



Co-Located Pavilion



**01-03 May 2025**

**Yashobhoomi, IICC, Dwarka**



India's Premier **Aerospace & Defence Manufacturing** Supply Chain & Sub-Contracting Expo..

**150+** Exhibitors **100+** International Buyers

**95+** Product Categories **8000+** Trade Visitors

Organised by



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India's aerospace and defence sector is among the largest in the world, driven by modernization, strategic initiatives, and strong international collaborations. The industry spans aviation, space exploration, military equipment, and advanced technologies, with the "Make in India" and "Atmanirbhar Bharat" initiatives supporting local production, R&D, and export growth. The Indian aerospace and defence market is projected to reach approximately USD 70 billion by 2030, driven by increasing demand for advanced infrastructure and government support. Future growth in aerospace and defence manufacturing will be shaped by effective governance, advancing military equipment, spacecraft, and both commercial and private aircraft production.

## 5 Reasons to Exhibit

- ✓ An exclusive platform to meet greet & transact business with defence & aerospace manufacturers
- ✓ Identify demand trends in aerospace and defence for input material
- ✓ Understand the best way to transact business with aerospace & defence players
- ✓ Gain Access to Industry Leaders from aerospace & defence sector
- ✓ Induce trials of your products and attract long term business



## Exhibitor Profile

### Design Engineering & It Solutions

- \* Aircraft & Subsystem Design
- \* Avionics
- \* Critical Components Design
- \* Product Development
- \* Software & Stimulations
- \* Measurement, Inspection and Analysis
- \* IT Solutions
- \* Design & Simulation
- \* 3D Printing
- \* Rapid Prototypes

### Electronics Components

- \* Connectors
- \* Harnessing Accessories & Identification
- \* High Performance Relays & Contractors
- \* Rugged Fiber Optics & Cable Assemblies
- \* Wire & Cables
- \* Termination Devices, Splices & Crimp
- \* Aircraft Wiring
- \* Actuation
- \* Power Distribution Assemblies
- \* RF & Microwave Components

### Maintenance Repair & Overhaul (MRO)

- \* IT Solution Providers
- \* Tools Manufacturer
- \* Airport Equipment's & Services
- \* Hardware
- \* Lightning
- \* Hydraulics & Pneumatics
- \* Parts Distributors
- \* Fuel & Lubricants
- \* Cleaning



## Why Delhi..?

Delhi has for long firmly been entrenched as the headquarters of Indian defence forces and some critical decision making around manufacturing, acquisitions, upgradations in aerospace & defence sector happen in the capital city of the country.

In addition to this many an SME enterprise and some very important defence manufacturing enterprise including but not limited to DPSU's, OFB's and private domestic and international manufacturers have a strong base in northern India. Delhi is also home to main offices of organizations like Defence Research And Development Organization (DRDO), Bharat Electronics Limited (BEL) & Hindustan Aeronautics Limited (HAL) and multiple R&D labs, Ministry of Defence, Ministry of MSME, Ministry of Heavy Industry etc which presents the ideal eco-system that an event like AeroDef Manufacturing would need.

## Exhibitor Profile

### Engineering & Process

- \* Metal Casting & Forging
- \* Foundry & Forging
- \* CNC Controls & Machineries
- \* Laser Cutting | \* Finishing & Coating
- \* Contract Manufacturing
- \* Surface Treatment & Cleaning Equipment's
- \* Aerospace & Defence Fasteners & Tools
- \* Fasteners, Bearings & Standard Parts
- \* Cutting & Welding

### Component Manufacturer & Suppliers

- \* Aero Structure Components
- \* Airframe Manufacturer
- \* Aircraft Engines
- \* Avionics & Flight Systems Components
- \* Wings & Landing Gear Assembly
- \* Wheels, Brakes & Landing Gear
- \* Hydraulic Systems
- \* Missile Casing & Launchers
- \* Pneumatics | \* Air Compressor

### Other Tools & Suppliers

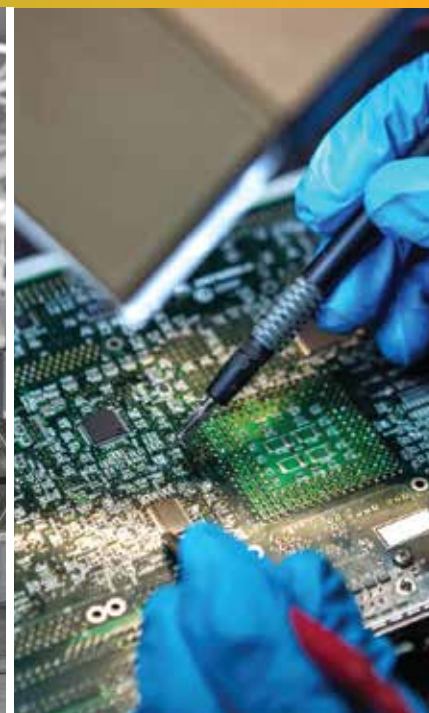
- \* High Performance Fabrics | \* Glass
- \* Aviation Oils & Lubricants
- \* After Market - Spare, Parts & Services
- \* Safety Related Equipment's
- \* Rubber Components
- \* Protection & Armoring

### Raw Material

- \* Advanced Materials
- \* Steel, Titanium & its Alloys
- \* Sheet Metal Components
- \* Additive Manufacturing | \* Composites

## 5 Reasons to Visit

- ✓ Identify suppliers of raw material, components, assemblies
- ✓ Understand the innovations in supplier market upgrade your products
- ✓ Strengthen your supply chain & mitigate potential risks by expanding vendor base
- ✓ Reduce your sourcing cost whilst improving your product quality
- ✓ Benchmark your existing materials, suppliers with alternate sources



# Conference Agenda Day-1



**01-02 May 2025**  
IIC Dwarka, New Delhi

## Session Session Focus

**0800 Registration & Coffee**

**0855 Welcome Remarks by Conference Chair:**

**0900 – 0930 Opening Session**

**0930 – 1000 Emerging Opportunities for Defence Manufacturing in India: 2025-2030**

India's defence manufacturing sector presents a wide array of opportunities, driven by increasing domestic demand, modernization efforts, and the government's push for self-reliance through initiatives like "Atmanirbhar Bharat" (Self-Reliant India). The sector is growing rapidly, fueled by advancements in technology, foreign partnerships, and rising investments in indigenous defense capabilities.

**1000 – 1030 Ceramic Matrix Composites (CMCs) and Ballistic Composites in Defense Manufacturing**

Ceramic Matrix Composites (CMCs) and ballistic composites mark a significant advancement in materials engineering, providing exceptional strength, thermal resistance, and lightweight properties that are essential for contemporary defense applications. These innovative materials are revolutionizing the creation of military equipment, ranging from armor systems to high-performance aerospace components.

**1030 – 1100 Nanocomposites in Defence Manufacturing: Transforming the Battlefield**

Nanocomposites represent a revolutionary class of materials in defense manufacturing, combining nanoscale reinforcements with traditional matrices to deliver exceptional mechanical, thermal, electrical, and barrier properties. By leveraging the unique attributes of nanoparticles, nanocomposites are driving innovations in lightweight armors, advanced weaponry, and durable aerospace components.

**1100 – 1115 Refreshment Break**

**1115 – 1145 Emerging Role of Smart Composites in Defence & Aerospace Manufacturing**

Smart composites are materials that combine traditional composite structures (e.g., polymer, ceramic, or metal matrices reinforced with fibers) with embedded smart technologies, such as piezoelectric sensors, shape memory alloys, or nanomaterials. These features enable the material to sense, act, and adapt to environmental changes or external stimuli.

**1145 – 1215 Advanced Materials for Defence Power Electronics: Enabling Superior Performance**

Advanced materials are vital for the next generation of defense power electronics, enabling superior performance, efficiency, and reliability. By integrating wide bandgap semiconductors, thermally conductive materials, and innovative composites, the defense sector can meet its growing demands for high-performance systems in increasingly challenging environments. As research and development continue, these materials will play an essential role in shaping the future of defense technology.

**1215 – 1245 Quantum Computing and Cryptography in Defense Manufacturing: Transforming Security and Efficiency**

Quantum computing and quantum cryptography are rapidly becoming integral to defense manufacturing, offering revolutionary capabilities in secure communication, materials development, and operational optimization. By harnessing the principles of quantum mechanics, these technologies promise unparalleled computational power and cryptographic security, essential for addressing modern defense challenges.

**1245 – 1315 Quantum Computing for Material Simulation**

Quantum computing is revolutionizing the way we simulate atomic-level material properties. As this technology progresses, it will significantly enhance our ability to discover innovative materials with outstanding characteristics, particularly for defense applications. Embracing these advancements will pave the way for breakthroughs that can strengthen our defense capabilities.

**1315 – 1400 Networking & Lunch**

**1400 – 1430 Quantum-Enhanced Simulations in Defence Manufacturing: Redefining Innovation and Efficiency**

Quantum computing is emerging as a transformative force in defence manufacturing, enabling simulations of unprecedented scale and complexity. By leveraging quantum-enhanced simulations, defense manufacturers can achieve breakthroughs in materials design, optimization of manufacturing processes, and operational efficiency, ultimately strengthening national security capabilities.

**1430 – 1500 AI-Driven Material Development for Defence Applications**

Artificial Intelligence (AI) is playing a transformative role in the development of advanced materials for defence applications. By leveraging AI technologies, manufacturers can significantly accelerate the discovery, design, and optimization of materials used in critical defence systems, ensuring that they meet the rigorous performance, durability, and safety requirements essential for military and aerospace operations.

**1500 – 1530 AI-Enhanced Digital Twins in Defence Manufacturing: Revolutionizing Innovation and Efficiency**

The integration of Artificial Intelligence (AI) with Digital Twin technology is transforming defence manufacturing, enabling the development of smarter, more efficient, and adaptive systems. By creating virtual replicas of physical assets and processes, AI-enhanced digital twins provide unprecedented insights into performance optimization, predictive maintenance, and strategic planning in the highly demanding defense sector.

# Conference Agenda Day-1

## 1530 – 1600 AI-Driven Sensors for Defence Manufacturing

In the highly demanding world of defence manufacturing, the need for real-time monitoring, predictive analytics, and enhanced decision-making has never been greater. AI-driven sensors are revolutionizing the sector by providing intelligent, autonomous solutions to monitor and manage critical systems and equipment. These sensors, powered by artificial intelligence, enable enhanced capabilities in asset management, condition monitoring, predictive maintenance, and quality control, making them essential for the modernisation of defence manufacturing operations.

## 1600 – 1615 Refreshment Break

## 1615 – 1645 Autonomous Quality Control and Inspection in Defence Manufacturing

Autonomous quality control (QC) and inspection systems are transforming defence manufacturing by ensuring precision, reliability, and adherence to stringent standards. Leveraging advanced technologies such as artificial intelligence (AI), machine vision, robotics, and the Industrial Internet of Things (IIoT), these systems provide a more efficient and effective approach to quality assurance, critical for the defence sector's high stakes.

## 1645 – 1715 Rapid Prototyping and Customization in Defence Manufacturing

Rapid prototyping and customization are revolutionizing the defence manufacturing sector, enabling faster innovation, improved adaptability, and enhanced performance. These processes, which involve the quick creation of physical models or components using advanced manufacturing techniques, are crucial in a domain where precision, speed, and tailored solutions are paramount.

## 1715 – 1745 Multi-Material Integration: Combining Different Alloys to Achieve Superior Hybrid Properties

The integration of multiple materials, often referred to as multi-material integration, is a strategy employed in defence and aerospace manufacturing to develop components with superior hybrid properties. By combining different types of alloys, manufacturers can create materials that are stronger, lighter, and more durable, tailored to meet the specific needs of military applications. This approach leverages the strengths of each material while minimizing weaknesses, resulting in enhanced performance, improved resistance to extreme conditions, and greater adaptability to complex operational environments.

## 1745 Concluding remarks and end of Day 1

# CONFERENCE AGENDA DAY-2

## Session Session Focus

### 0800 Registration & Coffee

### 0855 Welcome Remarks by Conference Chair:

### 0930 – 1000 Cloud-Based Digital Twins: Empowering Scalability, Collaboration, and Real-Time Access

Cloud-based digital twins are revolutionizing industries by offering scalable, collaborative, and real-time solutions for managing complex systems. In the realm of smart manufacturing, defence, and aerospace, these digital twins provide unparalleled efficiency and innovation opportunities, enabling organizations to stay ahead in a competitive landscape.

### 1000 – 1030 Autonomous Predictive Maintenance in Defence Manufacturing

Autonomous predictive maintenance is revolutionizing the way defence manufacturers maintain critical machinery and equipment, ensuring peak performance and minimizing downtime. By combining the power of AI, machine learning, and IoT sensors, autonomous predictive maintenance systems predict equipment failures before they occur, allowing manufacturers to optimize maintenance schedules, improve operational efficiency, and extend the life of costly military assets.

### 1030 -1100 Collaborative Robots (Cobots) in Defence Manufacturing

Collaborative robots, or cobots, are transforming defence manufacturing by enabling seamless collaboration between human operators and robotic systems. Unlike traditional industrial robots, cobots are designed to share workspaces with humans, enhancing productivity, precision, and safety in complex and high-stakes environments like defence manufacturing.

### 1100 -1130 Advanced Logistics Solutions for Defence Production

As modern defence systems become increasingly complex, the demand for innovative logistics solutions is rising. This includes automated supply chain management systems, advanced distribution networks, and effective maintenance solutions. Manufacturers have the opportunity to develop technologies that enable the tracking, monitoring, and efficient management of military assets across different domains.

### 1130 – 1200 Refreshment Break

### 1200 -1230 Iterative Prototyping in Defence Manufacturing

Iterative prototyping is a crucial process in defense manufacturing, allowing for continuous improvement and refinement of complex systems and components. By creating and testing successive versions of a prototype, manufacturers can identify flaws, optimize designs, and ensure that the final product meets stringent operational, performance, and regulatory requirements.

# Conference Agenda Day-2

## 230 -1300 Zero Trust Supply Chains in Defence Manufacturing

Zero trust supply chains in defense manufacturing represent a paradigm shift from traditional trust-based models to a more secure, resilient, and transparent approach. This model operates on the principle of "never trust, always verify," ensuring that every entity, system, and transaction within the supply chain is continuously authenticated, authorized, and monitored.

## 1300 -1400 Networking Lunch

## 1400 -1430 Supplier Diversification for Supply Chain Resilience

Supplier diversification is a strategic approach in defence manufacturing to reduce dependency on a single source or limited number of suppliers. This practice enhances resilience, promotes innovation, and mitigates risks such as supply chain disruptions, geopolitical challenges, or economic instability.

## 1430 -1500 Autonomous Systems R&D Opportunities in Indian Defence Sector

Unmanned Aerial Vehicles (UAVs): Development of combat drones and surveillance platforms. Autonomous Underwater Vehicles (AUVs): For maritime reconnaissance and mine detection. Collaborative Robotics: Human-machine teaming for advanced operational capabilities. All present opportunities for industry to collaborate with primary producers

## 1500 -1530 Directed Energy Weapons (DEWs): Opportunities for Private Industry in India

Directed Energy Weapons (DEWs), such as laser weapons, microwave weapons, and particle beam systems, are emerging as game-changing technologies in modern defense systems. These weapons provide precision targeting, cost-effective operations, and versatile applications for defense and security forces. India's focus on indigenizing defense production and advancing military technology presents significant opportunities for private industries in the DEW segment.

## 1530 - 1600 Latest Developments in Thermal Protection Systems (TPS)

Thermal Protection Systems (TPS) are critical for safeguarding spacecraft, hypersonic vehicles, re-entry vehicles, and other advanced aerospace and defence platforms against extreme temperatures. Recent advancements in TPS technology focus on improving material properties, manufacturing methods, and integration capabilities to address modern engineering challenges.

## 1600 -1630 Refreshment Break

## 1630 -1700 Ablative Materials for Product Resilience

Enhanced resin-based ablative materials offer superior thermal resistance and controlled ablation rates, reducing mass and improving performance for re-entry vehicles. New composite ablative materials, such as carbon-phenolic and silica-phenolic composites, balance thermal resistance with lightweight properties.

## 1700 -1730 Future Trends in Simulation for Defence Manufacturing

Cloud-based simulations for greater accessibility and scalability with cloud-based platforms for collaborative simulations. Real-Time simulations for enhanced capabilities to simulate and adjust manufacturing processes in real time. AI-Integrated Simulations for optimizing designs, processes, and systems autonomously. Multiphysics simulations for combining thermal, structural, and electromagnetic simulations for comprehensive system analyses.

## 1730 Concluding remarks and end of conference

### ESTEEMED PARTICIPANTS OVER THE YEAR

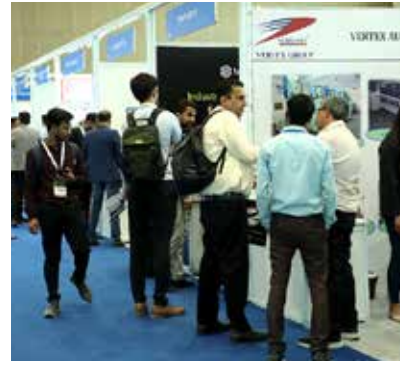



# Key Visitors

- \* Aditya Birla Group
- \* Aeronautical Development Agency
- \* Airbus
- \* All Russia Public Organization
- \* Antrix Corp
- \* Balmer Lawrie & Co Ltd
- \* BDL
- \* Bharat Electronics Limited (BEL)
- \* Bharat Forge Limited
- \* Boeing
- \* Brahmos
- \* Defence & Research Development Organization (DRDO)
- \* Epsilon Engineering Pvt Ltd
- \* Goa Shipyard Limited
- \* Goderj Aerospace
- \* Grse
- \* Hindustan Aeronautics Limited (HAL)
- \* IBM Technologies
- \* Indian Armed Force
- \* Indian Space research Organization (ISRO)
- \* JSW Steel
- \* Kalyani Group
- \* L&T Heavy Engineering
- \* Mahindra & Mahindra Group
- \* Mazagon Dock Limited
- \* Midhani
- \* Nuclear Fuel Complex
- \* Ordnance Factory Board
- \* PPG Aerospace
- \* Reliance Aerospace
- \* Reliance Defence
- \* Tata Advance
- \* TCS
- \* Tech Mahindra
- \* Toshiba
- \* Wipro

## Visitor Companies

- \* Private Sector Defence
- \* Manufacturers
- \* Public Sector Defence Units
- \* International OEM's
- \* Ordnance Factories
- \* Naval Dockyards
- \* Research Labs
- \* Aerospace Research Centres



**Participate as: Sponsor | Exhibitor  
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