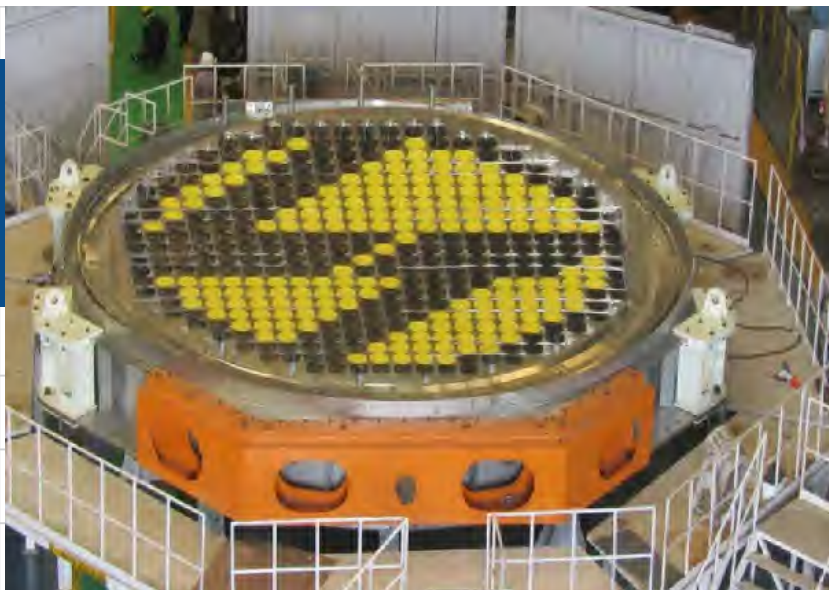


# HI-TECH MANUFACTURING SEGMENT

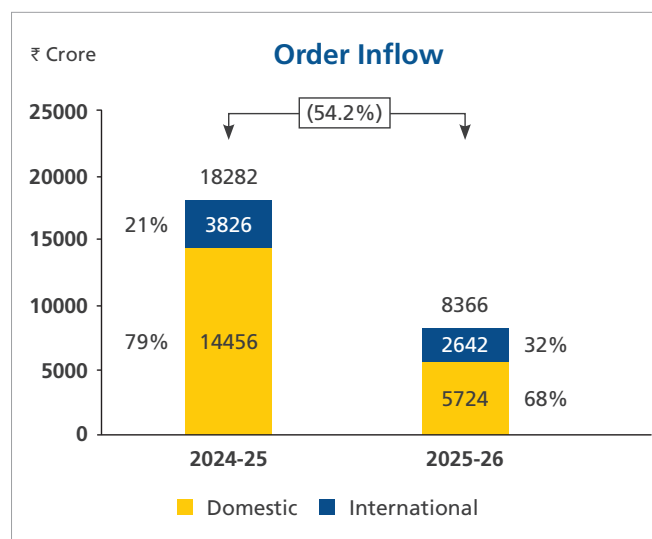


End-shields for 700 MWe Pressurised Heavy-Water Reactor (PHWR)

## The Hi-Tech Manufacturing segment comprises:

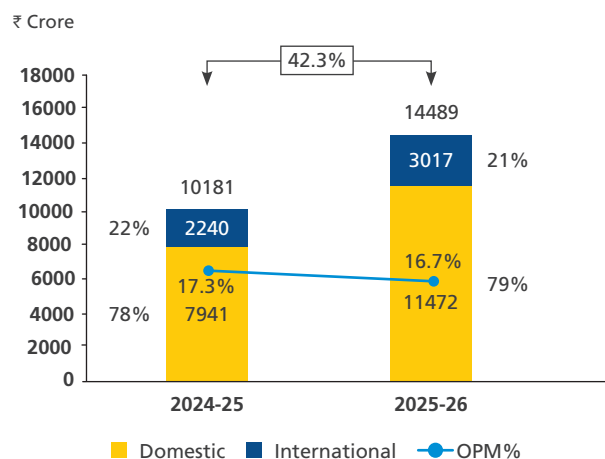
- a) Heavy Engineering
- b) Precision Engineering and Systems

### Financial performance of the segment



The Hi-Tech Manufacturing segment recorded order inflows of ₹ 8,366 crore during FY 2025-26, registering a decline of 54.2% over the previous year, primarily due to high base in the previous year. The share of international orders increased to 32% in the current year from 21% in FY 2024-25.

### Revenue from Operations and OPM%



The Hi-Tech Manufacturing segment achieved revenue of ₹ 14,489 crore for the year, registering a significant growth of 42.3% y-o-y, driven by a pick-up in execution momentum. The share of international revenue in FY 2025-26 was at 21% of the segment's total revenue, compared with 22% in the previous year.



*Debottlenecking Project for HOFCC and ECR units, Petro Rabigh, Kingdom of Saudi Arabia*

The segment's operating margin declined to 16.7% from 17.3%, largely reflecting the stage of execution and job mix.

Funds employed by the segment as at March 31, 2026, increased by 77.7% y-o-y to ₹ 3,999 crore, mainly due to increase in contract assets arising from higher job execution activities.

## Heavy Engineering

### Overview

L&T Heavy Engineering designs and manufactures engineered-to-order, high-technology equipment such as reactors, pressure vessels, heat exchangers and critical nuclear components for refineries, petrochemicals, fertilisers, oil & gas, and nuclear power plants. The business also undertakes complex modification, revamp and upgrade (MRU) projects, delivering safety-critical solutions across the full life-cycle of process plants.

These capabilities are anchored at the A. M. Naik Heavy Engineering Complex in Hazira, which serves as the hub of the business' manufacturing and execution operations. The Hazira facility is a globally benchmarked, fully integrated and digitally enabled manufacturing complex, equipped with in-house engineering and technology

centres, advanced fabrication and testing infrastructure, and Industry 4.0 practices, supported by a highly skilled workforce committed to safety and sustainability.

The business is organised into following Product Business Units (PBU):

- The **Reactor & Pressure Vessels (RPV)** unit specialises in the design and manufacture of critical reactors and high-pressure vessels for refinery, petrochemical, fertiliser, liquified natural gas (LNG) and energy projects
- The **Heat Transfer Equipment (HTE)** unit specialises in the design and manufacture of heat exchangers and thermal process equipment for refinery, petrochemical, fertiliser and energy projects
- The **Process Plant Internals (PPI)** unit specialises in proprietary internals for reactors and ammonia converter baskets and chemical vapour deposition (CVD) reactors for polysilicon plants, involving the use of advanced and exotic metallurgies including duplex / super duplex stainless steel, inconel, titanium and zirconium.
- The **Modification, Revamp & Upgrade (MRU)** unit delivers comprehensive solutions for multidisciplinary lumpsum turnkey (LSTK) brownfield projects. These services include urea energy-saving initiatives, oil & gas unit debottlenecking, fluid catalytic cracking (FCC) revamps, reactor life-extension programmes, critical repairs and emergency process plant repairs. MRU integrates in-house manufacturing with site fabrication



*Exxon Mobil – BT Gold Hydrocracking Reactor*

to ensure the safe and timely execution of complex revamps in live operating plants.

- The **Special Fabrication Unit (SFU)** undertakes the fabrication of critical titanium piping spools, complex internals for gasification plants, loop reactors and primary quench exchangers (PQEs). SFU also manufactures double pipe heat exchangers for the polysilicon industry, filter vessels and refractory lined reactor regenerator internals for the petrochemical sector.
- The **Nuclear business** specialises in the design and manufacture of critical nuclear island equipment, including steam generators, end-shields and pressurisers. The unit also supplies reactor headers, calandrias, end-fittings and safety heat exchangers for pressurised heavy water reactor programmes. In addition, it manufactures spent fuel canisters and casks and has delivered specialised cryostat components for fusion reactor applications, including the International Thermonuclear Experimental Reactor (ITER) project.
- **L&T Special Steels & Heavy Forgings Pvt. Ltd. (LTSSHF)** is a wholly-owned subsidiary of Larsen & Toubro Limited. It is India's largest integrated steel melting and heavy forging facility, offering seamless, end-to-end capabilities from steelmaking through to precision-engineered finished forgings.

## Business Environment

Policy momentum around the SHANTI Act in the nuclear sector presents a significant medium-term opportunity, with anticipated legislative and regulatory measures expected to catalyse greater private sector participation. This is likely to strengthen domestic capabilities across specialised materials, heavy equipment and skilled manpower, aligned with India's long-term vision of achieving 100 GWe of nuclear power capacity. The expanding role of nuclear energy beyond grid-connected power — supporting hard-to-abate industries and energy-intensive digital infrastructure — positions the sector as a critical enabler of reliable, low-carbon growth over the medium- to long-term.

In the MRU and SFU space, there has been a sustained shift from greenfield expansions towards brownfield modifications with customers increasingly prioritising revamps, upgrades and turnarounds aimed at life extension of existing facilities and short-cycle projects. Regional EPC players are offering cost-competitive solutions supported by localisation incentives, while participation by Asian contractors has increased, often backed by sovereign financing.

In the domestic market, investment levels in the refinery and fertiliser segments remained constrained, accompanied by intensified competition among domestic players. In response, the business has adopted a disciplined approach to order booking, with a focus on selectively pursuing



*Steam Generators for Kaiga Units 5 & 6 for the 700 MWe PHWR Fleet Programme*

technologically complex and value-accretive opportunities. The outlook for the forgings business remains positive, supported by policy tailwinds such as Domestically Manufactured Iron & Steel Products (DMI&SP), the Capital Goods Scheme and Make in India. The sector is expected to grow at a CAGR of ~6-8%, with comparatively stronger momentum in the open-die forgings segment.

Internationally, the business environment remains challenging due to geopolitical tensions and abrupt changes in trade and tariff policies. While investments in the refining sector remained selective, medium-term prospects showed gradual improvement with fertilisers — particularly blue and green ammonia — and LNG emerging as key growth drivers, supported by rising demand in Asia, North Africa and North America.

## Major Achievements

### International

- Won orders for 12 equipment packages for a flagship blue hydrogen, carbon capture, utilisation and storage (CCUS) and compression project in South East Asia
- Secured over 40 orders for critical equipment in West Asia, and heat exchanger orders from South America and North Africa
- Delivered a 1,225 metric tonne hydrocracking reactor, an NGL column package, 12 critical equipment packages, and 2 delayed coking unit reactors

- Secured FCC regenerator replacement and Micro Scrubber Replacement Projects for Kuwait National Petroleum Company (KNPC)
- Executed 5 major shutdowns for Abu Dhabi National Oil Company (ADNOC) NGL Trains 1-4 under the Ruwais Capacity Enhancement Project, achieving a 25% capacity increase

### Domestic

- Secured a performance order for manufacture and supply of 8 steam generators under the 700 megawatt electrical (MWe) PHWR for Rajasthan Atomic Power Project
- Delivered 7 of 12 steam generators under the 700 MWe PHWR fleet programme
- Achieved the fastest-ever delivery of a urea reactor under a compressed 11-month schedule and 3 high-pressure reactors for India's first vinyl acetate monomer / vinyl acetate ethylene (VAM / VAE) plant
- Completed molten-salt testing and commissioning of an acrylic-acid reactor based on L&T's patented design
- Completed Hindustan Mittal Energy Limited (H MEL) Bathinda FCC and waste-heat boiler (WHB) revamp ahead of schedule
- Successful indigenisation of thermal rotor and wind shaft forgings exceeding 20 MT



*Urea Reactor IFFCO Kalol Express Delivery – Creating a New Benchmark*

## Significant Initiatives

Across the business, initiatives are focused on strengthening long-term competitiveness through selective capability building, execution excellence and organisational development. The business is advancing a future-ready operating model through investments in process-specific technologies and by reinforcing quality systems under the Deming Journey.

The business is also pursuing initiatives to enhance productivity and control in complex brownfield projects through targeted automation, in-house technology development, and integrated project and resource planning systems. These efforts are complemented by the selective adoption of advanced simulation and AI-enabled tools, supported by dedicated teams to scale high-impact digital use cases.

Underpinning these initiatives is a sustained focus on people and leadership development, with continued investments in building leadership depth, strengthening succession pipelines and advancing structured talent development programmes. These efforts are aimed at fostering organisational resilience, capability continuity and a performance-driven culture to support long-term growth.

## Outlook

International markets are expected to remain competitive, driven by intensified pricing strategies and preferential treatment for North Asian and European suppliers in export credit agency (ECA)-funded projects. In addition, fabricators based in China continue to benefit from policy-driven support and non-tariff barriers, further intensifying competitive pressures. MRU continues to see healthy opportunities across West Asia and Indian PSUs for revamps, replacements and reliability-improvement projects.

The SHANTI Act signals a positive and decisive step to incentivise entry of private sector in the nuclear energy business.

Near-term priorities for the business remain centred on accelerating execution of the existing order book, maintaining prudent input cost management and continued advocacy for policy support.

To address regional workforce and mobility constraints, the business is adopting advance visa planning, greater localisation and transitioning towards a direct manpower model.

The business continues to pursue a selective bidding strategy focused on complex, safety-intensive and time-bound projects where technical capability, execution certainty and safety performance take precedence over price-led competition.

*Close-In Weapon System (CIWS)*

## Precision Engineering and Systems

### Overview

Precision Engineering and Systems (PES) synthesises high-precision manufacturing with advanced systems engineering to deliver comprehensive 'concept-to-design-to-delivery' solutions.

While historically anchored in the defence and aerospace domains, the business is currently transforming to capitalise on the growing demand for intelligent industrial systems. This evolution is anchored in two strategic thrusts: deepening indigenisation in its core defence and space businesses, and expanding into high-value industrial electronics through a newly incubated vertical – Electronic Products & Systems (EPS).

This transformation is a natural progression of a journey that began decades ago. L&T made its foray into various strategic sectors such as nuclear power, aerospace and defence in the sixties, early-seventies and mid-eighties, respectively, as part of the Company's focus on building a strong and self-reliant India by leveraging its precision and systems engineering capabilities. This was well ahead of the opening up of these sectors for private industry participation, beginning with defence in 2001, aerospace in 2020, and finally nuclear power in 2026. Today, L&T is a strategic industry partner to the Indian Ministry of Defence (MoD).

The business is structured to provide focus to various segments of operations, as under:

- Marine Platforms, Equipment & Systems
- Land Platforms, Equipment & Systems
- Aerospace Systems
- Electronics Products & Systems

During the one and a half decades preceding the opening up of the defence sector for private sector participation, L&T was associated with the Defence Research & Development Organisation (DRDO), while concurrently contributing towards the Indian Navy's 'A Builder's Navy' aspiration, by development of platform-specific equipment and systems across classes of naval platforms with in-country value addition. L&T has a state-of-the-art shipyard capable of building large warships, conventional submarines, and critical equipment and systems for these platforms.

In the Land Systems domain, the business is engaged in design-to-delivery solutions across a host of artillery programmes, air defence programmes, armoured platforms, weapon delivery platforms and combat engineering systems.

In the space sector, the business continues to be a trusted partner to Indian Space Research Organisation (ISRO) across technology streams.



*India's Indigenous Light Tank 'Zorawar' prototype*

Building on L&T's strengths in strategic electronics and leveraging its growing capabilities in semiconductor design, its newly formed business vertical EPS is structured around five verticals:

- Strategic EPS focussed on Defence electronics, and
- Four industrial verticals built around it — (i) Power Electronics, (ii) Mobility, (iii) Industrial Robotics & Automation (IRA), (iv) Electronics Systems Design & Manufacturing (ESDM)

The business is guided by core principles of IP-led product differentiation, open innovation and strategic partnerships for accelerated go-to-market.

The business is headquartered at Powai, Mumbai and its operations extend across India through the following dedicated Production Centres:

- A. M. Naik Heavy Engineering Complex at Hazira (near Surat) for manufacturing, integration & testing of armoured & allied land platforms, hulls as well as pressure-proof structures for underwater platforms
- Shipyard at Kattupalli (near Chennai) catering to new builds and repair of marine platforms
- Strategic Systems Complex (SSC) for manufacturing, integration and testing of launch systems, radars, engineering equipment and control systems at Talegaon (near Pune)

- Precision Manufacturing & Systems Complex (PMSC) for manufacturing of aerospace systems, precision products and advanced electronics at Coimbatore
- Battery Energy Storage System (BESS) Factory at Kancheepuram offering end-to-end capabilities, including system and solution engineering, procurement, manufacturing, in-house integration and construction of containerised storage solutions

The business has a dedicated team focused on the development of futuristic technologies, and has recently relocated its Protolab to the Indian Institute of Technology (IIT) Bombay's Aspire Research Park. This move enables the organisation to better leverage IIT's talent pool, research ecosystem and infrastructure for collaborative innovation and co-development.

The newly incubated EPS vertical will have its facility at a 40-acre integrated campus in Coimbatore, positioned as a large-scale, future-ready electronics manufacturing hub, supported by a comprehensive capability expansion plan.

Since its inception, the business has built a portfolio of wide-ranging indigenously designed & developed products, systems, solutions, platforms and technologies. The business has indigenously conceptualised, engineered, built and supplied over 250 systems & products, with more than 50 of them having been delivered in serial production mode. The business model is uniquely differentiated through its focus on in-house technology and product development,



*Pinaka: Multi-barrel Rocket Launcher*

innovation for serial production, and mature and equated partnerships with domestic as well as global majors, both in the government and in private sector. Besides supplies, the business also offers services for life-cycle sustenance of platforms, equipment and systems supplied, including for obsolescence management. These capabilities enable the business to maintain its market leadership position in the private sector defence industry and be future-ready given the government's push for higher indigenisation and autonomy through the 'Aatmanirbhar Bharat Abhiyan'.

L&T's participation in the defence sector stems from its ethos of being a 'Builder to the Nation'. Various sustainability and risk assessors of defence-related businesses do recognise the right of countries to defend themselves and the need to develop and produce defence-related products to fulfil security, peacekeeping and humanitarian needs. This is well acknowledged in the current era of multiple regional conflicts where nations have increased their spending on defence to ensure national security.

It is noteworthy that the business' prime customer and regulator, i.e., the Government of India, is committed to non-proliferation under the 'Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005'. India is also a signatory to the Missile Technology Control Regime (MTCR), a multilateral export control regime, and a party to the Wassenaar Arrangement — a voluntary export control regime that limits the

destabilising proliferation of sensitive technologies. Further, India has voluntarily adopted a 'No First Use' (NFU) Policy (PIB notification dated January 4, 2003) that is enshrined in the commitments of the Cabinet Committee on Security (CCS). The Company recognises the need to act responsibly in carrying out its business related to the defence sector, implement internal controls and stay committed to respecting human rights.

While maintaining its position as a leading private sector, multi-segment player in the Indian defence domain, **the business does not manufacture explosives and ammunition of any kind related to cluster munitions, anti-personnel landmines, nuclear weapons and components for all such munitions. The business also does not customise any delivery systems for all such munitions.**

## Business Environment

India's defence production ecosystem continues to evolve rapidly. Traditionally dominated by Defence Public Sector Undertakings (DPSUs), the sector has now entered a transformative phase marked by deeper private sector participation — including strategic public-private partnerships, tie-ups with start-ups and academia — and driven by a strong policy push towards indigenisation, innovation and the development of a competitive domestic defence industrial base.

FY 2025-26 has witnessed tangible outcomes of wide-ranging policy and procedural reforms undertaken by the



*Maneuverable Recoverable Aerial Target (MRAT)*

Ministry of Defence (MoD). These reforms have focused on strengthening jointness, accelerating modernisation, improving ease of doing business and significantly compressing acquisition timelines through revised procurement manuals, enhanced financial delegations and faster approval mechanisms. Further reinforcing this trajectory, the MoD issued a draft revised Defence Acquisition Procedure (DAP) during FY 2025-26 for industry consultation, aimed at simplifying processes, accelerating decision-making, promoting indigenisation and encouraging greater private sector participation.

During the year, Acceptance of Necessity (AoN) was accorded by the Defence Acquisition Council (DAC) for 55 proposals amounting to ₹ 6.73 lakh crore — a pipeline nearly thrice the annual defence capital outlay, creating deep multi-year order visibility across DPSUs and private players. Importantly, over 90% of these programmes are categorised for procurement from domestic sources, underscoring India's deepening commitment to self-reliance. Major programmes include the Multi-Role Fighter Aircraft (MRFA), Next Generation Corvettes (NGC), Landing Platform Dock (LPD), Quick Reaction Surface-to-Air Missile (QRSAM) Systems and Nag Missile System (Tracked) Mk-II (NAMIS), among many others.

Government initiatives continue to focus on emerging domains such as unmanned systems, cyber, space, electronic warfare and artificial intelligence. Policy measures encouraging indigenisation, increased private sector

participation, promotion of the PPP model and fostering of R&D partnerships between Indian industry and global OEMs are further strengthening the ecosystem. India's ambitious targets — defence exports of ₹ 50,000 crore by FY 2028-29 and domestic defence production reaching ₹ 3 lakh crore by FY 2028-29 — continue to provide strong directional impetus to the sector.

Globally, the defence landscape in FY 2025-26 remained volatile, shaped by ongoing geopolitical tensions including the current US-Israel-Iran conflict and instability in other regions. These developments have sustained pressure on global defence supply chains, resulting in longer lead times, higher input costs and a heightened focus on supply chain security and localisation. Trade protection measures and evolving geopolitical alignments are further influencing sourcing strategies and defence collaborations worldwide. In this context, PES has continued to strengthen its focus on building a resilient, self-reliant supply chain anchored in indigenisation and strong in-house design and engineering capabilities, actively diversifying its supplier base and investing in strategic partnerships to mitigate supply risks and enhance execution reliability.

On the space front, the sector continues to gain momentum following its liberalisation and the implementation of the Indian Space Policy 2023. Increasing private sector participation across the value chain — from launch vehicle manufacturing to satellite development and downstream



*Articulated All-Terrain Vehicle*

applications — presents significant growth opportunities for companies with established capabilities in this domain.

Parallel to these developments in the defence and space ecosystem, India's electronics manufacturing landscape is witnessing an equally significant structural transformation — one that PES, through its incubated business vertical EPS, is now strategically positioned to capture.

India's electronics manufacturing market is at a structural inflection point, projected to scale from USD 115 billion to USD 500 billion by FY 2030-31, driven by the accelerating adoption of renewable energy, electric vehicles, industrial automation and indigenisation mandates. Within EPS's targeted industrial segments, the total addressable market stands at approximately USD 2 billion today and is projected to grow at 18% CAGR to approximately USD 5 billion by FY 2030-31.

## Major Achievements

During FY 2025-26, the business has achieved multiple milestones, uniquely reaffirming L&T's positioning as a 'Nation Builder' through a series of Make in India programmes. These include:

- Signed a contract with Indian Army for the procurement of All-Terrain BvS10 Sindhu Platforms in partnership with BAE Systems Hägglunds
- Foray into Combat Management Systems for Navies including one export opportunity
- Delivered two Anti-Submarine Warfare Shallow Water Crafts (ASW-SWC) to GRSE for the Indian Navy
- Launched the first Cadet Training Ship (CTS-1)
- Handed over the first set of Light Combat Aircraft (LCA) Mk1A Wings to Hindustan Aeronautics Limited (HAL)
- Grant of Clearance of Service Use (CSU) for upgraded on-board pilot oxygen system for Indian Navy, reducing import dependency for crucial runtime requirement
- Maiden flight-test of Quick Reaction Surface-to-Air Missile (QRSAM) conducted successfully from L&T-developed launcher as part of Integrated Air Defence Weapon System (IADWS)
- High Altitude Trials of Runway Independent Remotely Piloted Aerial System (RWI-RPAS) conducted successfully at Leh
- Strategic partnership with US-headquartered General Atomics Aeronautical Systems, Inc. (GA-ASI) to manufacture Medium Altitude Long Endurance (MALE) Remotely Piloted Aircraft Systems in India, for the Indian armed forces
- L&T-BEL consortium is among the three participants who have cleared the Expression of Interest (EoI) qualification stage for participation in the AMCA programme



*Cadet Training Ship*

## Significant Initiatives

R&D and innovation have been the backbone of the PES business since its inception. A range of R&D initiatives have been undertaken during the year, focusing on the development of advanced defence platforms, emerging technologies and the integration of AI-based solutions. Some of the key initiatives undertaken by the Technology & Innovation Centre during the year are as listed below:

- Development of Application Specific IC (ASIC) in collaboration with L&T Semiconductor Technologies (LTSCT)
- Development of Narrow Line Width Fibre Laser (NLFL) with CGCRI, Kolkata
- Joint development of aero engine for unmanned aerial vehicles (UAVs)
- Development of AI-based algorithms for future autonomous vehicles

Three key strategic partnerships were concluded for Industrial Electronics business to kick-start their go-to-market plan:

- MoU with a leading sector player for motor control unit (MCU) for EVs
- Successful completion of painting cobot prototype trials followed by the signing of a Joint Development Agreement
- Collaboration agreement for product development of DC-DC Converter

## Outlook

The Union Budget 2026-27 has allocated ₹ 7.85 lakh crore to the Ministry of Defence, reflecting an ~15% increase over the previous year's estimates. Within that the capital outlay for defence witnessed a significant step-up of ~22% y-o-y, underscoring the government's continued emphasis on accelerated modernisation of the Armed Forces. Of the record capital outlay of ₹ 2.19 lakh crore, around ₹ 1.85 lakh crore has been earmarked for capital acquisition, to equip the Armed Forces with next-generation fighter aircraft, advanced weapons, ships and submarines, UAVs, drones, etc.

*Multi-Purpose Vessel*

Reinforcing the government's *Aatmanirbhar Bharat* focus, nearly 75% of the capital acquisition budget has been reserved for procurement from the domestic defence industry, translating to an allocation of approximately ₹ 1.39 lakh crore for Indian manufacturers.

The R&D thrust has been further strengthened in the budget, with capital outlay for defence R&D increasing to over ₹ 17,000 crore, representing a double-digit growth over the previous year.

On the electronics front, the budget raised the Electronics Components Manufacturing Scheme (ECMS) outlay to ₹ 40,000 crore, signalling deeper support for domestic component ecosystems, sub-assemblies and supply chain localisation. The basic customs duty exemption on capital goods for Lithium-Ion cells has been extended to Battery Energy Storage Systems (BESS).

The competitive landscape presents a clear white space: heavy dependence on imports in power electronics, dominance by global Tier-I players in mobility electronics,

and an absence of strong indigenous IP-led players in high-complexity industrial electronics. Supportive government policies — including Production-Linked Incentive (PLI) schemes, EV Phased Manufacturing Programme (PMP) mandates, Bureau of Indian Standards (BIS) localisation requirements and the India Semiconductor Mission — reinforce this structural opportunity. Geopolitical supply chain disruptions have further accelerated customer intent to localise electronics sourcing, directly benefiting India-first proposition of the business and creating a durable tailwind.

Against this backdrop of enhanced capital spending, policy reforms and sustained global demand, the business is well positioned to leverage the government's thrust on self-reliance and modernisation, and to capitalise on emerging opportunities across shipbuilding, artillery and combat systems, combat engineering equipment, electronic and communication systems, and space technologies, both within India and in select export markets.