited as user evaluation)⁴⁶.

Early deployments reduce two risks at once: technical risk (performance in real conditions) and institutional risk (user confidence + doctrine fit). The tech that gets adopted is often the tech that fits operating routines, not just specs.

4. iDEX/TDF are formalizing "pilot-to-procurement rails"

iDEX is explicitly positioned as a path to procurement under DAP 2020, and TDF is framed as a mechanism to meet tri-services needs through funded development⁴⁷.

Independent program material also notes that iDEX can shorten procurement cycles, citing early orders within ~24 months for some winners⁴⁸.

The real value of iDEX/TDF is not grants-it's de-risked interface design: problem statements → prototypes → trials → procurement visibility. That pipeline design is what converts "startup output" into "force capability."



5. Notable Companies & Strategic Case Studies

5.1 Notable and Strategically Important Players

Apart from the top-funded startups dominating India's Defence Tech narrative, a smaller set of companies is quietly reshaping the ecosystem by operating at high-leverage capability layers rather than platform scale. These startups focus on unmanned systems, immersive training, autonomous defence, and advanced electro-optical

surveillance areas where incremental innovation directly improves decision speed, survivability, and force readiness. Their strategic relevance lies not in capital intensity, but in where they intervene in the kill chain and training loop: enhancing perception, autonomy, and human-machine coordination, which increasingly define operational effectiveness in modern conflict.

Table 7

The table below lists a few of these emerging startups in India's Defence Tech.

| SL No. | Startup | Core Defence Problem Addressed | Why This Matters |
|--------|-----------------------|---|--|
| 1 | Optimized Electrotech | High-performance electro-optical sensing and tracking | Sensors, not platforms, are the true chokepoint in modern warfare. Indigenous EO/IR capability shifts India from system integration to precision capability ownership, reducing reliance on imported seekers and optics. |
| 2 | AjnaLens | Training, mission rehearsal, and human-machine interfaces | As systems grow more autonomous and complex, human-machine teaming becomes the bottleneck. Immersive training compresses readiness cycles often faster than acquiring new hardware |
| 3 | Vayudh | Autonomous decision-making and battlefield AI | Autonomy software determines how fast forces can sense-decide-act. Control here enables doctrinal flexibility without proportional force expansion |
| 4 | Indrajaal | Autonomous, layered defence against drone swarms | Counter-drone is shifting from a niche solution to baseline defence infrastructure. Systems like Indrajaal matter because they scale economically against asymmetric threats |
| 5 | BonV Aero | Long-endurance, flexible UAV operations | Hybrid VTOL platforms solve the last-mile deployment problem, enabling operations from austere or mobile bases without fixed infrastructure |

List of other notable startups in India's Military Tech. (Source: Tracxn)

For India, these firms represent the transition from assembling defence systems to owning the logic, perception, and response layers that define future military effectiveness.

5.2 Strategic Case Studies: How Breakout Defence Tech Companies Execute

Breakout defence-tech companies rarely “win” by building the biggest platform first. They win by choosing a narrow

Table 8

The table below lists a few of these emerging startups in India's Defence Tech.

| Company | How they execute | Operational Signals | What to watch |
|-----------------------|--|--|--|
| Optimized Electrotech | Starts at the subsystem choke-point (EO/IR + AI) and expands outward (surveillance → seekers). This is a smart wedge because sensing quality defines downstream autonomy and targeting reliability. | Company positioning in high-end EO surveillance (optimizedelectrotech.com); Series A to expand AI surveillance (YourStory.com); “Harpy Sight” imaging seeker positioning (The Defense News); https://optimizedelectrotech.com | If they standardize sensing modules across multiple platforms (UAVs, border towers, precision systems), they become infrastructure (repeat orders) rather than project-based deployments. |
| AjnaLens | Attacks readiness bottlenecks instead of hardware bottlenecks: immersive training and human-machine interfaces. This compresses training cycles and upgrades capability without waiting for new platforms. | Defence-focused XR offerings (ajnalens.com); Collaboration narrative with Indian defence/DRDO (Analytics India Magazine); https://ajnalens.com | XR only scales when it becomes a training stack (content + devices + deployment + refresh cycles). Watch for repeatable rollouts across units (not one-off pilots). |
| Vayudh | Owns the smallest operational unit (nano-drone ISR) where adoption friction is lower and usage frequency is high. They position around “precision surveillance” and tactical utility rather than generic drone narratives. | Company highlights “Atri” nano drone showcased at DefConnect (Vayudh); Funding used for R&D/manufacturing and deployments (circuitdigest.com); https://vayudh.com | The strategic leap is moving from “a drone” to a fleet doctrine (training, spares, maintenance, unit-level integration). Watch for structured deployment + sustainment signals. |
| Indrajaal | Builds wide-area counter-UAS as layered infrastructure, not a point solution. Their execution bias is toward integration (radar/RF/AI/C2) and showcasing in controlled test environments + critical-infra narratives. | Indrajaal product positioning and test facility demos (Indrajaal); Public unveiling and wide-area C-UAS claims (Business Standard); Reported critical-infrastructure deployments (Indrajaal Infra) (The Times of India); https://indrajaal.in and https://grenerobotics.com/indrajaal/ | Counter-UAS becomes sticky when it integrates with existing security layers. Watch for interoperability + certification + multi-site rollouts, which convert it into “baseline defence infra.” |
| BonV Aero | Anchors on heavy-lift / logistics + eVTOL adjacencies, which tend to attract long-term institutional buyers and industrial partners (more predictable than pure ISR drone markets). | Company positioning on heavy-payload/high-altitude/logistics UAVs (Bonvaero); Funding to expand R&D and production + collaboration plans (ETManufacturing.in); https://bonvaero.com | The scale inflection comes from manufacturing repeatability and reliability metrics. Watch for production capacity expansion translating into institutional orders, not just prototypes. |

List of other notable startups in India's Military Tech. (Source: Tracxn)

wedge positioned along a procurement-intensive adoption path defined by mandatory user trials, system interoperability requirements, and regulatory or quality compliance before expanding into adjacent modules once credibility is established. Across the companies below, the common execution pattern is capability-first productization: converting R&D into deployable systems with clear operators, documentation, and integration hooks, so adoption becomes a procurement decision, not a science experiment.

Across these case studies, a consistent execution pattern emerges: enter through a narrow, high-friction capability wedge; prove deployment under operational constraints; then expand horizontally into adjacent layers. The next inflection point for all these companies is not visibility or funding, but repeatability-standard deployments, sustainment pathways, and institutional adoption that convert innovation into enduring defence capability.

5.3 What These Companies Reveal About India's Defence Tech Trajectory

Taken together, India's emerging and mid-scale defence technology companies highlight a pattern of innovation centered on capability depth rather than capital scale. Unlike earlier defence industrial phases that emphasized import substitution through licensed production or system assembly, these firms are developing indigenous capabilities

across autonomy, sensing, training, ISR, and decision-support layers that directly affect operational performance. This pattern aligns with procurement reforms under the Defence Acquisition Procedure (DAP) 2020 and innovation-linked mechanisms such as Innovations for Defence Excellence (iDEX), which explicitly recognize indigenous innovation as a procurement input rather than a post-tender enhancement. The strategic relevance of these companies lies in ownership of intellectual property, software-defined architectures, and upgrade pathways, attributes valued by defence users even in the absence of industrial-scale deployment⁴⁹.

At an ecosystem level, these innovation patterns help explain why certain capability layers attract sustained defence user engagement before attracting large pools of capital. By focusing on deployability, interoperability, and operational integration, these companies reduce adoption friction during trials and early deployments, even when production scale remains limited. This mirrors documented global defence technology trends that emphasize integration, adaptability, and networked operation over standalone hardware performance. At an ecosystem level, such innovation signals help shape how investors evaluate future opportunities by highlighting which capability layers are becoming strategically relevant, even before large capital deployment occurs. As a result, these companies contribute to defining the contours of India's defence innovation landscape by demonstrating deployable, interoperable, and upgrade-ready solutions rather than purely experimental technologies⁵⁰.

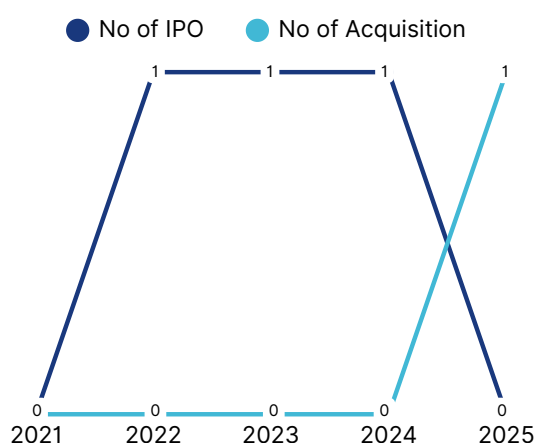


6. Exit Landscape & Strategic Outcomes

India's Defence Technology ecosystem has witnessed selective but strategically significant acquisition and IPO activity, reflecting a market that is transitioning from fragmented innovation to capital-market validation and industrial consolidation. Unlike consumer or enterprise technology sectors, exit pathways in defence are shaped by heightened sovereign oversight of strategic assets, regulatory scrutiny around foreign ownership and control, and the need to ensure continuity of supply for critical military programs. These factors do not preclude exits, but introduce additional approval, compliance, and integration considerations that naturally limit exit frequency. Combined with long procurement cycles and stringent regulatory oversight, these factors result in fewer exit events overall, but render each acquisition or public listing disproportionately important as a signal of ecosystem maturity and institutional confidence.

Exhibit 6

YoY Exit (2016 - 2025)



Source: Tracxn

6.1 Acquisition Landscape: Capability Absorption Over Scale Expansion

To date, India's Defence Tech has witnessed 3 acquisitions. Acquisition activity in India's defence technology ecosystem has been limited but strategically targeted, with transactions centered on absorbing mission-critical capabilities, defence-grade IP, and trusted vendor status rather than scaling customer reach or revenue multiples. Each acquisition to date reflects a specific gap-filling or capability-deepening motive aligned with long defence procurement cycles and indigenization priorities.

Zen Technologies' acquisition of Unistring Tech Solutions (2018) reflects a more focused, vertical integration play. Unistring's expertise in simulation and training systems strengthened Zen's position as a full-spectrum defence training and simulation provider, expanding its ability to offer integrated solutions across live, virtual, and constructive (LVC) training environments⁵¹.

Adani Enterprises' acquisition of Alpha Design Technologies (2018) marked one of the earliest large-conglomerate entries into India's defence manufacturing value chain. Alpha Design brought with it decades of experience in avionics, electronics, and system integration for the armed forces. This acquisition allowed Adani to rapidly bootstrap credibility, certifications, and supplier relationships, compressing what would otherwise have been a multi-year trust-building process with defence customers⁵².

Sanlayan's acquisition of Versabyte Data Systems (2025), a well-established supplier of defence power electronics to strengthen India's indigenous defence electronics capabilities and support import substitution in critical military components. The partnership combines Versabyte's expertise in high-reliability power systems with Sanlayan's broader defence R&D and product portfolio, enabling expanded systems-level integration across radar, electronic warfare, secure communications, and related platforms while preserving Versabyte's operational independence under the Sanlayan umbrella⁵³.

These transactions indicate that defence acquisition in India is less about consolidation and more about system capability completion. Large groups are effectively "buying time" by acquiring firms with proven defence clearances, domain certifications, and program-level credibility assets that cannot be easily built through greenfield R&D alone.

Table 9

List of Acquisitions

| SL No. | Startup | Acquisition Date | Acquired By |
|--------|---------------------------|------------------|-------------------|
| 1 | Unistring Tech Solutions | 14 Aug 2018 | Zen Technologies |
| 2 | Alpha Design Technologies | 13 Dec 2018 | Adani Enterprises |
| 3 | Versabyte Data Systems | 27 Oct 2025 | Sanlayan |

List of Acquisitions in India's Defence Tech. (Source: Tracxn)

6.2 IPOs: From Defence Suppliers to Public-Market Institutions

India's defence-tech ecosystem has witnessed 5 startup-led IPOs since 2010, reflecting investor confidence in long-term defence spending, export potential, and indigenization-driven demand visibility. IPO activity in India's defence tech ecosystem, while modest in absolute numbers, provides stronger signals of sectoral maturity than acquisition data. Defence IPOs typically occur only after prolonged validation through defence contracts, making them a marker of institutionalization rather than speculative growth.

Zen Technologies' IPO (2011) reflected rising demand for indigenous simulation and training systems. The listing enabled Zen to scale R&D in combat simulators and anti-drone training platforms, reinforcing its position as a core supplier within India's defence training ecosystem⁵⁴.

aerpace's listing (2012) though smaller in scale illustrates early capital-market participation by defence-aligned engineering firms, particularly those serving aerospace and precision manufacturing segments. More recent IPOs indicate a shift toward platform-led and product-centric defence companies⁵⁵.

Table 10

List of IPOs since 2010

| SL No. | Startup | IPO Date |
|--------|----------------------|-------------|
| 1 | C2C Advanced Systems | 3 Dec 2024 |
| 2 | ideaForge | 7 Jul 2023 |
| 3 | DroneAcharya | 23 Dec 2022 |
| 4 | aerpace | 11 Aug 2012 |
| 5 | Zen Technologies | 23 Mar 2011 |

List of IPOs in India's Defence Tech. (Source: Tracxn)

DroneAcharya's IPO (2022) reflects the democratization of unmanned systems and drone training under evolving UAV regulations. Rather than pure manufacturing, DroneAcharya's listing signals market appetite for services and skilling layers within the broader defence drone ecosystem.

ideaForge's landmark IPO (2023) represents a pivotal moment for India's defence tech narrative. As a UAV manufacturer with deep defence and homeland security penetration, ideaForge's public listing validated unmanned systems as a scalable, exportable defence product category moving beyond pilot programs into repeatable procurement and international markets⁵⁶.

C2C Advanced Systems' IPO (2024) further reinforces this trend, with its focus on secure communications and defence electronics positioning it as a critical enabler of network-centric and data-driven military operations.

India's defence IPOs reveal a progressive shift from component suppliers to system and platform providers. Public markets are increasingly rewarding firms that sit closer to mission outcomes, data flows, and operational readiness, rather than standalone hardware suppliers.

6.3 What Exits Reveal About India's Defence Tech Maturity

Taken together, acquisition and IPO trends reveal a defence tech ecosystem that is institutionalizing rather than hyper-scaling. The scarcity of exits is not a weakness, it reflects the sector's high barriers to entry, strategic sensitivity, and long gestation cycles.

- **Acquisitions in India's defence tech ecosystem function primarily as indigenization accelerators rather than market roll-ups.** The three recorded transactions—Zen–Unistring, Adani–Alpha Design, and Sanlayan–Versabyte were all targeted at internalizing defence-qualified capabilities, certifications, and established supplier credentials in areas such as simulation, avionics, and defence electronics. Each acquisition was used to compress time-to-credibility with defence customers, reinforcing acquisition as a mechanism for capability absorption and trust transfer rather than consolidation-led scale.

- **IPOs reflect durability and procurement-backed revenue visibility rather than growth optionality.** The five defence tech IPOs spanning Zen Technologies, aerospace, DroneAcharya, ideaForge, and C2C Advanced Systems share a common trait. The five defence tech IPOs reflect companies that spent multiple years building defence-aligned credibility, through procurement contracts, certified supply roles, or defence-adjacent services, before accessing public markets. Public-market access has favored companies that demonstrate survivability through multiple procurement cycles, regulatory compliance, and repeat orders. This positions defence IPOs as signals of institutional trust and long-horizon demand alignment, not near-term growth acceleration.
- **Exit pathways reward system-level relevance over horizontal breadth.** Across both acquisitions and IPOs, successful exit candidates are those positioned closer to mission outcomes integrated training systems (Zen), UAV platforms (ideaForge), secure communications infrastructure (C2C), and defence electronics (Alpha Design, Versabyte) rather than standalone component suppliers or purely software-led startups.

As defence budgets rise and export ambitions scale, exit activity is likely to increase but it will remain selective, state-influenced, and capability-driven, rather than volume-led. For investors and founders alike, this reinforces a core truth of defence tech in India: endurance matters more than speed, and credibility matters more than valuation optics.



7. Macro Economic Factors Driving India's Defence & Military Landscape

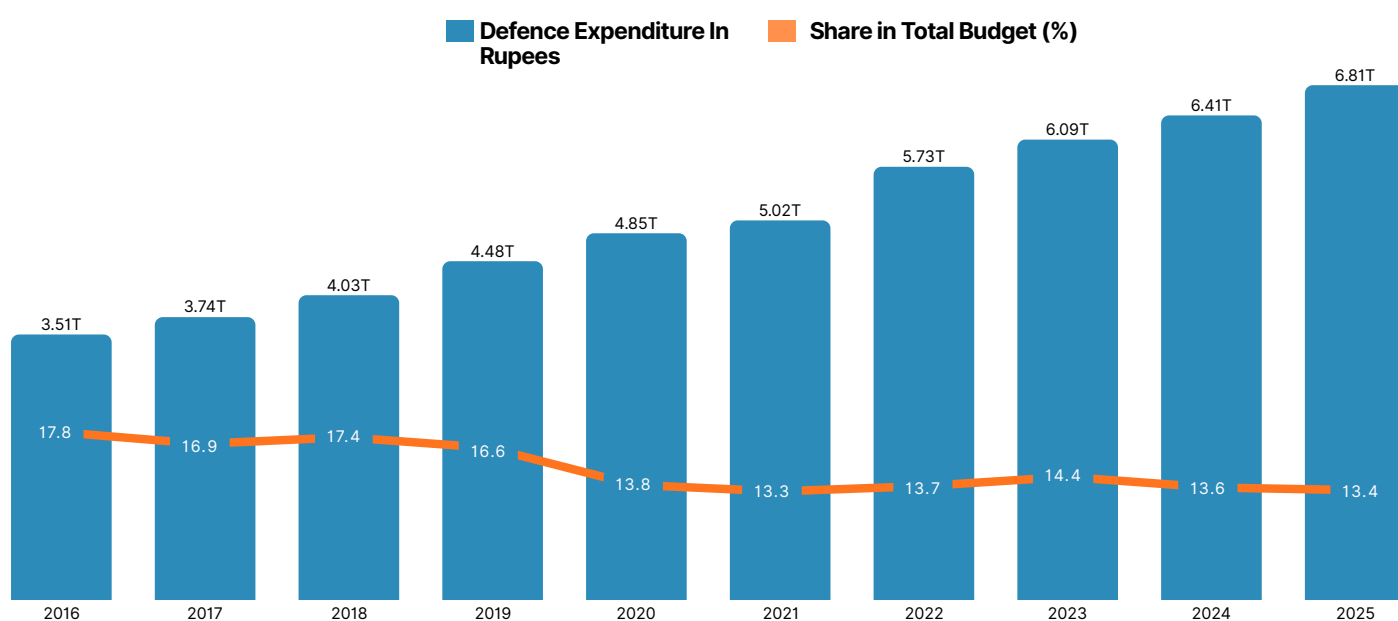
7.1 India's Defence Budget: The Rising Story

In FY 2025–26, India allocated ₹6.81 Trillion (\$78.7B) for defence. This is a 6.26% increase over the revised expenditure of ₹6.41 Trillion (\$74.1B) in FY 2024–25⁵⁷. The rise reflects the government's growing commitment to national

security⁵⁸. The FY 2025–26 allocations account for 13.4% of the total Union Budget, showing the government's commitment to strengthening national security and rapidly modernizing the Armed Forces⁵⁹. This budget allocation is aimed at strengthening frontline capabilities alongside deepening domestic manufacturing through active industry participation⁶⁰.

Exhibit 7

India's Defence Expenditure & Share in Total Budget (%)



Source: PRS Legislative Research⁶¹

Note: Defence figures are based on Union Budget Actuals up to FY 2023–24, Revised Estimates for FY 2024–25, and Budget Estimates for FY 2025–26

This allocation reflects the government's strategic intent to balance operational readiness, technological transformation, and self-reliance (Atmanirbhar Bharat) in defence manufacturing. It also anchors India's broader economic goals under the vision of Viksit Bharat @ 2047, with the armed forces envisioned as a technologically advanced force structure.

India's defence policy focus continues to emphasise capability modernisation, indigenisation, and export orientation, anchored in long-standing structural reforms rather than annual budget cycles. Initiatives such as Atmanirbhar Bharat in defence, the Defence Acquisition Procedure (DAP) framework, and sustained support for domestic R&D institutions reflect a strategic push toward reducing import dependence, strengthening local supply chains, and enabling private-sector participation across

platforms and subsystems. In parallel, the government has articulated ambitions to expand defence exports and integrate Indian firms into global defence value chains, positioning defence manufacturing as both a strategic and economic lever over the long term.

7.2 Defence Expenditure of India Compared With Other Top GDP Nations

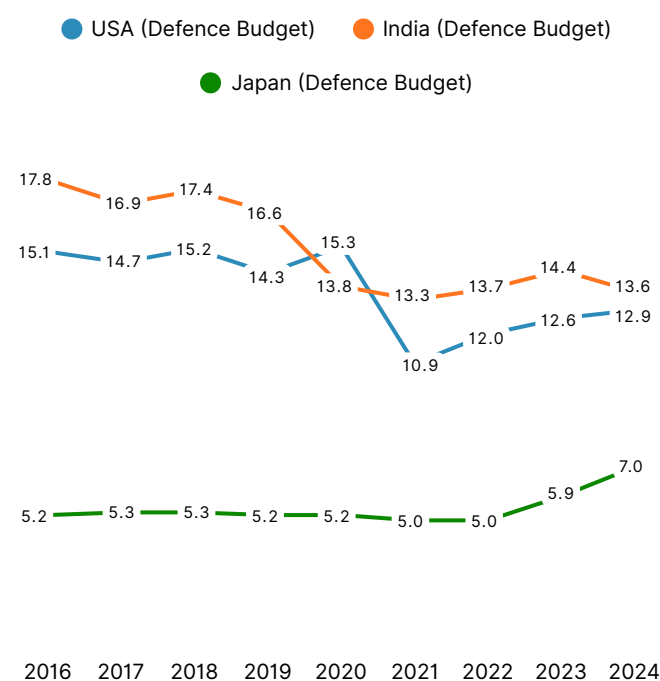
Between 2016 and 2024, the share of defence expenditure in total government spending across top GDP nations (USA, India, and Japan) followed distinct trajectories. For consistency, this share is measured as defence outlays divided by total government outlays. Looking at this ratio helps reveal not just the scale of defence budgets in absolute terms, but also the relative priority governments assign to defence within their overall spending.

The USA experienced peaks followed by declines and partial recoveries, while Japan remained stable before a sharp rise in recent years. On the other hand, India declined and then stabilized. These patterns reflect differing priorities, budgetary pressures, and evolving security environments across the three nations.

Overall, India maintained the highest defence budget share among the three nations until 2019, with the USA taking the lead in 2020. From 2021 onward, India regained the top position and retained it through 2024.

Exhibit 8

Percentage Share of Defence Expenditure in Annual Budget



Defence Expenditure (% of Total Budget) : USA, India, and Japan (2016-2024)⁶²
(The financial years of the three countries may be different).

As of early 2026, detailed consolidated data for the defence expenditure shares of the USA and Japan for 2025 (measured as a share of total government spending) have not yet been officially published in standard cross-country comparative sources, and remain broadly in line with the trends observed through 2024. However, preliminary national budget releases show continued commitments to defence spending. In India's case, the Union Budget 2025–26 allocated ₹6,81,210.27 crore to the Ministry of Defence,

representing about 13.45 % of total government expenditure and marking a 6.26 % increase over the FY 2024–25 defence budget, underscoring the persistent prioritisation of defence within the national fiscal framework amid ongoing modernisation and self-reliance initiatives.

United States

The US defence budget consistently accounted for around 14–15% of total expenditure between 2016 and 2020. In 2021, the share temporarily eased to 10.9%. This decline did not reflect a reduction in defence spending, which actually remained elevated, but rather a higher increase in the overall federal outlay. From 2022 onward, the share rebounded, averaging 13.1% in 2022 and 2023, before moderating slightly to 12.4% in 2024⁶³. The US defence outlay for FY24 stood at \$852B, up from \$806B in FY23⁶⁴. US defence budget is aimed at its will to modernise the defence ecosystem as per 21st century security challenges⁶⁵. U.S. defence spending for 2025 is estimated near \$895 billion, placing it well ahead of other nations in absolute terms⁶⁶.

Japan

Japan's defence budget share held steady at around 5% from 2016 through 2022, before rising to 5.9% in 2023 and further to 7.0% in 2024, the highest level in the nine-year period. The FY2025 allocation of ¥8.7 Trillion (\$55.1B) builds on this growth, focusing on stand-off defence, integrated air and missile systems, and counterstrike capabilities as part of a long-term modernization strategy⁶⁷. Japan's total defence budget for 2025 is estimated at around \$57 billion in absolute terms⁶⁸.

India

India's defence budget share was around 16–18% from 2016 to 2019, which dropped and remained stable at 13–15% for the period 2020–2025. This trend can be attributed to several factors including evolving government budget priorities, and India's strategic defence needs⁶⁹. In FY 2024–25, India's defence ministry was allocated ~₹6.21 lakh crore (12.9 % of total government expenditure)⁷⁰. For FY 2025–26, the defence allocation rose to ₹6,81,210.27 crore (~13.45 % of total government expenditure), one of the highest shares among key ministries⁷¹.

8. The Road Ahead: India's Defence Tech Trajectory

8.1 Indigenous Capability, Dual-Use & Export Potential

India's defence tech trajectory over the next decade will be defined less by platform ownership and more by capability depth, dual-use scalability, and export readiness, driven by three converging forces: the limits of capital-intensive, platform-led development; policy emphasis on modular indigenisation and subsystem-level self-reliance; and the commercial necessity for startups to access non-defence markets to sustain scale. As a result, value creation is increasingly shifting toward mission-critical subsystems, software-defined capabilities, and technologies that can serve both military and civilian applications, while meeting global compliance and export standards. The ecosystem is now entering a phase where strategic intent, industrial capacity, and startup-led innovation are beginning to align.

Indigenous capability is shifting from assembly to control over critical layers.

While earlier indigenisation efforts focused on local manufacturing and licensed production, current defence startups and private players are increasingly building core IP across sensors, autonomy, AI algorithms, EW subsystems, and mission software. This aligns with MoD's push under DAP 2020 and subsequent reforms that prioritise Indigenous Design, Development and Manufacturing (IDDM) categories in procurement.

True self-reliance is emerging not at the platform level, but at the upgrade and iteration layer where control over software, data, and electronics determines battlefield relevance over time.

Dual-use technology is becoming the economic backbone of defence innovation.

Many defence tech companies now operate at the intersection of military and civilian markets spanning drones, space-based ISR, cybersecurity, advanced materials, and simulation technologies. This dual-use orientation allows startups to access commercial revenues, faster iteration cycles, and global customers beyond defence alone. Dual-use scalability is reducing the traditional dependency on slow, episodic defence orders, making the ecosystem more resilient and venture-investable⁷².

Export potential is shifting from aspiration to structural design choice.

India's defence exports have crossed USD 2.6 billion annually and are officially targeted to exceed USD 5 billion in the near term, supported by export clearances, government-to-government frameworks, and private sector participation. Increasingly, startups are designing systems to meet NATO compatibility, cost-performance thresholds, and rapid deployability demanded by emerging and mid-tier defence markets.

Export orientation is forcing Indian companies to adopt global engineering standards early raising product quality and interoperability even for domestic deployments.

Strategically, India is moving toward a hybrid defence-industrial model.

Public sector units remain critical for scale-heavy platforms, but innovation velocity is now driven by startups and private firms operating in partnership with the armed forces through iDEX, service innovation cells, and fast-track trials.

This hybrid model balances sovereign control with market-driven innovation, positioning India to compete not just as a buyer or assembler, but as a credible defence technology supplier globally⁷³.

Overall, India's road ahead in defence tech is defined by a convergence of indigenous IP ownership, dual-use commercial logic, and export-first system design marking a decisive shift from reactive indigenisation to proactive capability leadership.

8.2 AI, Autonomy & Next-Gen Warfare Systems

India's defence tech trajectory is increasingly being shaped by AI-driven decision systems, autonomous platforms, and software-defined warfare architectures reflecting a broader shift in how modern militaries generate combat advantage.

AI is moving from analytics to operational decision-making.

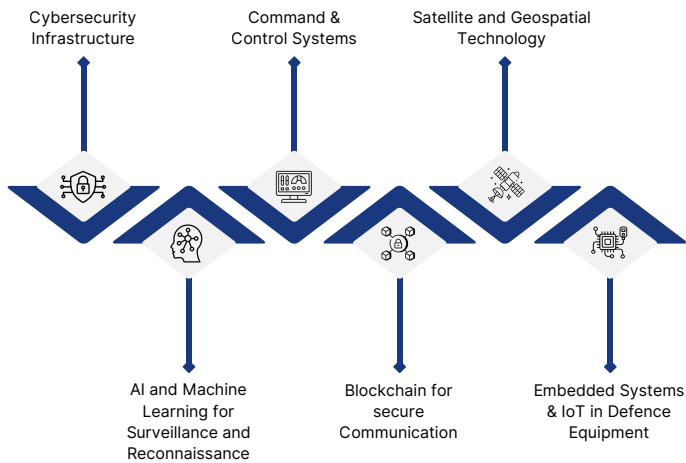
Indian defence startups and integrators are no longer using AI merely for post-mission analysis or surveillance tagging. Instead, AI is being embedded into real-time ISR, target recognition, threat prioritisation, predictive maintenance, and command-and-control (C2) systems. This aligns with global military trends where algorithmic speed is becoming a decisive advantage in contested environments⁷⁴. The competitive edge is shifting from firepower to decision latency, forces that can observe, decide, and act faster will dominate future engagements.

Autonomy is emerging as a force multiplier, not a manpower replacement.

Across unmanned aerial, ground, and maritime systems, Indian companies are building autonomous capabilities focused on persistent surveillance, swarm coordination, logistics, and high-risk missions, rather than full human substitution. This pragmatic autonomy approach mirrors doctrines adopted by the US, China, and Israel, where humans retain command while machines handle scale and speed⁷⁵.

Autonomy in India is being shaped by operational necessity and cost constraints, making systems more deployable and export-friendly for emerging defence markets.

Exhibit 9

AI, Autonomy & Next-Gen Warfare Systems**Next-gen warfare systems are increasingly software-defined and modular.**

From counter-drone grids to networked battlefield sensors and electronic warfare systems, Indian defence tech is converging on modular, upgradeable architectures that can evolve without full platform replacement. This mirrors global shifts toward network-centric and multi-domain operations.

Software-defined systems reduce obsolescence risk allowing India to sustain long-term relevance even with constrained defence budgets.

Civil-military tech convergence is accelerating capability development.

Many AI and autonomy capabilities leveraged in defence computer vision, edge computing, robotics, digital twins are drawn directly from India's commercial tech ecosystem. This convergence lowers development costs and accelerates iteration cycles⁷⁶.

India's advantage lies in its large civil tech talent base, enabling defence systems to evolve at software timescales rather than traditional defence procurement timelines. Looking ahead, India's next-gen warfare systems will be defined less by singular platforms and more by interoperable AI-enabled networks of systems, positioning the country to compete in future conflict environments where autonomy, data dominance, and algorithmic warfare are central to strategic superiority.

8.3 Key Risks, Bottlenecks & Structural Caveats

Despite strong momentum, India's defence tech trajectory faces structural risks that could constrain scale, speed, and strategic impact if left unaddressed. These challenges are less visible than funding or policy headlines but are decisive at the system level.

Procurement velocity remains the single biggest bottleneck.

While frameworks like iDEX and DAP 2020 have lowered entry barriers, transitioning from trials to large-scale induction remains slow and unpredictable, especially for startups. Lengthy evaluation cycles, fragmented user requirements across services, and limited repeat orders create revenue uncertainty.

Without faster post-trial absorption, startups risk becoming perpetual prototypes technically capable but commercially fragile.

Capital constraints emerge beyond early-stage innovation.

Most defence startups can raise seed and Series A capital, but growth-stage funding for hardware-heavy scaling, certification, and exports remains limited. Defence timelines are misaligned with traditional VC return horizons⁷⁷. The ecosystem risks a "missing middle," where promising technologies stall before achieving manufacturing and export scale.

Dependence on imported critical components persists.

Despite progress in indigenisation, key dependencies remain in semiconductors, high-end sensors, propulsion systems, and specialised materials. Global supply-chain disruptions or export controls can directly impact readiness⁷⁸. Strategic autonomy is constrained not by platforms, but by subsystem fragility, particularly in electronics and deep tech.

Talent concentration and security constraints limit scaling.

Advanced defence AI, EW, and systems engineering talent is scarce and often clustered in a small number of firms. Additionally, security clearances, restricted data access, and limited test infrastructure slow broader ecosystem participation. Innovation velocity is increasingly gated by institutional access, not just technical skill.

Export execution faces geopolitical and regulatory friction.

While export intent is rising, companies still face complex licensing, diplomatic dependencies, and lack of defence-focused export financing, especially for smaller firms. Export success will depend as much on state-backed diplomacy and financing as on product competitiveness.

In summary, India's defence tech ecosystem has crossed the innovation threshold but its long-term success hinges on resolving procurement inertia, scale capital gaps, subsystem dependencies, and export execution risks. Addressing these caveats will determine whether India becomes a global defence technology supplier or remains a strong but domestically bounded innovator.

9. Strategic Outlook

India's defence technology ecosystem is entering a decisive transition, from a phase defined by experimentation and capability catch-up to one shaped by institutional adoption and early-stage industrial consolidation. While fully self-reliant, end-to-end defence platforms remain a long-term objective, the current phase is marked by a more consequential shift: innovation is no longer being validated at the margins of procurement but is increasingly influencing how operational requirements are scoped, trials are structured, and capabilities are absorbed into force planning. This marks a structural elevation of defence tech from startup-led innovation to infrastructure-grade capability building.

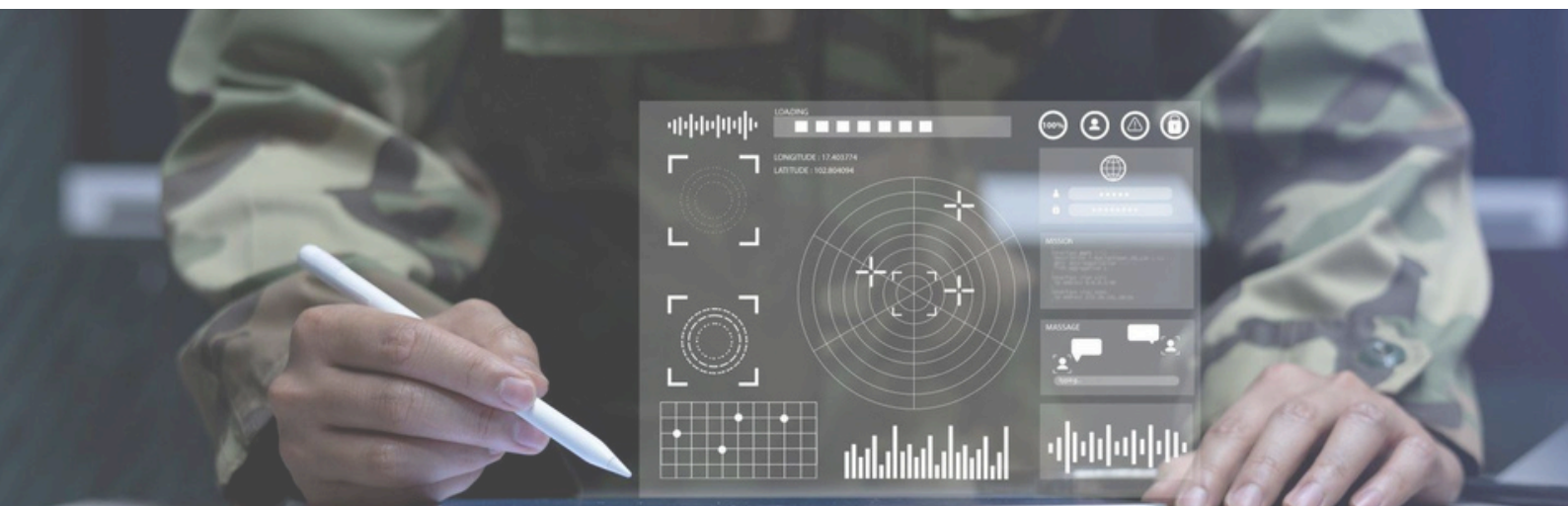
This transition introduces a new set of constraints and selection pressures. For policymakers and the armed forces, the binding challenge is no longer technology availability but conversion velocity, specifically, shortening trial-to-procurement cycles while ensuring system-level integration across platforms, commands, and legacy assets. Without this, innovation risks remaining fragmented and episodic rather than compounding into deployable force multipliers.

For startups and industry players, the basis of competition is shifting decisively. Breadth of innovation and rapid prototyping, once sufficient to secure pilots and grants are giving way to deeper execution requirements: manufacturing readiness, certification, interoperability with existing defence

architectures, and long-term sustainment across multi-decade lifecycles. This structurally favours firms that can operate across development, production, and post-deployment support, and filters out those optimized only for early-stage innovation.

For investors, this evolution implies a redefinition of value creation. Returns are increasingly concentrated in a narrow cohort of companies capable of absorbing infrastructure-scale capital, navigating defence procurement timelines, and operating as long-term capability partners rather than episodic technology vendors. Capital efficiency gives way to endurance, balance-sheet strength, and institutional credibility as primary differentiators.

Ultimately, India's defence tech trajectory will be shaped less by headline funding rounds or startup proliferation and more by uneven, path-dependent progress across the value chain. As indigenous capability development, dual-use scalability, and export orientation converge, the ecosystem is likely to crystallize around a small but durable set of capability anchors—firms that sit at the intersection of technology, manufacturing, and institutional trust. These anchors, rather than sheer startup volume, will define India's strategic autonomy and global defence relevance over the coming decade.



10. Appendix

Appendices

Appendix A: Research Methodology

A.1 Research Scope & Data Cut-Off

The Defence Tech-India (DT-I) report maps private-sector, startup-led, and emerging defence technology companies operating in India, with a focus on firms developing technology-driven solutions for military and defence forces.

The scope includes:

- Companies delivering indigenous or India-based defence technologies
- Dual-use technology firms with clear military or defence deployment pathways
- Defence-focused solution providers aligned to India's procurement, indigenisation, and export ecosystem

All company, funding, and ecosystem data considered in this report is based on information available up to January 12, 2026, unless otherwise specified.

A.2 Included Categories

Research is structured around a dual analytical lens, applied consistently across the report. Companies are classified into the following capability categories based on primary product focus and end-user application:

Vertical Defence Capability Value Chain

- Non-Combat Systems
- Combat Weapon Systems
- Defence Support & Enablement Systems
- Training & Simulation Solutions

Each company is assigned to a single primary value-chain layer based on its core defence offering, even if it operates across multiple segments.

A.3 Data Sources

This report synthesizes insights from a combination of secondary research, proprietary databases, and policy documentation, including:

Market intelligence databases:

Tracxn (startup mapping, funding, and company classification), official, government-released sources, budgetary disclosures, MOD disclosures and others.

Secondary sources:

Government policy documents (MoD, DRDO, DAP 2020, iDEX releases), parliamentary committee reports, defence export statistics, company disclosures, press releases, white papers, and defence-focused media publications.

Expert and ecosystem inputs:

Insights from industry briefings, startup founder interviews (where disclosed), defence exhibitions (Aero India, DefExpo), and ecosystem accelerators linked to defence innovation.

A.4 Funding & Ecosystem Analysis

Funding data includes:

- Venture capital, strategic investments, and government-linked funding
- Announced rounds and disclosed deal values only

Funding analysis focuses on:

- Capital concentration across value-chain layers
- Stage-wise maturity of defence startups
- Geographic distribution of funding across Indian defence-tech hubs, highlighting regional concentration of capital inflows and emerging clusters beyond traditional defence manufacturing centers.

A.5 Limitations & Interpretation Notes

The following categories are explicitly excluded from the DT-I dataset to maintain analytical consistency and focus on technology-centric defence innovation:

Excluded Company Types

- Diversified Defence Contractors
- Traditional Combat Weapons Providers
- Manned Weapon Systems
- Consultancy Firms
- Content & Media Platforms
- Offline & Non-Combat Training Providers
- Supply Chain & Logistics Services
- Non-Combat Vehicles
- MRO Services- Companies focused on Maintenance, Repair, and Overhaul (MRO) services rather than technology development.

Interpretation Guidance

- Inclusion in the DT-I report reflects technology focus and ecosystem relevance, not procurement status or contract scale.
- Funding and company activity should be interpreted as signals of capability development and market trajectory, not guarantees of military adoption or deployment.
- Certain programmes, contracts, or technologies may not be visible due to national security and disclosure constraints.
- All decimal figures across charts, tables, and analysis have been rounded off; therefore, totals may show minor variances due to rounding.

Appendix B: Acronyms & Abbreviations

| Acronym | Full Form |
|---------|--|
| MoD | Ministry of Defence |
| DRDO | Defence Research and Development Organisation |
| DPSU | Defence Public Sector Undertaking |
| iDEX | Innovations for Defence Excellence |
| DAP | Defence Acquisition Procedure |
| ISR | Intelligence, Surveillance & Reconnaissance |
| UAV | Unmanned Aerial Vehicle |
| UGV | Unmanned Ground Vehicle |
| EW | Electronic Warfare |
| AI | Artificial Intelligence |
| ML | Machine Learning |
| C4ISR | Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance |
| ToT | Transfer of Technology |

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