



INDIAN
SPACE
ASSOCIATION

Bhumandal Se Brahmaand Tak

ISpA ANNUAL REPORT 2025-26



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ABOUT US

ISpA is an apex non-profit industry body, set up exclusively for the successful collaborative development of the Private Space Industry in India.

ISpA was created to be the single Voice of the Private Space Industry and as a bridge between the Government and the Private Industry.

We undertake Policy Advocacy and engage with all stakeholders from the Indian & Global Space Ecosystem to facilitate business opportunities for the industry and empower our members to best serve National Aspirations.

ISpA provides an engaging environment to facilitate brainstorming,

professional networking knowledge sharing and catalyse collaborative relationships by bringing all policymakers, government bodies, industry, user community, academia and resource providers on a common platform.



VISION

ISpA echoes the Hon'ble Prime Minister's vision of **"Atma Nirbhar Bharat"**. We are working with all stakeholders, to create an enabling environment for strengthening the private industry in the Indian Space sector. ISpA aims to position India in the forefront of the global space ecosystem.

OBJECTIVES

To perform an all-encompassing role for the entire Space Domain, ISpA aims to be an Advocate and Facilitator for the participation, growth and capacity building of the private as well as the public industry in India's Space domain. ISpA engages with the Indian Government, regulatory bodies, national and international bodies and industry stakeholders, as well as participates in formulating effective, efficient and appropriate policies and regulatory frameworks from an all-round perspective:

EASE OF DOING BUSINESS & POLICY STABILITY

Advocacy for easy Availability, Accessibility, Affordability and Efficient Utilisation of Space Resources.

ENCOURAGE & FACILITATE SPECTRUM OF SPACE DOMAIN ACTIVITIES

Fostering Awareness & Promotion of:

- **Design, Manufacture, Launch, Operate & R&D:** Satellites/Spacecrafts; Launch Vehicles; Payloads; Ground & Space Control Systems; Ground Segment; Analytics & Dissemination; Testing, Certification & Validation Equipment
- **Communications:** Satellite-based Communication Services including Satellite Broadband Connectivity.
- **Applications & Services:** GNSS, Geospatial & Remote Sensing, Situational Awareness, Manned Space flight and Exploration. Space Infrastructure Security and Protection, Scientific Explorations, Astronomy, Testing & Certification and Others.
- **Capacity Building:** Awareness, Education, Knowledge Sharing & Skilling.

PROMOTE & COLLABORATE

Technology, Infrastructure, Investments & Innovation.

INTERNATIONAL PARTNERSHIPS

- Enhance & Strengthen Cooperation of International partners with the Indian Space Industry
- Engage with global institutions on Space-related issues including policy, regulatory and technical matters.

GUIDING PRINCIPLES



STRIVE FOR EXCELLENCE

Achieve through collective and unified effort.

CONTINUED DEVELOPMENT

Facilitate growth & development of all, including Start-Ups & MSMEs in the Space Industry.

EMPOWER

Promote discussion on all activities relating to the Space Domain.

COLLABORATE

Ensure collaborative effort of all stakeholders.

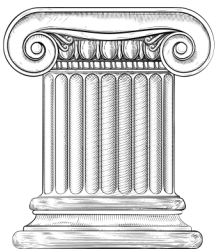
PROMOTE

Local Ecosystem and strive towards Atma Nirbharta.

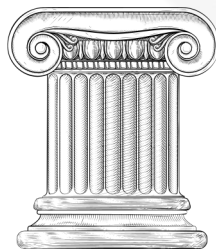
FOUR PILLARS OF REFORMS

Hon'ble PM Shri Narendra Modi in his speech during the inauguration of the Indian Space Association, laid down the four pillars for space reforms:

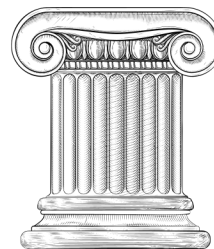
Allowing the private sector freedom of innovation.



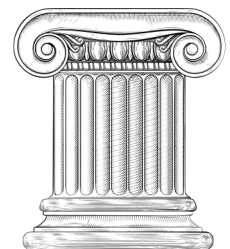
Government playing the role of an enabler.



Preparing the next generation for the future.



Treating the space sector as a resource for the progress of the common man.



"Today is the day the Indian space sector receives new wings. For 75 years since independence, Indian space has been dominated by a single umbrella of Indian government and government institutions.

Let this collective power of India's population take the space sector forward in an organised manner. The Indian Space Association (ISpA) will play a huge role in this."

Shri Narendra Modi
Honourable Prime Minister of India

(During the inauguration of ISpA on 11 Oct 2021).



FOCUS AREAS

Unified Voice for creating & enabling Policy & Execution frameworks

- Ensure good liaison and coordination with DoS, ISRO, IN-SPACE, NSIL, DoT, MoD, MHA, MEITY, DST, TRAI and other Government departments, International Regulatory Bodies and Industry on various issues. Be the interface between the Govt and the Industry Stakeholders for constructive policy and legal initiatives. Ensure a constant dialogue to refine policies as well as suggest new ideas to support the private industry growth.

Energize Resources, Funds & Business Growth

- Facilitate the creation of a healthy collaborative business climate based on principles of shared growth and fair competition.
- Provide a strong platform for all Space industry stakeholders to cooperate, identify areas of mutual growth and sustainability and if need be, look for joint ventures.

Interface with Defence & Security Agencies & Stakeholder Institution

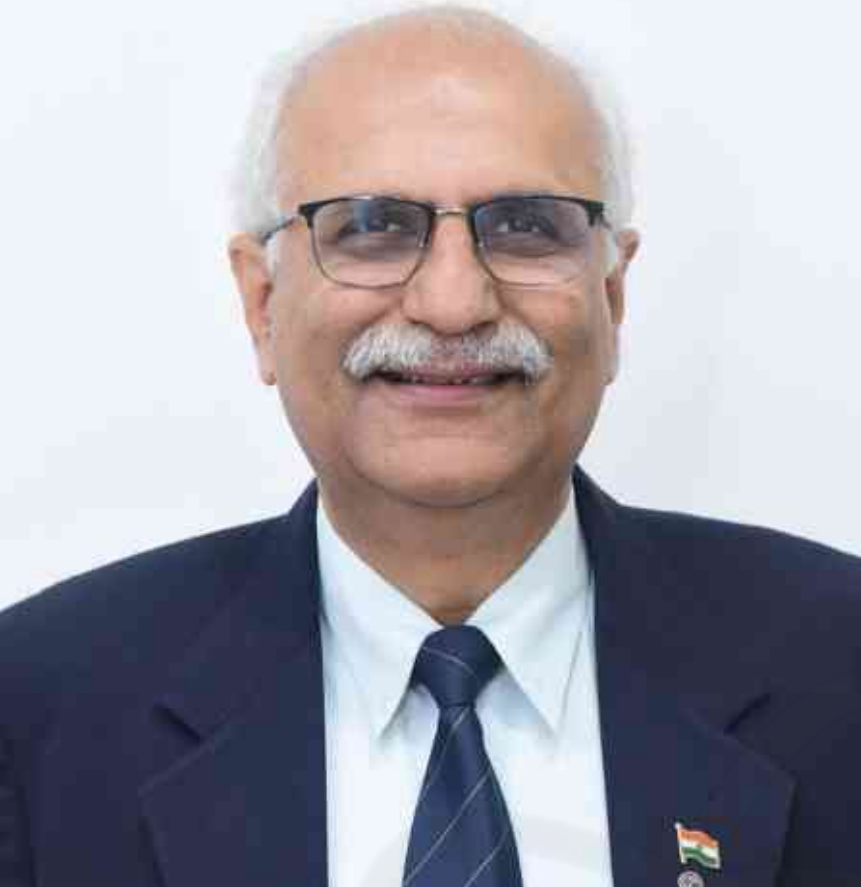
- A special focus would include interface with Defence and Strategic Domain organisations to understand their needs, sensitise them about emerging technology and work towards developing Dual-Use Technology that meets Defence as well as Commercial requirements.
- Strategic communication of Indian Space industry capabilities to various consumers and governments at both National and Global levels with a special focus on our Strategic users.

Capacity & Knowledge Building

- Capacity building through the creation of New Institutions as well as incentivising Universities and Institutions to focus on Space related subjects. Enhance the growth of Space academic culture in our premium academic institutions with the guidance of ISRO.
- Facilitate relations between academia and industry by assisting Space incubators in leading technical academic institutions.

International Partnerships, Cooperation & Collaborative engagements

- Work for proactive cooperation with Space industry associations globally to imbibe best practices and identify rules, regulations and procedures which would help the growth of the Indian Space Industry globally.
- Work towards integrating Indian-made products with Global Supply Chains through partnerships, collaborations and other channels. Facilitate technology and business collaborations between Indian and foreign entities. Act as the key enabler to achieve strategic self-reliance in key niche technology areas.



MESSAGE FROM CHAIRMAN

MR ARUN T
RAMCHANDANI

Sr VP & Head L&T
Precision Engineering &
Systems;
Chairman, ISpA

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A year ago, this report described India's space sector at an inflection point. We have now moved through it. In June 2025, our Gaganyatri, Group Captain Shubhanshu Shukla, became the first Indian to reach the International Space Station aboard Axiom-4, reviving a human spaceflight legacy dormant since Rakesh Sharma's 1984 flight an achievement the nation later marked with the Ashoka Chakra. And this July, Skyroot's Vikram-1 reached orbit under its own power, the first privately built Indian rocket to do so, making Skyroot our first space-tech unicorn in the same stroke. A serving officer carrying the tricolour into orbit and a private rocket built on Indian capital reaching that same orbit: together they show a sector whose ambitions have finally found their footing in hardware.

The wider ecosystem backs this up. Our space economy, valued at roughly \$8 billion today, remains on its stated path to \$44 billion by 2033. Our startup base has crossed 380, funding rose 94 per cent to over \$150 million this year and capital finally matches ambition on paper new venture and technology adoption funds, SIDBI's ₹1,005 crore corpus, Cabinet clearance for the space RDI Scheme and customs relief. Gujarat, Tamil Nadu, Karnataka and Andhra Pradesh have each written their own space-tech policies this year, proof that our federal structure now sees this as a sector worth competing over, not managing from Delhi alone.

Defence made this same shift from intent to delivery. Operation Sindoor settled any remaining doubt that space-based ISR is a national security imperative and the SBS Phase-III constellation of 52 surveillance satellites is now being fast-tracked toward 2029. In January, the complete Defence Space Agency leadership sat down with industry for the first structured dialogue of its kind and Mission DefSpace's challenges are converting into signed contracts, with Kepler Aerospace, InspeCity and Pixxel among the builders. The Earth Observation constellation partnership we awaited has gone to a Pixxel-led consortium with SatSure, PierSight and Dhruva Space.

MESSAGE FROM CHAIRMAN

Our international standing grew alongside it. We signed with Novaspace and Grayscale, exchanged a Letter of Intent with the European Space Agency, hosted U.S. Space Command and NASA's Sunita Williams for our members, deepened LUPEX with Japan and turned Italy's Joint Strategic Action Plan into a multi-city roadshow. Our own India International Space Conclave drew over a thousand delegates from 15-plus countries and we returned the gesture by hosting 28 delegates from 14 partner nations under the ITEC programme.

The work ahead is real. Commercial NGSO broadband still hasn't launched in India, even with satellites in orbit for years and millions of Indians waiting for exactly this connectivity closing that gap quickly has to be a priority. We must also deepen domestic manufacturing so growth doesn't stay import-dependent and help more start-ups convert prototypes into export-ready businesses.

At ISpA, we tried to match this pace: hosting the Space Conclave and DefSpace Symposium, bringing DSA and U.S. Space Command into direct dialogue with industry for the first time, publishing our first Space Industry Handbook and joint research with OrbitAID and SatSure, welcoming 25 new members and staying at the table through TRAI and IN-SPACE's consultations so industry helped shape these frameworks rather than react to them.

None of this happened without our members' patience, our government partners' willingness to act and international partners who backed India with more than good wishes. Last year, I said the sky is not the limit, it is just the beginning. This year, an Indian rocket reached orbit under its own power and our Gaganyatri looked back at Earth from the ISS. The beginning is behind us now. What we build with it is ours to decide.

Mr Arun T Ramchandani
Sr VP & Head L&T
Precision Engineering & Systems;
Chairman, ISpA

”



MESSAGE

FROM
VICE-CHAIRMAN

SHRI RAHUL VATTS

Director-Corporate Affairs &
Group Chief Regulatory Officer,
Bharti Airtel;
Vice Chairman, ISpA;
Vice Chairman, COAI
Chair-GSMA SPWG



As I reflect on the past year, it is clear that India's space sector has moved decisively from potential to demonstrated capability. FY 2025-26 marked a turning point where policy architecture translated into tangible outcomes – launch vehicles on the pad, capital deployed into the ecosystem and Indian companies winning business on the strength of their capabilities. The clearest symbol of this transition was Skyroot Aerospace's Vikram-1 mission reaching orbit in July, making it the first privately developed Indian launch vehicle to achieve this milestone and establishing Skyroot as India's first space-tech unicorn. With India's space economy currently valued at approximately US\$8 billion and targeting US\$44 billion by 2033, the sector now has credible private-sector achievements to support its long-term ambitions.

The progress of the broader ecosystem has been equally encouraging. At the close of our last annual report, India had surpassed 200 space startups; today, that number exceeds 380. These companies collectively raised more than US\$150 million over the past year, representing a 94% year-on-year increase. The policy and financing environment has also strengthened considerably. The launch of the ₹1,000 crore SpaceTech Venture Fund and the ₹500 crore Technology Adoption Fund, alongside SIDBI Venture Capital's ₹1,005 crore fund corpus and receipt of SEBI registration, has expanded access to growth capital. In parallel, the Cabinet approved the Research, Development & Innovation (RDI) Scheme for space and deep-tech startups, while customs duty exemptions have provided additional support to the sector. State governments have also emerged as active participants, with Gujarat, Tamil Nadu, Karnataka and Andhra Pradesh each introducing dedicated space-tech policies, reflecting a growing alignment between national and state-level priorities.

In the satellite communications and spectrum domain – an area where I remain deeply engaged – important progress has been made, although key issues remain unresolved.

MESSAGE FROM VICE-CHAIRMAN

The Department of Telecommunications (DoT) confirmed that satellite spectrum will be assigned administratively rather than through auction, a position ISpA has consistently advocated. However, the final framework, including the spectrum pricing mechanism, is still awaited.

At the same time, the transition away from dedicated satellite service authorisations has created uncertainty for both prospective entrants and existing operators, particularly regarding migration pathways. TRAI's consultation process on the proposed network-layer Satellite Communication Network (SCN) Authorisation has recently concluded and stakeholders are now awaiting its recommendations to the DoT. With the said consultation, TRAI has also initiated discussion on Direct-to-Device (D2D) services in the country.

A positive development has been the inclusion of an enabling provision in the new rules permitting the use of Indian gateways for services outside India. Operational guidelines, however, are yet to be issued.

Consequently, commercial NGSO broadband services have not yet commenced in India while the regulatory framework continues to evolve. Bringing clarity and certainty to the SCN authorisation regime and satellite spectrum assignment framework must remain a key priority in the coming year – not only for operators that have invested heavily in satellite infrastructure, but also for the millions of underserved Indians who stand to benefit from these services.

India's international engagement in the space sector also expanded significantly over the past year. We entered into new partnerships with Novaspace and Grayscale, signed a Letter of Intent with the European Space Agency, hosted U.S. Space Command for a closed-door TRUST-Space dialogue and welcomed NASA astronaut Sunita Williams for interaction with our members. We further strengthened cooperation with Japan through the LUPLEX programme and supported implementation of Italy's new Joint Strategic Action Plan through an aerospace roadshow across three Indian cities. In addition, the India International Space Conclave attracted more than 1,000 delegates from over 15 countries, reinforcing India's growing role in the global space ecosystem.

The relationship between the defence and space sectors also evolved considerably. Operation Sindoor underscored the critical importance of space-based Intelligence, Surveillance and Reconnaissance (ISR) capabilities for national security. The SBS Phase-III programme, which aims to deploy 52 surveillance satellites and was identified in last year's report as a major opportunity, has since been accelerated toward its 2029 target. In January, we convened the first comprehensive dialogue between the Defence Space Agency and industry stakeholders. Equally encouraging was the award of the long-anticipated Earth Observation constellation PPP to a Pixxel-led consortium comprising SatSure, PierSight and Dhruva Space, translating a long-discussed concept into an operational programme.

MESSAGE FROM VICE-CHAIRMAN

Priorities for the Year Ahead:

Our focus in the coming year will be on six key objectives:

1. Finalizing the satellite spectrum assignment framework and SCN authorisation in a timely and practical manner to enable the launch of commercial NGSO broadband services in India.
2. Engaging with the DoT to establish regulatory clarity following the discontinuation of SatCom-specific service authorisations.
3. Accelerating the introduction of a light-touch operational framework for the use of Indian gateways for services outside India.
4. Strengthening domestic manufacturing and supply-chain capabilities, including propulsion systems, semiconductors and on-orbit servicing technologies, to reduce import dependence.
5. Deploying the newly established venture and technology adoption funds effectively, while expanding startup access to international capital and export opportunities.
6. Expanding defence-industry collaboration models initiated by the Defence Space Agency (DSA), DRDO and Mission DefSpace, with the objective of converting a greater share of the identified 75 defence space challenges into deployed capabilities.

None of this progress would have been possible without the continued confidence and support of our members, government partners and international collaborators. I extend my sincere gratitude to all those who contributed to the sector's advancement over the past year.

Last year, we stated that space is not India's next frontier – it is India's present. Over the course of this year, through every launch, commercial success and policy advancement, we have continued to validate that belief. Our challenge now is straightforward: maintain momentum and continue translating ambition into outcomes.

Shri Rahul Vatts
Director-Corporate Affairs & Group Chief Regulatory Officer, Bharti Airtel;
Vice Chairman, ISpA;
Vice Chairman, COAI
Chair-GSMA SPWG





MESSAGE

FROM DIRECTOR GENERAL

Lt Gen A K Bhatt (Retd)
PVSM UYSM AVSM SM VSM

Former DGMO, MS & GOC 15 Corps;
Director General, ISpA



As I present this year's Annual Report, I do so with the sense of pride that India's private Space sector has crossed a genuine threshold from policy on paper to a private Indian rocket reaching Orbit. The Indian Space Association (ISpA) and its members have stood at the Centre of this transformation and it is my privilege to share this year's milestones with you.

The year was marked by two moments India will remember for a long time. In June 2025, our Gaganyatri, Group Captain Shubhanshu Shukla, became the first Indian to reach the International Space Station in four decades, reviving a human spaceflight legacy dormant since Wing Commander Rakesh Sharma's 1984 mission an achievement later honoured with the Ashoka Chakra. And on 18 July 2026, Skyroot Aerospace's Vikram-1 reached orbit from Sriharikota on its very first attempt, making Skyroot the first Indian private company to place a rocket in orbit and India only the third nation, after the United States and China, with private orbital launch capability a feat that also made Skyroot the space sector's first space-tech unicorn. A serving officer carrying the tricolour to the ISS and a rocket built on Indian capital reaching that same reach of Space a year later capture how far our members have come.

ISpA continued to serve as the trusted bridge between industry, Government and international partners this year. Among the developments we engaged with closely:

- DoT's confirmation that satellite spectrum will be assigned administratively rather than by auction, with TRAI holding firm on fair, non-discriminatory pricing principles ISpA has argued for consistently
- IN-SPACe's new norms for Space Situational Awareness, Safety and Security Guidelines and draft third-party liability insurance framework, each a step toward regulatory predictability.
- Cabinet approval of the Research, Development & Innovation (RDI) Scheme for space and deep-tech startups, alongside our ₹1,000 crore SpaceTech Venture Fund and ₹500 crore Technology Adoption Fund.
- Gujarat, Tamil Nadu, Karnataka, Telangana and Andhra Pradesh each releasing dedicated space-tech policies proves our federal structure is now competing for this sector

MESSAGE FROM DIRECTOR GENERAL

On the strategic front, the shift from intent to delivery was unmistakable. Operation Sindoor settled any doubt that space-based ISR is a national security imperative and the SBS Phase-III constellation of 52 surveillance satellites is now being fast-tracked toward 2029. In January 2026, ISpA convened the first-ever structured dialogue between the Defence Space Agency leadership and over 45 of our member companies, covering ISR, PNT, SatCom and Space Situational Awareness. Mission DefSpace's challenges are steadily converting into fielded capability. 58 winners have been declared and 44 contracts signed with our members Kepler Aerospace, InspeCity and Pixxel among the builders. Kepler alone won a \$4 million iDEX Prime contract for India's first autonomous swarming satellite architecture, a six-satellite ISR constellation targeted for 2027, while InspeCity secured Mission DefSpace's very first signed iDEX contract, for a CubeSat micropropulsion system. The Earth Observation constellation PPP, described last year as "at an advanced stage" has since been awarded to a consortium led by our members Pixxel alongside PierSight and Dhruva Space.

It gives me great pride to note that progress is visible through our own members, who delivered milestones across the value chain. On launch and manufacturing, Skyroot's Vikram-1 was naturally the standout, carrying a technology-demonstration payload of our member CosmoServe. Agnikul Cosmos matched that ambition on the ground with an AS9100D certification for its Rocket Factory-1, India's largest 3D printer at its new Large Format Additive Metal Manufacturing facility and India's first clustered test-firing of three 3D-printed semi-cryogenic engines, ahead of its own maiden orbital attempt.

In Earth observation, Pixxel's Firefly constellation reached its full complement of six satellites this year, giving the world its first daily, high-resolution hyperspectral view of the planet from a commercial system. Dhruva Space contributed five satellites to ISRO's PSLV-C62 mission in January 2026 and Azista's AFR satellite successfully tracked the International Space Station across two fully successful passes, a clear signal of the developing capabilities our members are building. GalaxEye's Mission Drishti in May 2026, as the world's first commercial satellite to fuse SAR and optical imaging on one platform, was a unique effort. PierSight moved closer to launching Varuna-2, its first commercial SAR and AIS satellite, building on its Varuna demonstrator and its role in the Pixxel-led EO consortium.

In Space Situational awareness, Digantara expanded from debris-tracking into full-stack space surveillance, closing a \$50 million Series B round and announcing plans for fifteen further satellites alongside two dedicated Albatross missile-warning satellites through 2026-27. In propulsion, Bellatrix Aerospace closed a \$20 million pre-Series B round, shipped to its first large commercial customer outside India and advanced its Pushpak Orbital Transfer Vehicle into NSIL's launch missions.

MESSAGE FROM DIRECTOR GENERAL

And in Satcom, Ananth Technologies became the first private Indian company to secure IN-SPACe approval for a Ka-band geostationary broadband satellite, targeting 100 Gbps and commercial service by 2028 a landmark step toward closing India's connectivity gap from space.

ISpA's activities in the year attempted to match this pace. We hosted the fourth India International Space Conclave (IISC2025), drawing over 1,000 delegates from various countries and the fourth Indian DefSpace Symposium (IDS2026), inaugurated by General Anil Chauhan, the then Chief of Defence Staff. We convened the first industry roundtable between U.S. Space Command and Indian companies under our TRUST-Space dialogue, hosted NASA astronaut Sunita Williams for our members, deepened our LUPEX partnership with Japan and assisted Italy's Joint Strategic Action Plan into a three-city roadshow. We signed a Letter of Intent with the European Space Agency and MoUs with Novaspac and Grayscale, published our first Space Industry Handbook profiling 90-plus members, released joint documents with SatSure and OrbitAID, hosted 28 delegates from 14 nations under the ITEC programme and welcomed 25 new members into the ISpA family.

Looking ahead, our priorities for the coming year are clear:

- Closing out the Satellite spectrum and SCN authorisation framework, so commercial NGSO broadband can finally launch in India.
- Deepening domestic manufacturing and supply-chain capability, so growth doesn't stay import-dependent.
- Scaling the defence-industry partnership model that Mission DefSpace and the DSA dialogue have opened, so more of our Defspace challenges convert into fielded capability.
- Widening our Start-ups' access to global capital and export markets.

ISRO's own year gave the whole ecosystem reason for pride: the 100th launch from Sriharikota, the successful SpaDeX docking demonstration and the NASA-ISRO NISAR being the highlights.

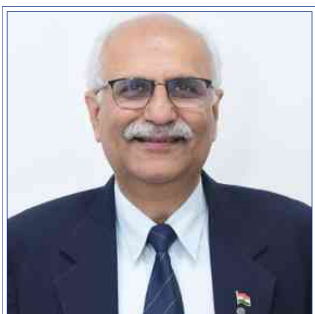
ISpA will continue to serve as the platform for advocacy, collaboration and growth our members and our nation need. Every policy shaped, every contract signed and every satellite launched this year moves us closer to a USD 44 billion space economy by 2033 and to a Developed and Atmanirbhar Bharat by 2047.

I extend my deepest gratitude to our members, to our government partners especially ISRO, IN-SPACe, the Defence Space Agency and the Department of Telecommunications and to our international partners for their continued trust.

Last year, I said the future of space belongs to those who dare to innovate. This year, our members proved it in orbit and on the ground. Let us keep the pace.

Jai Hind!
Lt Gen A.K. Bhatt (Retd)
Director General
Indian Space Association

EXECUTIVE COUNCIL



MR ARUN T RAMCHANDANI
CHAIRMAN

Sr VP & Head L&T
Precision Engineering & Systems;
Chairman, ISpA



MR RAHUL VATTS
VICE CHAIRMAN

Director-Corporate Affairs & Group Chief Regulatory
Officer, Bharti Airtel;
Vice Chairman, ISpA;
Vice Chairman, COAI
Chair-GSMA SPWG



MR CHIRAG DOSHI
**EXECUTIVE MEMBER & CHAIRMAN, MEMBERSHIP
COUNCIL**

Managing Director & CEO Walchandnagar Industries



MR P J NATH
**EXECUTIVE MEMBER & CHAIR SPACE
COMMUNICATIONS & SERVICES (SCS) COMMITTEE**

Managing Director & CEO, Nelco Ltd.

EXECUTIVE COUNCIL



MS SUJATHA DEEPAK

EXECUTIVE MEMBER & CHAIR, SATELLITES
COMMITTEE

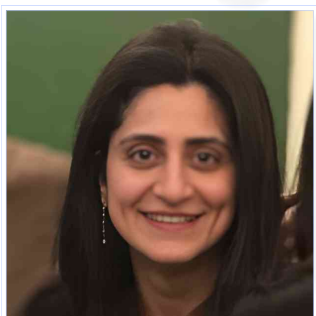
General Manager SATCOM, Alpha Design Technologies



MR ROHAN VERMA

EXECUTIVE MEMBER & CHAIR
GEOSPATIAL & REMOTE SENSING COMMITTEE

CEO & Executive Director
CE Infosystems Ltd (MapmyIndia)



MS NEHA IDNANI

EXECUTIVE MEMBER

Regional Vice-President Asia Pacific Eutelsat OneWeb



DR VINOD S CHIPPALKATTI

EXECUTIVE MEMBER

President – SEBU Centum Electronics Ltd



MS SHWETA SINGH

SECRETARY

GM Regulatory, Bharti Airtel

EXECUTIVE COUNCIL



LT COL V S VELAN (RETD)
EXECUTIVE MEMBER

Founder and CTO , Elena Geo Systems



MR UDAY BHANU DAS
EXECUTIVE MEMBER

Co-Founder & CEO, Kristellar Aerospace

MEMBERSHIP COUNCIL

Membership Council is a subgroup of the Executive Council of ISpA.

Chaired by Mr Chirag C Doshi with Mr Rahul Vats and Lt Gen AK Bhatt (Retd) as Council Members, the Membership Council handle and manage the admission process for any entity seeking membership in ISpA. They are also responsible for advising the Executive Council on the eligibility criteria for ISpA membership and any other matter relating to Membership.

OUR MEMBERS

This year has been significant for the Indian Space Association and its members. We are pleased to welcome 25 new members who have joined us on our journey to create an engaging environment and facilitate business opportunities for the industry.

We are sanguine that our new members, will play a significant role in our mission and we welcome them to the ISpA family.

FOUNDING MEMBERS



CORE MEMBERS



ASSOCIATE MEMBERS



START-UP MEMBERS



START-UP MEMBERS

 A SatSure Company	 Space Powered SIGINT & ELINT		
			
			
			
			
			
			
			
			
			

MEMBERS' ACHIEVEMENTS

Alpha Design Technologies

- Named among only three finalists alongside HAL and Bharat Dynamics for privatisation of ISRO's Small Satellite Launch Vehicle (SSLV) program, reaffirming ADTL's status as a leading private space player.
- Competed strongly in the SSLV bid, ultimately outbid by HAL's Rs 511 crore offer one of only two private consortia shortlisted against a PSU.
- Continued leveraging its position as one of two private firms to receive ISRO/NSIL's IMS-1 satellite bus technology transfer, a core capability for its satellite manufacturing business.
- Sustained support to India's human spaceflight programme, building on its subsidiary Alpha Tocol's role manufacturing the crew module fairing for the Gaganyaan mission, ahead of the Gaganyaan-1 uncrewed test flight.
- Strengthened order book and execution track record with a new order from the Indian Army for 400+ Software Defined Radios, reflecting continued growth in its broader electronics/avionics base that underpins space manufacturing.
- Recognized in industry analysis as a key private player shaping India's space and defence future, alongside firms like Tata Advanced Systems and Paras Defence.

Bharti Airtel

- **Direct-to-Cell Satellite Services in Africa:** Airtel Africa announced an agreement with SpaceX to introduce Starlink direct-to-cell satellite connectivity. Through this partnership, Airtel Africa customers with compatible smartphones in regions without terrestrial coverage can have network connectivity through Starlink. The satellite-to-mobile service will begin in 2026 with data for select applications and text messaging.
- **VSAT Connectivity:** Airtel has effectively leveraged satellite connectivity to expand its network in the remotest of areas, by commissioning sites on VSAT media where it is not feasible to lay terrestrial network. This also includes multiple sites commissioned by Airtel under various USOF projects.
- **650 Mn. Customer Milestone:** Airtel, the world's second largest telecom operator by customer base, serves nearly 666 million customers globally, through an integrated digital network and a diversified portfolio of services.
- **By combining advanced network infrastructure, scalable digital platforms and intelligent technologies,** Airtel is expanding its role as an enabler of next-generation digital services across consumer and enterprise ecosystems.

MEMBERS' ACHIEVEMENTS

CE Info System (MapmyIndia)

- Awarded a landmark contract by the Survey of India to develop India's first National Geo-Spatial Platform, creating a unified infrastructure for geospatial data access, analysis and dissemination across government, research, industry and public sectors.
- Integrated DIGIPIN digital coordinates into the Mappls platform, enabling highly accurate geospatial addressing with ~3.8 m resolution across India in collaboration with India Post.
- Bagged a project worth INR 1.10 billion from Indian Oil Corporation for a vehicle tracking system, leveraging its GPS/NavIC-based location intelligence stack.
- Signed an MoU with Delhi Metro Rail Corporation to integrate metro transit data into the Mappls app, expanding its multimodal, satellite-linked navigation coverage.
- Announced collaboration with the Ministry of Railways to extend its geospatial and mapping capabilities to rail infrastructure and services.
- Completed acquisition of an additional 20.02% stake in Gtropy Systems Pvt. Ltd., strengthening its IoT/tracking hardware and location-technology capabilities.
- Launched India's first real-time traffic signal timer feature along with the cheapest highway route calculator using NHAI's annual toll pass data, building on its satellite-derived mapping and traffic intelligence.
- Continued to deepen its long-standing collaboration with ISRO, integrating NavIC (India's satellite navigation constellation) and ISRO earth-observation datasets across its Mappls consumer and enterprise platforms, reinforcing India's push for indigenous, satellite-backed mapping infrastructure.

Larsen & Toubro*

- Larsen & Toubro (L&T) has developed an in-house Hinge and Hold-Down Release Mechanism (HDRM) for satellite solar panel deployment, qualified for 150-200 kg-class satellites with a 1,400 lb holding load and SMA-based low-shock release, as it matures the system into a configurable, export-ready product for the global market.
- As part of its continued contribution to India's space programme, L&T has established a state-of-the-art Satellite Assembly, Integration and Testing (AIT) Facility at its Precision Manufacturing & Systems Complex (PMSC), Coimbatore. Designed to support the growing demands of the nation's satellite missions, the facility is capable of handling and integrating satellites of up to 2,000 kg class.
- The facility features a 10-metre clear hook height and provides end-to-end capabilities for satellite assembly, integration, testing and checkout activities in a controlled environment. In addition to accommodating larger class satellites, the facility is designed to enable the simultaneous production and integration of multiple small satellites (<500 kg), supporting emerging requirements for serial production for satellite constellations

MEMBERS' ACHIEVEMENTS

Nelco (A TATA Enterprise)

- Signed an agreement with Eutelsat to deliver OneWeb LEO satellite connectivity services across India covering land, maritime and aviation markets and extending secure, low-latency connectivity to India's borders, territorial waters and remote regions for government and enterprise applications.
- Received a Letter of Intent from the Department of Telecommunications (DoT) for a GMPCS VNO (Global Mobile Personal Communications by Satellite – Virtual Network Operator) licence, clearing the way to commercially operate satellite communication services and expand its enterprise/government satcom offerings.
- Conducted proof-of-concept trials and demonstrations with Eutelsat OneWeb targeting the B2B/enterprise segment, reinforcing its strategic focus on high-value applications such as telecom backhaul, defence, energy and critical infrastructure connectivity.
- Expanded its collaboration with BSNL to launch specialised satellite handsets (priced at ₹1.34 lakh), pushing into niche high-value hardware for maritime, defence and remote disaster-management connectivity a shift from a purely service-based satcom model to hardware-integrated offerings.
- Board approved consideration of a fundraising plan (via loans/NCDs) specifically earmarked for investment in emerging satellite communication businesses and technologies, signalling continued capital commitment to scaling its satcom operations.
- Continued advancing plans, alongside Tata Group, to expand satellite broadband access to remote and underserved regions of India by engaging with regulators on spectrum allocation and leveraging global satellite capacity.

MEMBERS' ACHIEVEMENTS

Eutelsat OneWeb

- Agreement with Nelco: Eutelsat and Nelco Limited have signed an agreement to deliver OneWeb LEO satellite connectivity services across India – to customers on land, at sea and in the air.
- NR-NTN Trial: Conducted the world's first successful trial of Rel-19 5G-Advanced Non-Terrestrial Network (NR-NTN) connection over LEO, in partnership with the European Space Agency, MediaTek, Airbus, Sharp, ITRI and Rohde & Schwarz using OneWeb constellation – a landmark step toward global satellite-terrestrial 5G interoperability.
- Supporting Humanitarian Relief Operations: Partnered with Indian Defence agencies in multiple humanitarian missions over the year in India as well as abroad, enabling disaster relief, restoration of communication and telemedicine.

Walchandnagar Industries

Walchandnagar Industries continues to play a pivotal role in India's space program, reinforcing its legacy as a trusted partner of ISRO for over five decades.

- Strategic S139 Contract: Secured a ₹30.75 crore order from ISRO's Vikram Sarabhai Space Centre (VSSC) for the fabrication and supply of S139 segment hardware five units each of Head End, Middle and Nozzle End Segments, fabricated in maraging steel with a 2.8-metre diameter, with scope for up to 3 additional units under the same terms, strengthening Walchandnagar's long-standing role in India's PSLV launch vehicle production ecosystem.

MEMBERS' ACHIEVEMENTS

Ananth Technologies

- Contributed critical propulsion-adjacent flight hardware, avionics and precision subsystems to ISRO's LVM3-M6 mission (Dec 24, 2025), which placed AST SpaceMobile's BlueBird Block-2 satellite the heaviest satellite ever launched from Indian soil into orbit, alongside fellow Hyderabad firm MTAR Technologies, which supplied key propulsion systems for the same mission.
- Recognized as a key industry partner in ISRO's successful CMS-03 launch (Nov 2, 2025) a 4,410 kg multi-band military communication satellite for the Indian Navy launched via LVM3 (correcting the earlier PSLV-C59 reference) with ATL supplying critical components and its Chairman publicly commenting on the mission's strategic significance.
- Became the first private Indian company authorized by IN-SPACe to roll out satellite broadband-from-space services using a domestically-built geostationary satellite, targeting service launch from 2028 positioning ATL to compete with Starlink, Eutelsat OneWeb and Amazon Kuiper.
- Announced AnanthSat-1, India's first privately developed GEO communication satellite a 4-tonne, Ka-band platform at an exclusive 89°E orbital slot granted by IN-SPACe, offering 100+ Gbps capacity, backed by an initial ₹3,000 crore investment, unveiled by Chairman Dr. Subba Rao Pavuluri at India Space Congress 2026, targeting a 2029 launch.
- Opened a new Centre of Excellence for Navigation in Thiruvananthapuram (Nov 24, 2025), developed in collaboration with DRDO and BrahMos, with ISRO Chairman V Narayanan publicly citing it as a key step toward India's satellite-navigation self-reliance.
- Signed a Strategic Technology Cooperation Agreement with EndureAir Systems combining aerospace avionics and UAV expertise to jointly develop next-generation loitering munition systems under the IDDM category extending ATL's space/avionics capabilities into the aerospace-defence convergence space.
- Entered a strategic agreement with Finland's ReOrbit on GEO communications satellites just outside the strict 12-month window, but relevant ongoing context for ATL's GEO satellite ambitions (including AnanthSat-1).
- Reported strong financial momentum, with FY 2024-25 revenue of ₹417 crore, reflecting a 51% one-year revenue CAGR and 58% EBITDA CAGR indicating the space/aerospace order book scaled significantly through the reporting period.

MEMBERS' ACHIEVEMENTS

Astra Microwave Products

- Announced plans to spin out its dedicated Space, Meteorology & Hydrology business into a separate listed entity, building on a ~25-year relationship with ISRO during which Astra supplied close to 90% of the electronics for ISRO's RISAT (Radar Imaging Satellite) programme a major strategic move to unlock standalone value from its space franchise.
- Contributed precision RF-enabling products to the ISRO-NASA NISAR mission the world's first dual-band (L-band & S-band) SAR Earth observation satellite publicly celebrating its successful launch on July 30, 2025.
- Secured a ₹171.38 crore order from the India Meteorological Department (IMD) for six Klystron-based S-band Polarimetric Doppler Weather Radars plus associated systems and a 10-year warranty/maintenance package.
- Signed an MoU with Bharat Electronics Limited (BEL) to jointly develop advanced electronic modules spanning Electronic Warfare, radar and satellite/aerospace technologies.
- As of December 2025, maintained a standalone order book of ₹2,226 crore, with the Space Sector contributing ₹249 crore alongside Defence PSUs/DRDO (₹1,477 crore), Meteorology & Hydrology (₹369 crore) and Exports (₹130 crore).

Azista Space*

- Next-generation constellation in development: Advancing a follow-on satellite constellation targeted for 2027, designed to deliver a 750 km imaging swath at 4-metre resolution with up to 20 minutes of continuous imaging a capability combination not currently available in the commercial market.
- Continued operating its 80 kg AFR satellite (launched June 2023 via SpaceX Falcon-9/Transporter-8) well into its third year of a 5-year design life, with the Non -Earth Imaging (NEI) imaging ISS, validating its tracking algorithms and imaging systems remain fully functional.
- Winner of 3 iDEX grants from Ministry of Defence.
- Delivered 87 Subsystems to customers.

MEMBERS' ACHIEVEMENTS

Bharat Forge

- Through step-down subsidiary Agneyastra Energetics Limited (under Kalyani Strategic Systems), signed an agreement with the Andhra Pradesh Industrial Infrastructure Corporation for ~949.65 acres in Madakasira, Anantapur district, to build an end-to-end defence energetics manufacturing complex with explicit future provisions for rocket, missile and space launch vehicle energetics
- Announced plans to establish an aerospace-grade ring mill using advanced forging and machining technology to produce high-precision components, including landing gear parts, for aircraft, aero-engine and space launch vehicle applications.
- Signed a new MoU with FLYING WHALES (France-Canada) at the Farnborough International Airshow to jointly develop and manufacture 60-tonne heavy-lift airships in India for defence and strategic logistics extending its aerospace platform ambitions.
- Entered UAV partnerships with both Windracers Aviation and France's Turgis Gaillard, expanding into autonomous aerial systems relevant to aerospace/defence operations.
- Finalized the largest small-arms contract in India's private defence sector a ₹1,661.9 crore MoD order for 255,128 indigenously developed CQB Carbines (Dec 31, 2025) reinforcing Bharat Forge's position as a strategic, IDDM-focused defence manufacturer.

MEMBERS' ACHIEVEMENTS

Centum Electronics*

- Successfully supported multiple ongoing Indian Space and Defence missions through delivery of high-reliability electronics and mission-critical subsystems.
- Strengthened collaboration with ISRO, IN-SPACe, NewSpace startups and global space industry partners.
- Showcased indigenous technology leadership at IEEE SPACE 2026 and major national space forums.
- Expanded AI adoption across engineering functions to accelerate innovation and product development.
- Advanced development of next-generation SAR, EW, ELINT and digital payload technologies.
- Progressed Centum's next initiatives focused on sovereign capability, systems ownership and IP-led growth.
- Continued to be a key contributor to India's strategic electronics ecosystem spanning Space, Defence and Aerospace sectors.

Godrej & Boyce Manufacturing

- Delivered the first-ever human-rated L110 Stage Vikas Engine to ISRO's Liquid Propulsion Systems Centre (LPSC) for the Gaganyaan Human Spaceflight Programme the engine that will power the core L110 stage of the LVM3 (HLVM-3) rocket carrying India's first astronauts (Nov 13, 2025), continuing Godrej's four-decade ISRO partnership spanning Chandrayaan and NISAR.
- Signed a five-year contract with Safran Aircraft Engines (Sept 2025) to manufacture titanium ventilation assemblies for CFM LEAP engines correcting the "LEAP" attribution: CFM LEAP is a Safran/GE joint program and this specific deal was with Safran, not a generic LEAP OEM.
- Secured a manufacturing contract from Pratt & Whitney (an RTX business) to produce complex aerospace parts for commercial aircraft engine applications, expanding Godrej's role in the global aero-engine supply chain.
- Announced a new ₹250 crore aerospace manufacturing facility in Khalapur, Maharashtra, spanning 100 acres across two plants, positioned as a capacity-expansion hub for propulsion-adjacent and advanced aerospace manufacturing.

MEMBERS' ACHIEVEMENTS

Godrej & Boyce Manufacturing

- Committed a further ₹100 crore investment over three years into its aerospace business, covering new facilities and upgrades to global-standard infrastructure spanning liquid propulsion engines to advanced airframe assembly.
- Continued to position itself as the only private Indian company capable of manufacturing all modules of an aero-engine, with the aerospace business reporting ~25% annual growth and exports rising over 30%, underpinned by OEM partnerships including Boeing, Rolls-Royce, Safran and Pratt & Whitney.

Hughes Communication

- Entered discussions and formed early commercial VSAT partnerships with global LEO satellite broadband operators Starlink (SpaceX) and Amazon's Project Kuiper, positioning itself as a key go-to-market partner for B2B and B2G segments ahead of LEO rollout in India with Hughes' CEO Shivaji Chatterjee confirming active talks with all major LEO operators.
- Continued to leverage its position as India's largest VSAT/satellite services provider operating 200,000+ terminals through its Hughes-Airtel JV (Airtel 33%, Hughes 67%) as the natural distribution partner for new entrants like Starlink and Kuiper navigating India's regulatory and ground-infrastructure landscape.
- Submitted a formal response to TRAI's April 2026 consultation paper on Satellite Communication Network (SCN) authorisation, engaging directly in shaping India's evolving satellite regulatory framework including VSAT licensing, spectrum charging and Direct-to-Device (D2D) satellite policy.
- Continued operating its long-standing OneWeb LEO distribution partnership (originally a six-year deal from 2022), providing enterprise, government, defence, maritime and aviation customers access to OneWeb's LEO constellation alongside its traditional GEO/JUPITER HTS services positioning Hughes India as a genuine multi-orbit (GEO+LEO) satellite services provider.

MEMBERS' ACHIEVEMENTS

Ipstar (India) Pvt. Ltd.*

- Thaicom's leadership noted continued momentum and growth in the India market specifically through 2025, citing "increased activity in India and a growing customer base" as a driver of improving quarterly performance (reported July 2025).
- However, the flagship growth driver for India Thaicom 9, the next-generation software-defined satellite that IN-SPACe had authorized for Indian services has been significantly delayed. Originally slated for 2025, then push to mid 2026, the satellite (built by Astranis) suffered a component/power-board anomaly affecting production and Thaicom has now requested an extension, with the satellite expected to enter service mid 2027.

Viasat*

- Successfully launched ViaSat-3 Flight 2 (F2) aboard a ULA Atlas V551 from Cape Canaveral (Nov 13, 2025), with successful signal acquisition confirmed designed to more than double Viasat's network capacity over the Americas, with commercial service entry on track for early 2026.
- ViaSat-3 Flight 3 (F3) confirmed for launch on April 27, 2026, targeting the Asia-Pacific region completing Viasat's three-satellite ViaSat-3 constellation (each designed to cover roughly one-third of Earth), with service entry expected by late summer 2026.
- U.S. Space Force PTS-G "Swarm 1" Prime Contract (June 2026): Selected to build, launch and deliver the first satellite in a fleet of maneuverable mini-GEO satellites under the Protected Tactical SATCOM-Global program (up to \$4B IDIQ), following the Delivery Order 1 design-maturation phase completed in 2025.
- Indian Navy SATCOM Modernization with BSNL (Jan 15, 2026): Deployed Ka band satellite systems alongside existing L-band infrastructure, enabling the Indian Navy's shift to a multi-band, multi-constellation SATCOM architecture.
- WiSig Networks India-built Satellite IoT Chipset (June 2026): Launched global testing of a Made-in-India 3GPP Release 17 NB-IoT NTN chipset (developed at IIT Hyderabad) for Viasat's L-band satellite IoT ecosystem, targeting maritime and disaster-response applications along India's coastline.
- Multi-orbit Business Aviation Expansion (Nov 2025): Announced Telesat Lightspeed LEO integration into JetXP business-aviation connectivity, alongside an expanded Etihad Airways fleetwide deployment of Viasat Amara.

MEMBERS' ACHIEVEMENTS

Viasat

- NexusWave Maritime Next Phase (Dec 2025): Unveiled following the ViaSat-3 F2 launch, with a new VS60 terminal achieving 250+ Mbps in sea trials; Evergreen Marine (Taiwan's largest container line) committed to fleetwide NexusWave adoption (Jan 2026) the first Taiwanese operator to do so.
- Commercial in-flight connectivity expansions with American Airlines, Southwest Airlines and KLM supporting full, fast, free Wi-Fi initiatives.

Apex Technology*

- Closed a \$200 million Series C on April 28, 2025, led by Point72 Ventures and co-led by 8VC, following the successful one-year on-orbit milestone of Apex's first spacecraft, Aries.
- Unveiled Comet on May 28, 2025, its largest and most powerful satellite bus to date. Comet uses a flat-pack design that delivers over 5 kW of continuous power, is optimized for Direct-to-Device constellations and high-power national security payloads and allows more satellites to fit within a single rocket fairing.
- Raised a \$200 million Series D on September 12, 2025, led by Interlagos, pushing its valuation past \$1 billion. The back-to-back rounds, Series C to D in under five months, reflected surging demand for LEO constellations.
- Opened Factory One, a high-rate manufacturing facility in Los Angeles with capacity for 200+ satellite buses per year, with plans to expand beyond 100,000 sq. ft. by the end of 2026 to support further vertical integration and mission services.
- Launched Project Shadow on October 22, 2025, America's first commercially led on-orbit space-based interceptor demonstration. Built on Apex's Nova bus and equipped with a software-defined radio, the mission supports the Pentagon's Golden Dome missile defense initiative, with launch targeted for summer 2026.
- Raised a further growth round of over \$200 million on June 5, 2026, led by Glade Brook Capital Partners and co-led by Washington Harbour Partners, nearly doubling its valuation to \$2.3 billion in under a year and funding continued scale-up of high-rate manufacturing and vertical integration.
- Founded in 2022 by Ian Cinnamon and Max Benassi, Apex is the world's first mass-manufacturer of productized satellite bus platforms and holds the record for the fastest clean-sheet design to reach orbit. It has been recognized on Fast Company's Most Innovative Space Companies of 2025 and Silicon Valley Defense Group's NatSec100.

MEMBERS' ACHIEVEMENTS

Avantel Limited

- ₹122.58 crore NSIL antenna contract (Feb 11, 2026): Won a contract to supply, install and commission S/X-band full-motion antennas with Ka-band-ready capability for LEO satellite TT&C and data reception including setting up a Ground Segment as a Service (GSaaS) facility with a multi-band antenna farm, positioning Avantel as a lead player in India's satellite ground-segment infrastructure (completion due August 2027).
- ₹83.80 crore satellite equipment order from Zetwerk Manufacturing (~March 2026): A major new client win moving beyond direct government contracts to high-tier private manufacturing integrators for advanced satellite communication equipment, deliverable by March 2027; represents roughly 35-40% of Avantel's typical annual revenue.
- ₹11.59 crore NSIL Xponder order (April 6, 2026): Manufacturing, supply, installation and commissioning of Xponder devices, completion due October 2026.
- ₹11.19 crore NSIL Xponder order (Jan 7, 2026): Supply, installation and commissioning of Xponder devices, completion due July 2026 Avantel's third distinct NSIL win within the window.
- ₹9.94 crore DRDO contract (June 8, 2026): Development and testing of satellite terminals for the GSAT32/N3 communications system, with execution through December 2028.
- Successfully tested indigenous satellite data terminals for marine applications (April 2026), diversifying its satellite product portfolio.
- Signed an MoU with HAL's Strategic Electronics R&D Centre (SLRDC) at Wings India 2026 to collaborate on defence avionics and satellite communications.
- ₹28.20 crore Indian Coast Guard Satcom contract (May 25, 2026): Supply, installation, commissioning and annual maintenance of satellite communication products, executable by August 2027.
- Received a ₹19.33 crore order from L&T for satellite communication products and servicing.
- Won the IEI Industry Excellence Award 2025 for Engineering, Manufacturing & Processing, recognizing indigenous Satcom innovation.

MEMBERS' ACHIEVEMENTS

Axon Interconnectors & Wires

- High-Tech Manufacturing in India
- Defense, Aerospace and Space Contributions
- Certifications and Standards - Certified with AS9100, ISO 14001 (Environmental Management) and ISO 45001 (Occupational Health & Safety).

BAE Systems India

- Successfully launched the Azalea satellite cluster (Nov 28, 2025) three BAE-built AI-enabled RF satellites plus an ICEYE SAR satellite, delivering onboard-processed intelligence for UK defence and disaster relief.
- Won a \$1.2 billion U.S. Space Force contract (June 2025) for the Epoch 2 missile warning/tracking satellite cluster, supporting the Golden Dome missile defense architecture.
- Signed an MoU with Hanwha Systems (June 2025) to co-develop a multi-sensor satellite combining RF sensing and SAR for space-based ISR.
- Awarded an \$11.8 million U.S. Space Force contract (April 2026) to demonstrate Link-182 satellite-to-satellite communications for Golden Dome's MILNET relay layer.
- Advanced AI-enabled in-orbit data processing and anti-jamming GPS capabilities for resilient, dual-use space/defence operations.

BEML Limited

- Supplied the Strap-On Base Shroud (SBS) airborne structures for ISRO's LVM3-M6 mission (Dec 24, 2025) a key structural component of India's heavy-lift LVM3 rocket, which carried the heaviest commercial satellite ever launched from Indian soil (AST SpaceMobile's BlueBird Block-2, ~6.5 tonnes) and marked ISRO's 100th orbital launch overall.
- Manufactured the SBS structures entirely in-house advanced machining, conical rolling, jettison motor integration for S200 booster separation and complex conical panel assembly via a dual-facility model: engineering and machining at BEML's Aerospace Facility in Mysuru, final assembly at a dedicated LVM3 aerospace line in Bengaluru.

MEMBERS' ACHIEVEMENTS

BEML Limited

- Demonstrated end-to-end aerospace manufacturing capability meeting ISRO's stringent weight-to-strength and reliability standards, reinforcing its position as a trusted structural-hardware partner for India's heavy-lift launch programme.
- Continued serial production of seven additional light-alloy airborne structures for the LVM3 programme, supporting future commercial launches and India's Gaganyaan human spaceflight programme (which remains on track for its first uncrewed test flight, G1, in H2 2026).

Bharat Electronics

- Signed an MoU with Bellatrix Aerospace (March 2026) to co-develop satellite systems and payloads for Very Low Earth Orbit (VLEO) operations, combining BEL's defence electronics expertise with Bellatrix's satellite propulsion capabilities.
- Secured new orders explicitly including satellite communication networks (disclosed March 2026) as part of a broader ₹1,660 crore order batch.
- Reported record FY26 turnover of ₹26,750 crore (up 16.2%), with export sales up 33.65% exports included satellite communication systems among other products.
- Continued operating its dedicated TWTA manufacturing facility (built under its 2024 ISRO/SAC partnership) supplying satellite communication and navigation payload components through the year.
- Signed MoUs with Centum Electronics and Tata Electronics to deepen indigenous RF, radar and electronics manufacturing capabilities with cross-application to satcom and space surveillance systems.

Broadcast Engineering Consultants India Limited

- Azista MoU for Earth Station development collaboration to strengthen satellite ground segment infrastructure capabilities (confirmed via BECIL's own official disclosures).
- Suhora MoU for Disaster Management partnership leveraging satellite communication and geospatial technologies for disaster management solutions.

MEMBERS' ACHIEVEMENTS

Broadcast Engineering Consultants India Limited

- Operationalised a Cyber Forensics Centre of Excellence, with capabilities spanning drone forensics and digital investigation for secure communication ecosystems.
- Continued execution of large-scale satellite-enabled communication and broadcast infrastructure projects, integrating ICT, surveillance and digital systems under national government initiatives.
- Expanded operational support for satellite-based digital distribution systems DTH, HITS and IPTV platforms.
- Advanced deployment of drone and counter-drone systems for aerospace security and airspace monitoring.

Capella Space

- Capella-17 "No Cloudy Days" launch (June 23, 2025): Launched aboard SpaceX's Falcon 9 as part of the 88-satellite Transporter-14 rideshare mission from Vandenberg Space Force Base into a 550km sun-synchronous orbit. Set a company record with satellite contact established just 90 minutes post-deployment and introduced Orbion's Hall-effect propulsion system for enhanced InSAR and Coherent Change Detection precision.
- Acadia-class platform upgrades: 700 MHz radar bandwidth, optical inter-satellite links and higher-resolution imagery, enabling faster tasking-to-delivery cycles.
- "Low Drag Mode" innovation: Increased satellite lifespan by ~24% and reduced aerodynamic torque by 20-30% to counter elevated atmospheric drag.
- CSI enhancement for Spotlight Ultra: Colorized Sub-aperture Imagery now delivered with every collect, no added processing steps.
- Sub-minute automated tasking: Continuous console improvements enabling SAR imagery tasking in under a minute.
- Space Development Agency HALO Europa Award (~April 2026) a new government contract win.
- Planning next-generation satellite deployment for late 2026, signaling continued constellation expansion and platform evolution beyond the current Acadia-class fleet.

MEMBERS' ACHIEVEMENTS

Capella Space

- Acquired by IonQ: Completed July 15, 2025, in an all-stock deal valued at ~\$311 million, positioning the combined company to build the world's first space-based Quantum Key Distribution (QKD) network anchored in Capella's SAR satellite infrastructure.
- IonQ acquires Skyloom Global: Announced Nov 17, 2025 and formally completed January 28, 2026 adding Space Development Agency-qualified optical communications terminals (~90 delivered for SDA missions) to expand the combined quantum-secure space networking stack.

ESRI India*

Esri India, the market leader in geographic information system (GIS) software, location intelligence and mapping solutions in India, helps customers unlock the maximum potential of their data to improve operational and business decisions. It has delivered pioneering enterprise GIS technology, powered by ArcGIS, to more than 6,500 organizations in government, private, academia and non-profit sectors. The company collaborates with a rich ecosystem of partner organizations to deliver GIS and location intelligence-based solutions.

In Sep 2025, Esri India signed a Memorandum of Understanding (MoU) with Dhruva Space, a leading full-stack SpaceTech company, at the Esri India User Conference in Hyderabad. The collaboration will enhance the availability and accessibility of satellite imagery in India by integrating Dhruva Space's AstraView commercial satellite imagery service into Esri's ArcGIS platform.

HAL

- Signed the SSLV Technology Transfer Agreement (Sept 10, 2025) with ISRO, IN-SPACE and NSIL the 100th ToT Agreement facilitated by IN-SPACE. HAL will absorb SSLV technology over a 24-month handholding period, then enter a 10-year production phase, gaining a non-exclusive licence covering design, manufacturing, integration, launch operations and support marking HAL's direct entry into the small satellite launch vehicle ecosystem and its strategy to build a dedicated space vertical. This followed HAL's selection as winning bidder (June 20, 2025) with a ₹511 crore offer, beating consortia led by Alpha Design Technologies and Bharat Dynamics.

MEMBERS' ACHIEVEMENTS

HAL

- Signed an MoU with BEML (Feb 25, 2025) though this covers learning & development/leadership training collaboration, not manufacturing.
- Strengthened R&D ecosystem through partnerships with DIAT and IIIT Dharwad, focused on advanced aerospace technologies and future systems.
- Entered a long-term agreement with Safran Aircraft Engines for development and supply of critical engine components, strengthening HAL's propulsion ecosystem.
- Signed a partnership with HENSOLDT at Dubai Air Show 2025 for advanced avionics and sensing technologies relevant to aerospace and space systems.
- Signed an MoU with UAC (Russia) for SJ-100 aircraft production, enhancing global manufacturing and system integration capabilities.
- Conducted the inaugural flight of the Dhruv NG helicopter, reflecting advancement in indigenous aerospace design.
- Continued LCA Mk1A deliveries and progress on the AMCA programme and participated in Wings India 2026.

Hexcel Composites LLP

- Unveiled HexTow® IM11-R, an intermediate-modulus carbon fiber optimized for next-generation Type III/IV composite overwrap pressure vessels enabling higher operating pressures, greater payload capacity and improved reliability for aerospace and space applications (showcased at JEC World 2026, March 2026).
- Continued supplying composites for over 100 space and defense programs, spanning launch vehicles, satellite structures and composite overwrap pressure vessels.
- Partnered with HyPerComp to unveil an advanced composite pressure vessel at CAMX 2025 (Sept 2025), broadening applications beyond traditional aerospace.
- Continued positioning space as a growth area alongside helicopters and UAVs, citing durable, heat-resistant composites supporting launch vehicles and satellite structures as a rising-cadence growth driver.

MEMBERS' ACHIEVEMENTS

ICEYE*

Constellation Growth: Launched 22 new SAR satellites between July 2025 and July 2026, growing the constellation from 54 to 76 satellites, the world's largest SAR fleet. Production is scaling from roughly 50 satellites annually today toward a target of 100 per year by 2027.

Funding and Growth: Closed a Series F round in June 2026, EUR 450 million led by General Atlantic, total transaction (with secondary placement) exceeding EUR 1 billion at a valuation of over EUR 10 billion. This followed a Series E close six months earlier (December 2025, EUR 2.4 billion valuation). 2025 revenue exceeded EUR 250 million, EBITDA above EUR 100 million.

Sovereign Mission Milestones: New sovereign SAR contracts with Sweden (FMV, January 2026) and Finland (Defence Forces, ~EUR 158 million), plus Germany's RISS joint venture with Rheinmetall delivering the EUR 1.7 billion SPOCK-I program, the largest NewSpace satellite contract to date.

Product Milestones: Launched the ISR Cell (September 2025), a deployable tactical ISR ground segment validated in NATO exercises and Tactical Access (October 2025), a subscription tasking product offering guaranteed imaging slots and sub-hour delivery, breaking from the industry-standard first-in-first-out model.

LeoLabs

- Record 2025 bookings: \$60M+ in total contract awards, up 186% YoY in U.S. Government contracts.
- MDA SHIELD IDIQ: Named to Competitive Range for the \$151B Missile Defense Agency SHIELD contract (Jan 2026).
- Joint DOC-Space Force catalog contract: Awarded Sept 30, 2025 (announced Dec 9, 2025); tracks ~25,000 objects, feeding TraCSS and the Unified Data Library.
- Scout-S deployed in Indo-Pacific (June 10, 2026): New transportable 3D radar class; catalog now exceeds 26,000 objects; tracked Chinese ISR satellites and spaceplane within hours of activation.
- Valiant Shield 2026: Scout Hawaii supported the U.S.-led Indo-PACOM exercise.
- Hypersonic tracking demo with Varda and Anduril (Sept 8, 2025): Tracked Varda's W-3 reentry via Global Radar Network + Anduril's Lattice AI.

MEMBERS' ACHIEVEMENTS

LeoLabs

- NASA CARA agreement (Aug 2025): Evaluating tracking data for collision-risk analysis.
- SpaceWERX \$4M TACFI (June 2025): Scout radar software upgrades for missile/hypersonic tracking.
- OSC pathfinder award (June 2025): Cataloging new commercial payloads within 7 days of launch.
- Seeker and Scout radar classes finalized (2025); second Seeker site planned for Indo-Pacific by 2027.

NIBE SPACE

- -IN-SPACe registration (April 2025): Approved as EO Data Disseminator (GSD >30cm), valid till Feb 2026.
- Thales Alenia Space contract (Feb 2025): First high-resolution optical satellite ordered, kicking off NSPL's EO constellation.
- BlackSky agreement (Feb 2025): Subscription imagery/analytics services for NSPL's Indian customers.
- Constellation scope revised: Now tracked at 23 satellites (Optical, IR, SAR), scaling toward a 40-satellite long-term target.
- MSEDCL project win (May 2026): ₹12.58 crore GIS survey/mapping award diversification into utility infrastructure mapping.
- Consortium intact: MoUs with L&T, CENTUM, AgniKul, Skyroot, SpaceFields, SISIR Radar, CYRAN AI and Thales Alenia Space.

NorthStar Earth & Space

- Multi-source data integration pipeline (Sept 2025): Built out a pipeline processing 80 million observations/day across sensor types, including star-tracker data from a mega-constellation since cited by NorthStar as its current operating scale.
- Canadian Space Agency award (late 2025): ~\$1M CAD to build systems for tracking unknown objects using large data sets.
- NATO DIANA selection (following the CSA award): Chosen by the NATO DIANA accelerator program to develop new methods of fusing space data to support military decision-making.

MEMBERS' ACHIEVEMENTS

NorthStar Earth & Space

- RCAF defence contract (~June 2026): \$40M CAD, 12-month deal to supply the Royal Canadian Air Force's 3 Canadian Space Division with space surveillance data NorthStar's largest contract to date.
- SPAC merger for NYSE listing (announced April 17, 2026): Agreement with Viking Acquisition Corp. I at a \$300M pre-money valuation; expected to close Q3 2026, trading as "NSTR," with a \$30M PIPE led by Cartesian Capital Group.
- Constellation build-out underway: 4 satellites in orbit of a planned 52 (revised down from earlier 96-satellite plans); 8 more slated for launch via Rocket Lab no earlier than late 2026.
- Spire Global dispute ongoing: Litigation/arbitration over underperforming satellites (from a 2024 launch) continued through 2025-2026, with the SPAC filing disclosing its impact on NorthStar's launch roadmap.
- Full custody tracking milestone: Demonstrated for the U.S. government continuous tracking of a 10 cm object over 26 hours, showcasing precision SDA capability.

Planet Labs

- Pelican-3/4 launched (Aug 2025): Gen 1 satellites, 40cm-class imagery, NVIDIA Jetson AI onboard.
- Global Fishing Watch partnership (Aug 2025): 2M+ sq km of ocean imagery processed daily.
- German contract (July 2025): €240M multi-year deal Pelican/SkySat imagery + AI surveillance.
- Defense wins bundle (July 2025): DIU Indo-Pacific partnership, U.S. Navy contract, NATO surveillance deal.
- Contract renewal (Nov 2025): 8-figure renewal with international defense/intel customer.
- Google "Project Suncatcher" (Nov/Dec 2025): Two demo satellites with Google TPUs, testing orbital AI compute.
- Sweden contract (Jan 2026): Low 9-figure deal dedicated satellite suite + intelligence access.

MEMBERS' ACHIEVEMENTS

Planet Labs

- Pelican-11 launched (~March 2026): Gen 2 tech demo, targeting ~30cm-class imagery.
- Greek government contract (May 2026): Two-year ESA-backed imagery deal.
- NGA contracts (June 2026): \$22M Maritime Domain Awareness extension + new Global Monitoring Service deal.
- Raised FY2027 guidance (June 2026): \$425M-\$441M revenue outlook; added to Russell 1000.

Samtel Avionics

- Space & drone expansion announced (Feb 26, 2026): ₹200 crore+ investment to enter LEO/miniature satellite technology (comms + IoT-enabled) and drone/anti-drone systems, targeting a ₹1,000 crore order book; dedicated space and drone teams stood up.
- ₹215 crore growth funding secured (March 24, 2026): ₹75 crore raised from True North Private Credit plus a ₹140 crore green shoe option, earmarked for the space-tech and drone diversification.
- ET Entrepreneur Award 2026 (March 25, 2026): Won "Excellence in Manufacturing - Engineering & Allied Goods," recognizing indigenous manufacturing capability.
- Satellite concept work completed (as of June 30, 2026): Samtel confirmed it has finished concept-stage work on satellite technology and identified core manufacturing building blocks, with eventual supply envisioned for Indian Armed Forces and international customers no firm timeline given beyond concept phase.
- Indigenous jamming/interception technology unveiled (June 30, 2026): CEO Puneet Kaura announced in-house jamming/interception tech for cross-border application, positioned alongside the satellite push as part of Samtel's post-Operation Sindoor self-reliance narrative (claims 100% self-reliance already).

MEMBERS' ACHIEVEMENTS

SES India Pvt Ltd

- SES-Intelsat merger completed (July 17, 2025): \$3.1B acquisition finalized, creating a combined ~90 GEO + ~30 MEO satellite fleet with strategic LEO access positioned as a "global multi-orbit connectivity powerhouse," with €9B combined gross backlog and \$1.6B in targeted 3-year synergies.
- Received official authorization from **IN-SPACE** to provide direct satellite coverage to India's broadcast media industry, securing new business from three of India's largest media conglomerates.
- Orbit Connect India (Jio-SES JV) still pending final launch: Despite holding its GMPCS license and IN-SPACE authorization, as of June 2026 Orbit Connect remains blocked from commercial launch pending final DoT security clearance the same regulatory bottleneck affecting Starlink and Eutelsat OneWeb in India.
- Jio exploring sovereign LEO constellation: Reliance's Jio (SES's JV partner) signaled at its June 2026 AGM that it is separately assessing building its own sovereign LEO satellite constellation, while leasing capacity from global operators (including SES) in the interim.

Tata Advanced Systems Limited*

- Tata Advanced Systems Limited (TASL) has inaugurated India's first private-sector helicopter Final Assembly Line for the Airbus H125 at Vemagal Karnataka. The first 'Made in India' H125 is expected to be delivered early 2027, and will also be available for export across the South Asian region.
- Tata Advanced Systems announced the groundbreaking of a new Defence Maintenance, Repair and Overhaul (MRO) facility in Bengaluru, India, developed to support Lockheed Martin's C-130J Super Hercules aircraft. The construction finishes by end 2026 and the facility expects to receive the first C130 for MRO operations in early 2027.
- Dassault Aviation partners with Tata Advanced Systems to manufacture Rafale fighter aircraft fuselage for India and other global markets. This will be the First-ever Rafale fuselage production in India. Tata Advanced Systems will set up a cutting-edge production facility in Hyderabad for the manufacture of key structural sections of the Rafale, including the lateral shells of the rear fuselage, the complete rear section, the central fuselage, and the front section. The first fuselage sections are expected to roll off the assembly line in FY2028
- Tata Advanced Systems Limited unveiled a new, state-of-the-art manufacturing facility in Berrechid, Casablanca region for the Wheeled Armoured Platform 8x8 (WhAP 8x8). This milestone marks the first overseas defence manufacturing facility established by a private Indian company, underlining India's capability to design and deliver advanced combat vehicle platforms in partnership with DRDO. (added Morocco)

MEMBERS' ACHIEVEMENTS

Tata Advanced Systems Limited

- TSAT-1A, Indian Private sector's first sub-metric resolution satellite, was made fully operational and started sending images. TSAT-1A has been assembled at TASL's facility in Bangalore, Karnataka under Made in India paradigm and is fully aligned with "Atmanirbhar Bharat" to establish India's self-reliance in space. As part of the Tata Group's efforts to contribute to space technology and infrastructure in India, TSAT-1A plays a crucial role in supporting a wide range of services including strategic forces, geospatial analytics, environmental monitoring, scientific research, urban planning, agriculture, disaster management, and resource management. A state-of-the-art AIT facility at Vemagal, Bangalore was also made and fully operationalized with the capability to make multiple satellites annually.

Vantor

Corporate

- Rebrand from Maxar Intelligence to Vantor (Oct 1, 2025): Unveiled alongside its AI-powered platform strategy, marking the company's repositioning from a satellite-imagery provider to a "unified spatial intelligence" company.

Major Contracts & Government Wins

- U.S. Space Force SDA contract (Oct 22, 2025): Continuous tracking of high-interest space objects via Non-Earth Imaging (NEI), working with Space Force's Joint Commercial Operations program on objects in ground-sensor blind spots; targeting up to 1,000 NEI images/day by 2026.
- NGA Luno B AI-powered change detection (Feb 5, 2026): Won global change detection contract under the Luno framework.
- \$217M U.S. Army OWT contract (Feb 25, 2026): Follow-on OTA production award for One World Terrain, delivering sub-3-meter accurate 3D terrain via Vivid Terrain/Forge software.
- NGA Luno B orbital intelligence/NEI (April 1, 2026): Third Luno-program win, \$2.3M, providing automated near-real-time orbital intelligence and anomaly alerts on LEO objects.
- NGA G-EGD \$70M follow-on (May 4, 2026): Option Year 1 award to continue operating GEGD Pro, NGA's primary commercial GEOINT platform, built on Vantor's Tensorglobe suite.

Satellite & Constellation Expansion

- Vantage + Pulse architecture unveiled (April 8-9, 2026): New 20cm-class "Vantage" imaging satellites (~2029) and high-revisit "Pulse" smallsats (~2027), aiming to eliminate the resolution-vs-revisit tradeoff; existing fleet of 10 electro-optical satellites to be expanded.
- BAE Systems selected to build Vantage satellites (June 24, 2026): Manufacturing agreement for the first two 20cm-class Vantage satellites, with potential to scale to a larger constellation comparable to WorldView Legion's six satellites.

Partnerships

- Niantic Spatial partnership (Dec 16, 2025): Unified air-to-ground positioning for GPS-denied areas.
- Rheinmetall partnership (June 2026): European 3D spatial intelligence platform part of a broader European defense push (Vantor's international business now ~70% defense per CEO Dan Smoot).
- International leadership hire: Elie Tabchouri joined as EVP & GM, International Government business (announced alongside the April constellation news).

MEMBERS' ACHIEVEMENTS

Virat Exim

2020-Present - Certification, Scale & Global Alignment

- Achieved AS9120 certification (2020).
- Expanded approved vendor base to include Collins Aerospace, Honeywell and BAE Systems.
- Broadened material portfolio to include titanium alloys, beryllium copper, aluminium bronze and specialized steels.
- Strengthened inventory depth and processing support for precision applications.
- Continued participation in advanced defence programs, including L&T's TEER Aerial Target (2026).
- Expanded engagement with emerging private space companies: Dhruva Space, Skyroot Aerospace and Nibe Space.
- Sustained material supply support to Skyroot Aerospace over the past three years, supporting indigenous launch vehicle development.
- Supported Alpha Design Technologies (with Elbit Systems) on the Mi-17 upgradation project for the Indian Air Force.

Agnikul Cosmos

- LFAMM facility commissioned (Sept 2025): India's first large-format additive manufacturing facility for aerospace/rocket systems, integrating design, simulation, printing, post-processing and testing.
- Reusable launch vehicle unveiled at IAC 2025 (Sept 2025): Falcon-9-class reusable vehicle concept, plus multiple propulsion/aerospace patents secured across the US, Europe and India.
- World's largest single-piece 3D-printed Inconel engine unveiled (Aug 2025): Internationally patented design.
- ₹150 crore raised at \$500M valuation (Nov 22, 2025): Funding to scale aerospace/rocket component production and advance the stage-recovery program, plus development of a 350-acre integrated space campus allocated by the Tamil Nadu government; investors included HDFC Bank, Advenza Global, Artha Select Fund and 100X.VC.
- Tamil Nadu government equity investment (March 2026): TIDCO (Tamil Nadu's investment arm) took an equity stake in Agnikul.
- Agnite booster critical test (March 26, 2026): Largest single-piece 3D-printed rocket engine; cut manufacturing time from 7 months to 7 days.
- NeevCloud partnership for orbital AI data centre (Feb 2026): India's first orbital AI data centre platform in LEO, proof-of-concept mission targeted late 2026.

MEMBERS' ACHIEVEMENTS

Agnikul Cosmos

- 3-engine cluster test (early 2026) followed by a 4-engine clustered semi-cryogenic test (May 26, 2026): First known clustered semi-cryogenic engine test in India, validating multi-engine coordination needed for orbital flight.
- Agnite engine test in Chennai (April 15, 2026).
- In talks for \$50-75M new round (May 2026): At a flat \$500M valuation, to fund manufacturing/launch scale-up reportedly amid rising investor interest following rival Skyroot's \$1B+ valuation.
- International expansion Bharat Innovates 2026, France (~July 2026): Agnibaan presented to French President Macron; MoUs signed with Finland's ICEYE and France's Safran, combined value ~\$100M.
- Mission-02 announced (~July 2026): Targeting India's first-ever orbital-class booster recovery and repurposing the upper stage as an in-orbit platform.

AIDIN Technologies*

- Aidin Technologies Pvt Ltd, Bengaluru - A renowned Aerospace & Defence player with 18+ years in Product Design, Development and Manufacturing across RF&MW, Hi-Rel Power Supplies and Mixed Signal systems and a long-standing service partner to ISRO for end-to-end Hardware Space Subsystems and Li-Ion Cell characterisation for space applications.
- From Space-System Partner to Satellite Pioneer - Building on a decade-plus of support to ISRO, DRDO and India's strategic space programmes, Aidin is now developing indigenous satellite platforms ranging from 1U CubeSats to 150 kg-class spacecraft. Its first satellite, carrying a biotechnology payload, reflects the Aatmanirbhar Bharat vision.
- Indigenous Engineering, Proven in Space - Aidin has designed, developed and delivered in-house magnetic torquers and four-pi sun sensors for a defence satellite, demonstrating complete end-to-end capability from design through flight qualification.
- Award-Winning Innovation - Aidin's Helmholtz Orbital Geomagnetic Simulator (HOMS) recreates the magnetic environment of a ~90-minute Low Earth Orbit for realistic ground validation of attitude-control systems and won the Electronics For You R&D Innovation Award 2026.
- AIU and BioVest Electronics for Gaganyaan - Aidin developed the Avionics Interface Unit (AIU) and BioVest Electronics (BVE) for ISRO's Gaganyaan Mission - BVE monitors astronaut vitals (pulse, SpO₂, temperature), while AIU processes and transmits this data to ground stations.
- Preferred RF Partner to ISRO, Bengaluru - Over 15 years, Aidin has delivered end-to-end RF Transponder hardware across all bands (C, S, Ka, X), completing around 160 packages across 40+ missions.

MEMBERS' ACHIEVEMENTS

Altz Technologies

- **3D Platform / GeoBIM Solution:** Altz Technologies developed a cloud-native, no-training-required 3D geospatial platform (integrated with digital twin and GeoBIM capabilities) enabling one-click complex spatial analytics making advanced geospatial analysis accessible to non-technical users across industries.

ANVIKSHIKI SARVAJNA

2026

- Strengthened positioning as a multi-disciplinary enterprise risk advisory firm, integrating financial, cyber and sustainability risks into a unified framework.
- Continued expansion of advisory engagements across India, Bhutan and Qatar, supporting cross-border risk analysis and governance.

2025

- Established a differentiated approach integrating traditional sciences (Arthashastra, Ayurveda, etc.) with modern enterprise risk management practices.
- Expanded advisory services to institutional stakeholders, including family offices, investors and board-level leadership (CxOs, audit/risk committees).

Apsis Aerocom Limited*

1. Successful IPO – A Defining Milestone

- FY 2025-26 marked a key milestone: Apsis Aerocom Limited completed its IPO and listed on the NSE SME Platform
- Reflects investor confidence in the company's business model, operations, and growth strategy
- Reinforces commitment to governance, transparency, and stakeholder value creation
 - IPO Highlights: Issue Size: INR 3,577.20 Lakhs
 - Subscription: 91.24x
 - Listing Premium: INR 43/share (39.09% premium)
 - Listing Price: INR 153/share

2. Unit 2 Inauguration (Scheduled August 14, 2026)

- New manufacturing facility to be inaugurated on 14 August 2026
- Location: Plot No. 4-A-14 & 5-A-6, Hitech, Defence and Aerospace Park, Hoovinayakanahalli Village, Jala Hobli, Yelahanka North, Bengaluru Urban, Karnataka - 562149
- Spread over 40,000+ sq. ft.
- Built to boost manufacturing capacity for aerospace, defence, and space sectors
- Designed for: advanced manufacturing, precision machining, assembly, integration, testing, and QA
- Enables support for larger, more complex programmes
- Currently in development phase – not yet fully operational
- Once operational, capacity will be more than 2x that of Unit 1

MEMBERS' ACHIEVEMENTS

Astrobase Space Technologies

2026

- IN-SPACe TAF selection (June 2026): One of 3 firms chosen from 43 applicants for ₹25 crore support (from a ₹500cr fund) to accelerate its 800 kN LOX-methane FFSC engine, now in hot-fire testing.
- Impulso Space partnership (May 2026): First European commercial deal integrated launch support for European satellite operators.
- Test infrastructure operational: India's first private 200-tonne-rated LOX-methane test stand (Anantapur) + Bengaluru facility with India's largest industrial metal 3D printer.
- Vehicle design: 800 kN FFSC engine (a cycle only SpaceX has flown), reusable 2-stage vehicle with 7-engine cluster; orbital launch targeted 2029.
- Total funding: ~\$10.6M raised across seed tranches.

2025

- Founded July 2024; ~\$10M seed round closed July 2025.
- Subscale hot-fire test and turbopump validation completed.
- Approval secured for India's first private high-thrust LOX-LNG test facility (~Dec 2025).

Astrogate Labs*

- **1Delivery of India's First Indigenous Microsatellite Laser Communication Terminal to ISRO:** Astrogate Labs secured an ISRO programme order for an indigenous laser communication terminal. The scope included high speed optical data transfer, precision pointing, acquisition and tracking and space qualified opto-electronic subsystems. In December 2025, the 2.5 Gbps space to ground laser communication terminal was delivered to ISRO, representing a key step toward flight relevant implementation and reinforcing confidence in industry led development of advanced optical communication systems. Astrogate became the sole lasercomm company in India delivering mission ready systems.
- **AstroLink Nano Handover to Durham University under the NESCA Programme:** Astrogate Labs reached an important programme milestone with the handover of an AstroLink nano terminal to the Centre for Advanced Instrumentation at Durham University. The handover was backed by NESCA, a programme funded by EPSRC. The collaboration now moves into its next phase, where the two teams will develop methods to maintain optical alignment during live in-orbit operations. The terminal will support work on verifying optical alignment while the system is live in orbit. The collaboration marks the next phase of the programme as hardware testing moves closer to mission conditions.

MEMBERS' ACHIEVEMENTS

Astrome Technologies*

Astrome solidified its position in deep-tech space and defence communications, achieving technological breakthroughs, deepening defence alignment, expanding globally and scaling indigenous manufacturing.

1. Technology: Demonstrated GigaMesh wireless connectivity, including a 2-hop relay across Bengaluru over 23.5 km; OrbiThru satellite ground modem reached 1.3 Gbps throughput.

2. Defence Wins: Won the iDEX Prime Challenge to build a Space Training Simulator; secured a TCOE project for GSAT Ku-Band/VSAT backhaul connectivity; showcased Tactical LAN Radio at the Vijay Diwas Reception (Army House); participated in the Navy's Swavalamban initiative.

3. Awards: India-region winner, Startup World Cup (IMC 2025); Innovations Icon Award (Marico Innovation Foundation); CEO Neha Satak named Woman Leader of the Year (The Fast Mode Leadership Excellence Awards).

4. Global Outreach: Selected to represent India at Bharat Innovates, Nice, France; hosted 28 foreign defence journalists.

5. Infrastructure: Inaugurated a Clean Room at IISc for space-grade payload testing; moved to a larger corporate/R&D headquarters.

Augsense Lab

- iDEX (IAF) selection (FY2025-26): Named iDEX winner for quantum-enhanced sensing recognized for work in quantum-photonics, atomic receivers, ELINT, GPR and spaceborne radiometry.
- K-DISC Challenge win: Selected to develop an Atmospheric Forecast System for Landslide Early Warning (N-Sonde GNSS-tomography-based) for the Western Ghats, with KSDMA.
- KELTRON MoU: Partnership with Kerala State Electronics Development Corporation to co-develop next-gen sensing technologies.

Aule Space*

- **Funding raised:** The company has raised 18Cr in pre-seed funding led by pi Ventures, with angel participation including a former Intelsat board member, Eash and the CEO of Tonbo Imaging, Arvind. ([Company press release](#))
- **Infrastructure built:** A dedicated facility was commissioned in Bengaluru with a cleanroom, optical dark room and air-bearing lab for RPOD testing.

MEMBERS' ACHIEVEMENTS

Aule Space*

- **Government of India programmes:** Secured approximately ₹1 crore in grants from the IN-SPACe Seed Fund Scheme and the ELEVATE Scheme, Government of Karnataka, for autonomous GNC and docking technology development. Shortlisted through the techno-commercial round of a ₹40Cr DRDO TDF tender for in-orbit robotics as one of the 5 companies selected for the price bid round.
- **Tech:**
 - GNC stack TRL6 validation at ISRO test facility: In May 2026, Aule completed hardware validation of its camera-only based relative-GNC stack at ISRO's Rendezvous Simulation Lab (Mission Simulation Group, URSC), the facility used to qualify SpaDeX. Aule is the first non-government entity ever to test at the facility.
 - Docking mechanism and satellite docking demonstration mission: The company designed, manufactured and tested on air-bearing setup successive iterations of its satellite-agnostic docking mechanism, with design reviews conducted by ex-ISRO experts from the SpaDeX & mechanical team. A patent filing for the same is in progress. Preliminary Design Reviews for a two-satellite non-cooperative docking demonstration are near closure, with launch targeted next year.
- **Others:** Ranked 6th at the demo day pitch of the Draper University, where 67 companies from 20 countries pitched.

Bellatrix Aerospace

- \$20M Pre-Series B raised (March 2026): Led by Cactus Partners; total funding now ~\$31-34M, earmarked for manufacturing scale-up.
- Harbinger satellite launched (March 2026, SpaceX Transporter-16): First full satellite; validated in-house ADCS and other subsystems in orbit; first contact confirmed on first pass.
- BEL partnership (March 2026): Bharat Electronics Limited partnered with Bellatrix to co-develop satellite systems.
- TelePIX (South Korea) VLEO MoU (May 2026): Joint development of a next-gen VLEO Earth observation satellite; demo launch targeted 2028.
- WEF 2026 Technology Pioneers (June 2026): Named among 100 global startups (9 from India) for in-space propulsion technology.
- Astroscale (Japan) MoU (March 24, 2025): Partnership on space sustainability, part of Astroscale's broader engagement with Indian spacetechn startups (also including Digantara).
- RUDRA 1N green propulsion third consecutive successful in-orbit test (Jan 2, 2025): Fired on ISRO's POEM-4 mission.
- NSIL Pushpak Orbital Transfer Vehicle (OTV) contract (Oct 9, 2024, but ongoing through this period): Integration contract with NewSpace India Limited for in-orbit satellite maneuvering/repositioning services on NSIL launch missions.

MEMBERS' ACHIEVEMENTS

BES Space

- Selected for AWS Space Accelerator: APJ 2025 (announced ~Sept 2025): One of 67 startups chosen globally (42 from India), independently confirmed recognized specifically for the SAFER platform, an AI-based system for predicting satellite anomalies from space.
- Up to USD 100,000 in AWS credits: Standard accelerator benefit, alongside mentoring and access to AWS's space-focused cloud/ground-station infrastructure.
- Positioned within a growing India cluster of AI/orbital-monitoring startups: BES Space's SAFER platform sits alongside similar 2025 cohort entrants (Akashaveda Technologies, OrbitArch, Pinaca Technologies, mistEO) all working on satellite anomaly detection, collision avoidance, or domain-awareness tools, reflecting a broader national trend AWS's selection highlighted.

Big Bang Boom Solutions*

- Successfully executed a ₹200 crore defence contract for the supply of Counter-Unmanned Aircraft Systems (C-UAS) to the Indian Armed Forces, demonstrating BBBS's ability to develop, manufacture and deploy mission-critical defence technologies at scale.
- Advanced its core autonomy stack into next-generation applications. BBBS won the prestigious US\$5 million i4F challenge from the Technology Development Board, in partnership with an Israeli technology company, to develop autonomous drones for hazardous environments.
- Extending its autonomy and AI capabilities into the space domain. BBBS is developing AI-enabled and edge-intelligent space systems, under the guidance of its Principal Advisor, Dr Mylswamy Annadurai, former ISRO scientist and Programme Director for the Chandrayaan-1 and Mangalyaan missions.
- Built a strong track record in defence innovation through iDEX. BBBS has secured 10 iDEX wins to date, of which three projects have been successfully executed, two are nearing completion and the remaining projects are progressing through various development milestones.
- Established an international footprint through exports to friendly nations. BBBS has successfully exported its defence technology solutions to countries including Nepal, Thailand and Kenya, demonstrating growing international acceptance of its products and capabilities.
- Built a strong ecosystem of R&D and technology partnerships. BBBS has partnered with leading institutions including IIT Roorkee, IIIT Delhi, IGCAR Kalpakkam, IIT Madras CDOT Samgnya for collaborative research, technology development and the translation of advanced technologies into deployable products.

MEMBERS' ACHIEVEMENTS

BQP Technologies

- Won its first federal contract via SpaceWERX (July 2026) to develop PC-QAML quantum-inspired AI software that classifies unidentified orbital objects, cutting AI model size by 99% while running on low-power satellite-grade processors. Supports Space Operations Command (SpOC) and Space Systems Command missions.
- Raised an oversubscribed \$5 million seed round (July 2025) following a pilot with the Air Force Research Laboratory for a quantum-accelerated aerospace/defense digital twin platform.
- Achieved a CFD simulation breakthrough using just 30 logical qubits (Feb 2025), demonstrating feasibility for aerospace applications.
- Collaborated with NVIDIA and Classiq on hybrid quantum-classical simulation workflows (Dec 2025).
- Launched BQPhy® for MATLAB, bringing quantum-accelerated optimization into aerospace engineering workflows.
- Recognized across multiple industry roundups through the year (Top Quantum Computing Startups to Watch, 2026 startup trend predictions, hybrid quantum-classical computing recognition) reinforcing its standing in quantum-inspired aerospace/defense simulation.

Caliche

- Partnered with IN-SPACe (India's space regulator) on Project BeyonEa exploring how extremophilic, carbon-fixing microbes can produce biocement for extraterrestrial construction (e.g., future lunar/Martian habitats). Per Caliche's own materials, this is reportedly the first MoU IN-SPACe has signed in the space-biotech domain and positions Caliche's ambition to become the first Indian company to send microbes to space.
- Continues R&D on biocement technology more broadly (currently applied terrestrially using fly ash and non-pathogenic microbes), which forms the scientific foundation being adapted for the extraterrestrial-construction use case under BeyonEa.
- Positioned itself as one of the few companies globally working at the intersection of industrial biotechnology and space applications an emerging category that also has active academic research interest.

MEMBERS' ACHIEVEMENTS

CI-Metrics

- Continued expansion of multi-sector satellite intelligence applications across defence, agriculture, climate and mobility domains, using data ontology and predictive AI frameworks (per your data) consistent with the company's core positioning as a Gurugram-based R&D lab building satellite/drone image-processing pipelines (L0-L2) and bespoke ML-powered risk indices for Aerospace & Defense, Climate, Telecom, Agriculture and Finance sectors.

Cosmoserve Space*

Key Achievements and Milestones (July 2025 – July 2026)

- Launched Mission Embrace, its soft robotic capture system, on July 18, 2026. 77% of subsystems achieved flight heritage. Became the youngest company (operating under a year) to send hardware to space.

Funding and Commercial Progress

- Secured \$3.17M in pre-seed funding, one of the largest pre-seed rounds by an Indian space startup.
- Won a \$1M DRDO contract to develop a robotic capture system and navigation sensor suite.
- Received a ₹10L Startup India Seed Fund Grant, a ₹20L HDFC Parivartan grant and a ₹5 crore investment commitment via Bharat Ke Super Founders.

Technology Development and Mission Progress

- Advanced its soft robotic debris capture system from TRL 1 to TRL 8 in just 4 months.
- Advanced computer vision to TRL 5, achieving sub-millimetre proximity accuracy.
- Completed the System Concept Review (SCR) for its second (chaser-target) technology demonstration mission.

Awards and Recognition

- Top 6 at VivaTech 2026 presented to French President Macron and PM Modi in Paris.
- AWS Galactic Pitch runner-up, AI Catalyst Global Impact Award, Google Cloud YourStory Tech30 and TiE50 Hyderabad.

Test Facilities

- Built an air-bearing microgravity test facility for proximity navigation and computer vision testing.
- Building a 14,000 sq. ft. facility with an RPO Lab, Robotics R&D Lab and ISO Class 8 clean room operational by September 2026.

MEMBERS' ACHIEVEMENTS

CYRAN AI Solutions*

- Signed an MoU with Safran Aircraft Engines (~May 2026, at Bharat Innovates 2026) to jointly develop AI solutions for aerospace and defense covering manufacturing, maintenance, predictive analytics and future defense capabilities a significant international OEM partnership supporting India's Make in India/Atmanirbhar Bharat initiatives.
- **CYRAN AI** and Dutch semiconductor pioneer **Innatera** have announced a major expansion of their strategic partnership that accelerates the development and deployment of ultra-low-power AI applications by leveraging Innatera's proprietary neuromorphic processing technology within CYRAN's intelligent sensing systems.
- Deepened collaboration with Innatera (neuromorphic processor maker), announced June 17, 2026 strengthening Cyran's hardware-AI stack for edge-deployed geospatial intelligence.
- Won the DST Mission Dronagiri Award (2025) recognizing Cyran's geospatial AI capabilities, per the company's own award history.
- Building a sovereign, ITAR-free edge AI stack (20+ sensor types) positioning it for partnerships with European defence primes.
- Showcased defence-geospatial AI capabilities at the India-Thailand Defence Conclave (~Feb 2026).

Codimaths

- Artemis II astronauts are carrying a micro SD chip with ISSO winners' names to lunar orbit a genuine, notable recognition tie-in for CodiMaths' student space program.
- Confirmed partnership with the Kenya Space Agency, which promoted ISSO registrations directly on its official channels.
- Selected ISSO winners for an exclusive interaction with astronaut Sunita Williams, with winners receiving official merchandise.
- Confirmed as a registered Space Tutor under ISRO and one of the few registered IN-SPACE research startups in India (per Wikipedia's organizational profile).
- The European Space Agency (ESA) and NASA provide educational resources to Codimaths' students and the company announced a collaboration with NASA STEM Gateway and a new partnership with Google Education.
- Maintains a global presence spanning India, Switzerland, UAE, Jamaica, UK, USA, Zimbabwe, South Africa, Australia and New Zealand.

MEMBERS' ACHIEVEMENTS

Dhruva Space*

Missions & Launches

- Launched LEAP-1 (Aug 2025), its first commercial hosted payload mission on the indigenous P-30 satellite platform, aboard SpaceX Falcon 9.
- Launched Polar Access-1 (PA-1) (Jan 2026) aboard ISRO's PSLV-C62, serving six Indian states and two nations.

Government & Regulatory Milestones

- IN-SPACe awarded the EO-PPP to Dhruva Space, Pixxel, SatSure and PierSight for India's first fully indigenous private Earth Observation satellite network (Aug 2025).
- Selected by IN-SPACe for the Satellite Bus-as-a-Service (SBaaS) Announcement of Opportunity, to develop an indigenous modular satellite bus for hosted payload missions (Feb 2026).
- IN-SPACe authorised Dhruva Space to establish and operate ground stations in Luleå, Sweden (May 2026).
- Became the first private company to receive investment from the Antariksh Venture Capital Fund (AVCF) India's sovereign space-tech VC fund (July 2026).

Funding & Commercial Progress

- Secured ₹105 crore under the Government's RDIF to develop Project Garud, an indigenous 500 kg-class communications satellite platform (May 2026).
- Provided GSaaS (Ground Station as a Service) to an Indian NGE for their mission (May 2026).
- Order book now stands at ₹500+ crore with 18+ spacecraft in the pipeline.

Partnerships

- Partnership with Pixxel to power its next-gen satellite constellation with Solis+ space-grade solar panels (July 2025).
- MoU with Esri India to advance geospatial intelligence via AstraView, its virtual constellation of 200+ EO satellites (Sept 2025).
- Joint white paper with SatSure and KaleidEO on a vertically integrated Earth Observation-as-a-Service (EOaaS) framework (Jan 2026).
- Strategic partnership with ICEYE on satellite manufacturing, Earth Observation and downstream space applications (June 2026).
- Collaboration with MAHE to co-develop ASCENT, a dedicated Space Technology R&D and mission-management centre at Manipal (July 2026).

MEMBERS' ACHIEVEMENTS

Dhruva Space*

Awards & Recognition

- Featured on the cover of Forbes India's Space Tech Special Issue (Dec 2025).
- Won 'Innovative Business of the Year' at The Economic Times Entrepreneurship Awards (March 2026).
- Received the Cybersecurity Partnership Excellence Award at CyberSec India Awards 2026 (May 2026).
- Named a 2026 Technology Pioneer by the World Economic Forum (June 2026).
- Represented India at Bharat Innovates 2026 in Paris (June 2026).
- Won 'Space Startup of the Year' at the India Space Congress Excellence Awards 2026, organised by SIA India (June 2026).

Digantara*

- Raised \$50M (Series B) from a mix of new strategic and financial investors such as 360 ONE Asset, SBI Investments Co Japan and Ronnie Screwvala, with continued participation from existing investors, Peak XV Partners and Kalaari Capital.
- Anirudh Sharma was featured in Payload Pioneers 2025.
- The Economic Times - AI Startup of the Year (Defence and Public Services) (2026).
- ET AI Young Leader of the Year (<30) presented to Anirudh Sharma, Rahul Rawat and Tanveer Ahmed (2026).
- MoU: GISTDA <> Digantara to support the growth of Thailand's space ecosystem with Space Situational Awareness and intelligence capabilities (2026)
- MoU: DSTA <> Digantara to collaborate on Space Situational Awareness (SSA) in support of the National Space Agency of Singapore (2026)
- ispace <> Digantara to collaborate to establish a cislunar situational awareness and domain infrastructure (Sept 2025)
- Recognised by Hon'ble Union Minister of State for Science & Technology, Earth Sciences and Space, Dr Jitendra Singh, at ISpA's International Space Conclave 2025
- Digantara Industries was selected among the top 120 (out of 1,800) to represent India at Bharat Innovates 2026

MEMBERS' ACHIEVEMENTS

Elena Geo Systems

Developed an indigenous NavIC-Enabled Drone Navigation Unit (~March 2026) a dual-frequency (L5/S-band) receiver offering centimetre-level precision in GPS-denied environments, developed with a DRDO electro-optics laboratory and validated against spoofing and electronic warfare scenarios. Priced at ₹50,000/unit (roughly half of imported alternatives), with scalable production at Elena's Whitefield facility targeting 10,000 units annually and DGCA/BIS certifications paving the way for exports to QUAD partner countries.

GalaxEye Space*

GalaxEye is a Bengaluru-based space technology company building the world's first multi-sensor (OptoSAR) imaging satellite constellation. The period since July 2025 has marked a defining phase in the company's journey, from the successful launch and operation of its first satellite to global commercial expansion and international recognition.

Mission Milestones

- Launched the world's first OptoSAR imaging satellite Mission Drishti on May 3rd, 2026. Successful communication was established through GalaxEye's in-house Mission Control Centre, with satellite operations conducted for over 100 orbits.
- Received global recognition on the launch of Mission Drishti, validating its significance on a global scale, including acknowledgement from the Hon'ble Prime Minister of India Shri Narendra Modi Ji and Gaganyatri Shubhanshu Shukla.

Commercial & Institutional Traction

- Became NSIL's first private satellite imagery provider partner in India, strengthening alignment with India's national space commercialisation agenda.
- Partnered with imagery resellers across the globe covering ~76 countries worldwide to commercialise data captured from OptoSAR.
- Partnered with ANRF (Government of India) and IIT Madras as industry collaborator for AISEHack 2.0, as of July 2026, Phase 1 drew 116 teams and 3,000+ submissions, yielding models with up to 80% accuracy.

Awards & Recognition

- Winner Space Tech Startup of the Year 2026, Entrepreneur India Startup Awards.
- Featured in the Forbes Asia 100 to Watch 2025 list.
- Selected in the World Economic Forum's 2025 Technology Pioneers cohort (Top 100).
- Co-founders Kishan, Pranit and Rakshit featured in Forbes Asia 30 Under 30 2026 list.

MEMBERS' ACHIEVEMENTS

GarudaUAV Soft Solution Pvt Ltd.

- Preparing for an IPO targeted for late 2025/early 2026, at an expected valuation of ₹4,000+ crore, including a 7:1 bonus issue and stock split a major corporate milestone within the window.
- Maintained a consistent unlisted valuation of ₹2,100 crore (as of Nov 2025/Jan 2026), with FY25 revenue of ₹118 crore and ₹17.5 crore net profit.
- Continued scaling manufacturing capacity toward 12,000-15,000 drones annually, holding 20+ patents in drone technology, with client relationships spanning ISRO, DRDO and HAL alongside major commercial names.

Geo Solutions India

- Credentials: CMMI L3 Certification, ISO/IEC 27001:2022 (ISMS), ISO 9001:2015 (QMS), Startup India registered, MSME registered.
- Positioning: "Emerging as a System Integrator with Geospatial Technology" working across GIS, BIM, CAD and Digital Twin technologies.
- Verticals served: Agriculture, Digital Twin, Water Resources, Mining, Town & Country Planning, Utilities, Defence & Intelligence, Urban Local Bodies, Metro/Railway/Highway, Ports & Coastal Zone Management, Real Estate & Infrastructure, Forest Resources, Archaeological Survey and Revenue Land Records.
- Technology capabilities relevant to space/EO: Data generation from Lidar, Drone and Stereo Satellite Data; surveying (surface, sub-surface, above-surface); topographic and utility mapping; surface hydrology analytics.

Ice Aero Pvt Ltd

- Awarded Productivity Championship Award By Indian Machine Tool Manufacturing Association (IMTMA)
- Expertise in Aerospace Tooling and Fixture Manufacturing
- AS9100D Certified
- In-House Machining Capacity up to 8m x 4m
- Project Management team that can managed complete end-to-end supply chain

MEMBERS' ACHIEVEMENTS

Inbound Aerospace*

- **Advanced Spacecraft Development:** Successfully progressed the design and development of a reusable spacecraft platform, with significant advancements in structural design, subsystem integration and mission architecture for Low Earth Orbit (LEO) operations.
- **Re-entry & Recovery Systems:** Achieved key milestones in the design and engineering of precision re-entry, thermal protection and recoverable landing systems, enabling safe return of spacecraft and high-value payloads.
- **Guidance, Navigation & Control (GNC):** Developed the core architecture for an indigenous Guidance, Navigation & Control (GNC) system, including flight control algorithms, navigation sensors and autonomous guidance capabilities for atmospheric re-entry and precision landing.
- **Infrastructure Expansion:** Graduated from the IIT Madras Research Park incubation ecosystem and established operations in a significantly larger engineering and manufacturing facility in Chennai to support rapid prototyping, testing, integration and future production activities.
- **Funding Milestone:** Successfully secured USD 1 million in funding, strengthening the company's technology development roadmap, talent acquisition and infrastructure expansion.
- **Global Recognition:** Represented Inbound at leading international space forums including the Global Orbital Infrastructure Symposium (GOIS), Swiss and the Global Space Technology Convention & Exhibition (GSTCE), Singapore showcasing indigenous space technologies and building strategic international collaborations.
- **National Deep-Tech Recognition:** Selected among India's Top 100 Desi Deep-Tech Startups, recognizing Inbound Aerospace as one of the country's most promising technology ventures driving innovation in the space sector.
- **Startup India Achievement:** Shortlisted for the prestigious National Startup Demo Day, validating the company's technological capabilities, commercial potential and contribution to India's growing space startup ecosystem.
- **Strategic Partnerships & Ecosystem Building:** Executed strategic Memoranda of Understanding (MoUs) with IN-SPACE, the Government of Tamil Nadu and Swiss Space & Innovation Platform (SSIP), Switzerland, while establishing international payload implementation partnerships with IDDK Co., Ltd. (Japan) and ResearchSat (Australia) to accelerate technology development, market access and global collaboration.

MEMBERS' ACHIEVEMENTS

Indian Technology Congress Association

- Leads the "75 Students' Satellites Mission" with ISRO a national student-driven satellite consortium spanning 100+ institutions (broadly consistent with your 40+ universities figure).
- Multiple satellites remain in active development, including PuneethSat (Karnataka), still in CubeSat validation as of the latest confirmable update.
- Runs large-scale student training and STEM outreach as part of the mission.

Inspecity Space Laboratories

- Secured \$5.6 million in seed funding (May 2025), led by Ashish Kacholia, to space-qualify its technologies and scale its team; an IDEX awardee.
- Published a joint white paper with Japan's Orbital Lasers (July 2025) on an integrated ISAM architecture combining laser ablation and robotics for debris handling.
- Advancing its product roadmap GITA, RAMA, CHAKSU and flagship VEDA (satellite life-extension/deorbiting platform) moving toward commercialization by 2026-28, with a demo mission targeted for 2027.
- Signed an MoU with Japan's IDDK Co., Ltd. (~March 2026) to explore microgravity experiments and in-space manufacturing.
- Flagship VEDA (Vehicle for Life Extension and De-orbiting Activities) platform integrating propulsion, robotic arms and RPOD technology remains on track for a demonstration mission in 2027.

SatSure & KaleidEO*

- SatSure is awarded a ₹24.6 crore grant from IN-SPACE under the Technology Adoption Fund (TAF) to develop Dhaarini, India's sovereign Earth intelligence backbone and foundational AI platform powered by a Large Earth Observation Model (LOM).
- SatSure is recognized among the Top 10 Global Innovators at the IndiaAI Impact Summit 2026, part of MeitY IndiaAI Startups Global Acceleration Program.
- SatSure is part of the winning consortium for the Earth Observation Public-Private Partnership (EO-PPP) program by IN-SPACE to develop a national Earth observation satellite constellation under a Rs. 1,200 crore contract.
- KaleidEO is selected among the Top 8 companies globally from 170+ applicants for the Safran Explore NewSpace program to co-develop a next-generation wide-swath, high-resolution Earth observation payload.

MEMBERS' ACHIEVEMENTS

SatSure & KaleidEO*

- SatSure won the NABARD National Climate Stack Innovation Challenge, organized by NABARD, the Gates Foundation and Dalberg Advisors, for our Climate Vulnerability Index (CVI) innovation.
- SatSure entered into a strategic partnership with Safran.AI to advance next-generation geospatial intelligence (GEOINT) solutions for the Indian market.

KSpace

- CFC + R&D Centre foundation laid (2025): At Technocity, Pallippuram 2 lakh sq ft across 3.5 acres, backed by ₹244 crore NABARD support.
- Kerala Aerospace Sector Stakeholder Summit 2026 hosted: 15+ companies have sought space at K-Space; HEX20 (Technopark-based) already launched two satellites as a proof-point.
- ₹600 crore land acquisition approved (Feb 2026): 60 acres near VSSC for the Aerospace Control Systems Centre funds reallocated from a stalled IT-corridor project; ~100 jobs/acre expected.
- Aerospace Industrial Policy: Still pending formal launch/notification as of latest reporting targeting growth from ₹2,000 cr to ₹30,000 cr aerospace sector in 5 years.
- IDIP proposed (Jan 2025): 100-acre defence park near Neyyar Dam with BrahMos Aerospace, ₹1,000 crore projected investment status unclear.

Kepler Aerospace

- iDEX Prime contract 6-satellite ISR swarm constellation (July 2025): \$4M contract (~₹38 crore) with MoD/Defence Space Agency/HQ-IDS for the world's first autonomous swarming ISR satellite constellation, designed to track radio/thermal signatures in 90-minute orbits without ground intervention. Target launch 2027, with the first batch reportedly expedited to April 2026 amid heightened tensions post-Operation Sindoor.
- Indigenous ADCS avionics stack detailed (June 2026): Custom Attitude Determination and Control System combining reaction wheels, magnetorquers, thruster drivers, star trackers, GNSS and MEMS IMUs engineered for micro-arcsecond precision formation-flying across six satellites, a capability rarely achieved indigenously.
- Apogeo Space (Italy) ground station deal (May 2026): Integration agreement expanding Kepler's GSaaS network toward ~50 global stations
- Astrome MoU (July 2025): Multi-orbit satcom systems partnership for defence, disaster response and remote connectivity.

MEMBERS' ACHIEVEMENTS

Kepler Aerospace

- Lets Comm (Taiwan) partnership (Sept 2025): Global ground-infrastructure integration via Kepler's Unified Command Center, plus co-development of EO/ISR services and a planned Taiwan ground station facility.
- Funding push: Previously bootstrapped (~₹7.3 crore revenue), now raising \$10M to support the IDEX roadmap, including plans for its own CubeSats.
- Current scale: 50+ ground stations across six continents, operated from Bengaluru; ISRO/DRDO/C4I program heritage.

Kristellar Aerospace

- BEL-Metamind-Kristellar tripartite MoU (May 4, 2026, Bengaluru): Kristellar joined Bharat Electronics Limited (Navratna PSU) and Metamind Systems to co-develop futuristic defence/non-defence technologies cyber security, semiconductors, electronic warfare and data centres under Make in India/Atmanirbhar Bharat. Kristellar contributes its portfolio spanning CubeSat systems, propulsion, radar/RF, electronic warfare, secure comms, AI and cognitive defence systems.

LuminASIC Pvt Ltd

2026

- Apr 26 - Developed India's first 32×32 SPAD Flash LiDAR chip with event-based readout, marking a milestone toward an indigenous 3D sensing stack.
- Strengthened position in space-grade imaging and infrared sensor development, with continued focus on advanced ROICs (Read-Out Integrated Circuits) for satellite payloads.
- Progressed towards scaling deployment of high-performance SWIR, MWIR and LWIR sensors for space and defense applications.
- Expanded capabilities in AI-integrated imaging and machine vision systems, supporting next-generation space-based ISR and Earth observation missions
- LuminASIC has developed the Noctule Flash LiDAR ROIC (32×32 SPAD, 50K FPS)

2025

- Advanced development and validation of space-qualified imaging payloads, targeting high-resolution Earth observation and satellite servicing missions.
- Demonstrated strong portfolio of indigenous sensor chips (Eagle, Python III, Mantis, etc.), supporting self-reliance in semiconductor technologies for space applications.
- Expanded applications of imaging sensors into LiDAR-integrated systems and autonomous platforms, contributing to dual-use (space +terrestrial) technologies.

MEMBERS' ACHIEVEMENTS

Maan Defence

- ACES engineering model: Via parent Sure Safety India Ltd, developed with ISRO's Space Applications Centre India's first Gaganyaan crew escape suit engineering model.
- Raksha Triveni Sangam showcase (May 2026): Presented CBRN units, inflatable decoys and the space suit model to Defence Minister Rajnath Singh and Army Chief.
- Vibrant Gujarat Regional Conference, Vadodara (June 2026): Participated in the Aerospace & Defence seminar alongside ₹2,550 crore in Gujarat defence-sector MoUs.
- DRDO Transfer of Technology partnerships: Ongoing collaborations with DEBEL (life-support/shelters), R&DE Engineers (inflatable structures) and DLJ (thermal/PCM jackets).
- British JV: Partnership with Respirex International for gas-tight/CBRN protective gear manufacturing.

Manastu Space

- \$3M funding round (Aug 2025): Led by Capital-A; total raised to date \$6.71M across 10 rounds.
- VYOM 2U flight-tested on ISRO's PSLV-C60 (Adyanta mission): TRL 8 green propulsion validated in orbit.
- iBooster delivered to DRDO (Dec 2024): India's first iBooster Green Propulsion System, under DRDO's TDF program.
- Sharanga micro-propulsion qualified (May 2026): Cleared thermovac testing at IN-SPACE's Ahmedabad facility for CubeSat mobility.
- GATIsat platform partnership (March 2026): Propulsion selected for the GATIsat platform.
- MCCIA - Brig SB Ghorpade Award (2025); Top 10 startups, Maharashtra Startup Week 2025.

Micronet Solutions

- Two decades of geospatial leadership: Nagpur-based, ISO 9001-certified GIS & remote sensing firm, registered with the Government of Maharashtra as a Turnkey ITSP; ~59 employees, ~\$6.5M revenue (2026).
- Authorized distributor status: Confirmed sole/authorized distributor in India for Airbus Defence & Space, Planet Labs and MDA, supplying imagery from 30cm/50cm high-resolution up to 1-3m ranges.
- WARIS contribution: Confirmed involvement in ISRO's National Watershed Information System project, integrating multispectral satellite data (soils, forest cover, water resources, land use/cover) into GIS-based watershed planning.

MEMBERS' ACHIEVEMENTS

Micronet Solutions

- Government/institutional recognition: Longstanding working relationships with NRSC, ISRO and state remote sensing centres (MRSAC, JSAC, ORSAC); supplied Airbus Pléiades 50cm imagery to ISRO's Bhuvan project for South India.
- Defence & security applications: Provides satellite data to intelligence agencies under the Ministries of Home Affairs and Defence, plus support for anti-Naxal operations.
- Surface Movement Monitoring & smart city work: Uses Airbus Pléiades Neo 30cm tri-stereo imagery for 3D city modeling (e.g., a Mumbai 3D model referenced on their LinkedIn) and infrastructure/mining volume monitoring (Stack Insight, Go Monitor tools).

NAV Wireless Technologies*

- America's first commercial LiFi deployment (Sept 2025, NYC): Launched at Silicon Harlem with US partner JESCO Venture Labs; plans to scale to government, defence and enterprise sectors.
- ISRO/SAC MoU: Partnership for LiFi/FSO/Quantum Key Distribution supporting satellite-to-satellite communication; first Indian company to bring this to SAC/ISRO.
- Defence positioning: India's first/only indigenous LiFi + FSO developer for defence naval, airbase and EW-zone communications.

OmSpace Rocket & Exploration

- \$3M pre-seed funding (July 2025): Led by Dubai investor Surya's family office; funds Infinity One, India's first Reusable Small Launch Vehicle (350kg payload, 800km LEO, 24-48hr relaunch).
- First privately developed sub-orbital rocket launched from Gujarat (March 14, 2026): Launched from Dholera first private entity to fly a rocket built on Gujarat soil.
- Engine testing progress: Two solid-fuel engine tests plus igniter testing on liquid cryogenic engine completed; more tests planned.
- SPEXA 2026 participation (Tokyo, May 2026): Represented at this international space business expo.
- Institutional partnerships: 44 MoUs (MIT Pune, SRM Chennai, VIT Bhopal, \$2.05M combined); 55,000+ students trained.
- International expansion: UAE branch (OSRE FZC) established; targeting Europe/North America entry by 2027.
- Milestones ahead: First commercial launch targeted January 2028.

MEMBERS' ACHIEVEMENTS

OnEarth Space TS

- Synergy Quantum partnership India's first quantum-secure satellite systems (July 10, 2025): SpaceTS partnered with Synergy Quantum to jointly develop quantum-secure satellite systems for India.
- AWS Space Accelerator: APJ 2025 selection (Sept-Nov 2025): Part of the 67-startup cohort from Australia, India and Japan in AWS's 10-week accelerator program, delivered with T-Hub, Minfy, Fusic, Ansys, the Australia Space Agency, IN-SPACE and SKY Perfect JSAT.

Omnipresent Robot Tech

- TSATS Award (Sept 2025): AI Decision-Making Engine for Indian Navy, with UPES Dehradun.
- iDEX ADITI 1.0 Award (Oct 2024): Won Space-Based SAR elevation modeling challenge among 70+ competitors; ₹25 crore grant reportedly the largest such government grant to an Indian startup.
- Product portfolio: OmniSAR3D (SAR-based 3D DEMs), OmniAgent (threat-perception decision support), OmniNavX (GNSS-denied navigation).
- Legacy: Vision-autonomy software for Chandrayaan-3's Pragyaan rover (2023).

OrbitAID Aerospace

- AyulSAT lost in launch failure (Jan 12, 2026): PSLV-C62 suffered a third-stage anomaly and failed to reach orbit AyulSAT (in-orbit refuelling demo satellite) was lost along with DRDO's EOS-N1 and 14 other payloads. Mission was uninsured due to its novel risk profile.
- DST/TDB backing confirmed (March 2026): Government support for SIDRP docking/refuelling technology continued post-failure.
- R&D facility inaugurated (Sept 2025, Bengaluru): ISRO Chairman Dr. V. Narayanan inaugurated it, signaling ISRO's openness to private on-orbit servicing partners.
- \$1.5M pre-seed funding: Led by Unicorn India Ventures + TANSIM dated Jan 2025 in independent sources, not Jan 2026 as submitted; worth confirming.
- Space MAITRI Grant (Oct 2025): Confirmed grant round attribution to OrbitAID specifically not independently verified.
- Zero-gravity SIDRP test: Validated via parabolic flight in Florida.

MEMBERS' ACHIEVEMENTS

Orbitt Space

- January 2026: Orbitt Space wins IN-SPACE seed fund of 1Cr for development of VLEO specific mission control software for autonomous constellation management under Department of Space's program to advance autonomous spacecraft operations and smart computing.
- August 2025: Orbitt Space was nominated as one of the top 5 companies for the ETtech Top Innovator Award.
- June 2025: Orbitt Space raised USD 1M in pre-seed funding led by pi Ventures with participation from IIM A ventures.
- Technology approach: Propulsion system uses residual atmospheric gases as propellant (fuel-free), targeting 5-7 year satellite operational life; company is in lab-based development/qualification phase, with in-orbit demonstration and commercial rollout planned for later stages.

OrbiX Global*

OrbiX Global is building a mission risk intelligence platform to strengthen insurance readiness, investment confidence and sustainability across the space sector.

During the reporting period, the company developed its flagship Insurance Readiness Index (IRI) framework, providing structured, evidence-based mission risk assessments for satellite operators, insurers, investors and other stakeholders.

The framework has evolved into a commercial risk assessment offering supporting missions across Earth Observation (EO), In-Orbit Servicing (IOS), Active Debris Removal (ADR), Launch Vehicles (LV) and Communication Constellations, with multiple customer engagements currently underway.

A significant research milestone was achieved when OrbiX Global's research paper on the Insurance Readiness Index (IRI) was selected for presentation and display at SMOPS-2026 (Space Mission Operations Workshop), recognising the company's contribution towards advancing mission assurance and risk intelligence for the space sector.

The company actively engaged with stakeholders across the Indian and international space ecosystem, including satellite operators, launch vehicle companies, insurers, underwriters, research institutions and government agencies, to validate its methodologies and promote risk-aware decision-making within the emerging space economy.

OrbiX Global was recognised as a Top 7 Finalist at the Dubai Airshow 2025 VISTA Startup Challenge from over 400 global applicants and was honoured with the Blue Ocean Strategy Award 2026, StartupTN for innovation out of 900 applicants.

Building on its transition from research to commercial deployment, OrbiX Global is supporting India's growing space ecosystem through mission risk intelligence, insurance readiness, responsible space operations and stronger collaboration between industry, insurers, investors, regulators and academia.

MEMBERS' ACHIEVEMENTS

Piersight Space

- O-PPP consortium win India's first Public-Private Partnership EO constellation (Aug 12, 2025): PierSight joined the Pixxel-led consortium (with Dhruva Space and SatSure) selected by IN-SPACe to build a 12-satellite national Earth Observation constellation over 4-5 years, at an investment exceeding ₹1,200 crore (~\$130M) PierSight contributes the SAR backbone.
- Varuna 2.0 flat-panel reflect-array antenna validated at ISRO's CATF (March 2026): Completed gain, beamwidth and sidelobe-suppression testing at ISRO's Compact Antenna Test Facility; a lightweight, planar-PCB design eliminating bulky parabolic dishes; satellite bus integration underway, SSLV/GSLV launch targeted late 2026.
- \$8M cumulative funding: New strategic investors added (announced May 20, 2025), bringing total funding to \$8M across 3 rounds from 12 investors company describes this as strategic capital ahead of a planned Series A raise.
- First commercial SAR+AIS satellite in development: World's first SAR + AIS satellite (with AIS-2.0/VDES), targeted for mid-2026 launch.
- MATSYA maritime analytics platform and drone-based SAR program: Both progressing through 2025-2026.
- Startup Mahakumbh panel (New Delhi, Bharat Mandapam): CTO Vinit Bansal featured on an "India Spacetechnology on the World Stage" fireside chat.

Pixxel*

Pixxel significantly expanded its hyperspectral Earth observation capabilities, strategic partnerships and national and international collaborations, while advancing India's leadership in space technology and planetary intelligence.

Key Milestones

- **Pixxel x 4EI Partner to Advance Environmental Insights:** July 2025
- **Pixxel x Coactive Science Partner to Power Year-Round Monitoring of Agricultural Assets:** July 2025
- **Second batch of Firefly satellites launch:** Aug 2025
- **Pixxel x KSAT Partnership to Enable Global Access to Hyperspectral Satellite Data:** Oct 2025
- **Pixxel x Pacific Geomatics Partner to Bring Hyperspectral Satellite Data to Canada:** October 2025
- **Pixxel-Led Consortium Signed PPP Agreement with IN-SPACe to Build India's National EO Constellation:** Jan 2026
- **Awaits at Rashtrapati Bhavan:** Jan 2026

MEMBERS' ACHIEVEMENTS

Pixxel*

- Pixxel x Exotrail Announce Electric Propulsion Contract: Feb 2026
- Pixxel at India-EU Forum: Feb 2026
- Pixxel x NSG UP42 Partner to Expand Hyperspectral Earth Observation Capabilities in Saudi Arabia: March 2026
- Pixxel x CosmoServe | Advancing debris removal in orbit: March 2026
- The Shakuntala Initiative Announcement: March 2026
- Pixxel x NSIL | Expanding access to hyperspectral data in India: April 2026
- Gigapixxel Facility Announcement: April 2026
- Pixxel x Sarvam | India's first orbital data centre satellite: May 2026
- NRO Strategic Commercial Enhancements Contract for Hyperspectral Remote Sensing Capabilities: May 2026
- MoU with Tamil Nadu Agricultural University, Coimbatore, to advance agricultural monitoring: July 2026

Robinsons Cargo & Logistics

- Achieved ISO 14001 (Environmental Management System) certification, strengthening sustainable logistics practices aligned with global standards
- Continued expansion of end-to-end logistics capabilities supporting high-value and mission-critical sectors, including aerospace and space technology

Saankhya Labs (Tejas Networks)

- ₹96.42 crore NSIL order: Satcom Xponders for fishing vessel monitoring/surveillance across India's coastal states one of the world's largest Satellite-IoT deployments, with ISRO and Dept. of Fisheries.
- D2M partnerships with Lava & HMD (April 2025): India-made D2M chipset (SL-3000) in mobile phones first such instance; targeting 200M+ feature-phone users.
- Intel partnership (April 2025): Bringing D2M technology to AI-enabled laptops.
- IMC 2025 commentary (Oct 2025): EVP Parag Naik called D2M "the first deep-tech stack coming entirely out of India," now ready for deployment.
- Corporate integration: Fully amalgamated into Tejas Networks (completed ~Oct 2024), backed by continued Tata Sons strategic investment.

MEMBERS' ACHIEVEMENTS

Samkalpa Systems*

- Samkalpa is selected by NSIL to supply High Quality Transition Tubes/Bi-metallic Adapters for ISRO's Propulsion/Fuel Tank Applications. Samkalpa is getting these made from its technology partners in USA.
- Samkalpa has been in the forefront for supply of Space Grade DC-DC Converters and EMI Filters to various missions of ISRO for LIDAR development, Laser Doppler Velocimeter, Langmuir Probe Payload, etc.
- Leading defence contractors of HAL have selected Samkalpa for supply of DC-DC Converts and Filters to be used in HAL's Tejas program.
- Samkalpa is actively involved in projects that require High Power Space Cable Assemblies and LVDS Space Grade Balanced Shielded Cables.
- Samkalpa is involved in supplying Space Grade Advanced Composite Material for fabrication of Satellite Structural Components, Realization of Camera Structures and Development of Antenna Reflectors and Multilayer Antennas for multiple Indian Satellite Programmes.
- Samkalpa is also involved in supplying Composite Materials for the development of parts of Kaveri Engines for Light Combat Aircraft (LCA) - Tejas Program and AMCA Projects.
- As a Channel Partner of Ansys, Samkalpa has secured and successfully supplied STK & ODTK software for Simulation, Analysis & Modelling for many mission-critical activities of ISRO, DRDO & BEL.

Sanyark

- \$500K pre-seed funding from AUM Ventures (Feb 5, 2026): First investment under AUM Ventures' INDIA DeepSpark Deeptech Program (launched Aug 15, 2025; 400+ applications across 15+ incubators) funding constellation design, payload development and early customer engagement in defence, infrastructure and industrial sectors.
- Broader investor base confirmed: Total raised to date \$2.5M, with T-Hub, Avaana Capital and SIDBI Venture Capital joining AUM Ventures as investors (per PitchBook) a stronger institutional backing picture than initially visible from the AUM announcement alone.
- IN-SPACE Seed Fund mentorship selection: Selected (from 68 applicants) for mentorship/technical support on a proposal for precise orbit determination for LEO satellites, under IN-SPACE's Seed Fund program for full-mission virtualization and smart computing/control schemes.

SatLeo Labs

- \$3.3M pre-seed funding (May 2025): Led by Merak Ventures, with Huddle Ventures, GVFL, Java Capital, IIMA Ventures, PointOne Capital participating.
- YourStory Tech30 selection (Nov 2025) and international showcases: Sber Bank (Russia) top-10 startup recognition and Dassault Systèmes showcase in Paris.
- TAPAS-1 payload readiness (Oct 2025): First cubesat completed testing/calibration, ready for shipment to the US for launch; reached TRL-8 by April 2026.

MEMBERS' ACHIEVEMENTS

SatLeo Labs

- \$2.2M seed round (April 6, 2026): Led by Unicorn India Ventures, bringing total funding to \$5.5M. Commercial pipeline (LOIs) grew from ~\$15M to over \$42M within the year; urban heat island/air-pollution pilots launched with Ahmedabad and Tumakuru, impacting 400,000+ citizens.
- Defence positioning detailed via Janes interview (May 2, 2026): CEO Shravan Bhati cited the US-Israel-Iran conflict (Feb 28–April 8, 2026) as validating infrared sensing's value for real-time missile-launch detection the 15-satellite constellation is explicitly framed for detecting missile launches from China and Pakistan, alongside civilian applications.
- Roadmap: First operational satellite launch targeted Q4 2026; full constellation (12-15 satellites) aiming for twice-daily, sub-10m thermal resolution with 10cm visible imagery, ~1 Kelvin thermal precision.

SISIR Radar

- \$7M Series A funding (Dec 15, 2025): Led by 360 ONE Asset, with Shastra VC to launch India's first privately developed L-band SAR satellite, targeted for 2026; total funding now \$10.4M across 6 rounds (following a \$1.5M seed round, Feb 2025, led by Shastra VC with Riverwalk Holdings and INVSTT).
- Partnership with XDLINX Space Labs (announced May 27, 2025): Joint mission to build the satellite, powered by Antaris software will deliver 0.75m resolution, all-weather, day/night imagery.
- Reflect Array SAR Antenna milestone (July 2, 2025): Unveiled the central tile of India's first reflect array SAR antenna.
- P-band SAR surface extraction breakthrough (May 6, 2025) and L-band drone SAR fidelity demonstration (April 17, 2025, validated via Google Earth overlay).
- Two iDEX challenge wins: For specialized SAR satellites for the Indian Air Force.
- Competitive positioning: Ranks 15th among 356 tracked SAR/EO competitors by Tracxn (11th by total funding); competes directly with Planet, ICEYE and Capella Space, differentiated by L/P-band foliage-penetration capability versus the X-band focus of most global peers.

MEMBERS' ACHIEVEMENTS

Siliconia Technologies

- Siliconia has won two challenges for research and development from Innovations for Defence Excellence (iDEX), Government of India.
- Siliconia Technologies strengthened its presence in India's space ecosystem by signing a strategic collaboration MoU with IN-SPACE and inaugurating a new R&D and prototype development facility in Pune, aimed at advancing indigenous aerospace, satellite communication and defence technologies.

Skymap Global India

- In August 2025, it signed a Memorandum of Understanding (MOU) with SI Analytics to strengthen AI-driven satellite imagery solutions for government and defense clients in the Philippine market.
- Skymap Global operates in a space where India's defence-geospatial ecosystem is expanding rapidly evidenced by events like the Indo-Pacific GeoIntelligence Forum (IPGF 2026, June 2-3, New Delhi), which drew DRDO, ISRO, MoD and armed forces stakeholders, though Skymap Global's own participation in this specific forum wasn't confirmed in search results.

Skyroot Aerospace

- **Vikram-1 reaches orbit** first-ever private orbital launch from India (July 18, 2026): Mission "Aagaman" lifted off from Satish Dhawan Space Centre, Sriharikota at 12:05 PM IST (after a 35-minute hold), reaching a 450km orbit at 60° inclination ~15 minutes after liftoff. Makes Skyroot the first private Indian company to reach orbit and India the third country (after the US and China) with private orbital launch capability. Vikram-1 (4-stage: 3 solid + 1 liquid orbital-adjustment stage) carried Skyroot's own SCOPE satellite plus tech-demo payloads from Grahaa Space, CosmoServe and DCubed. ISRO/IN-SPACE provided testing facilities, integration and launchpad access; the vehicle itself was fully private.
- Skyroot becomes India's first space-tech unicorn (May 2026): Raised ~\$60M co-led by Sherpa Ventures and GIC, at a valuation above \$1.1 billion.
- "Infinity Campus" inaugurated by PM Modi (Nov 27, 2025): ~2 lakh sq ft facility for designing, developing, integrating and testing multiple launch vehicles, with capacity to build one orbital rocket per month; Vikram-1 was unveiled at the same event.

MEMBERS' ACHIEVEMENTS

Skyroot Aerospace

- S. Somanath (former ISRO Chairman) joins as Honorary Chief Technical Advisor (June 26, 2025): To advise on Vikram-1 launch preparation.
- Axiom Space MoU (June 2025): Exploring collaboration on integrated launch and in-orbit services.
- Kalam-1200 static fire test (Aug 2025): India's largest privately developed solid rocket motor, ~1200 kN peak vacuum thrust, ahead of the Vikram-1 mission.
- 300 acres allotted in Tirupati andhra Pradesh (Sept 2025): For an integrated rocket manufacturing, assembly, testing and storage facility (₹400 crore investment).
- Exolaunch partnership (Oct 2025): For payload integration, rideshare and satellite deployment services on upcoming Vikram launches.
- Dhawan-III cryogenic engine test (March 2026): 145-second endurance test under the Aatmanirbhar Bharat ARISE-ANIC initiative.

Hyspace Technologies (Skyserve)*

- Skyserve was selected among 10 Indian deeptech startups for IndiaAI mission (MeitY,GoI) × HEC Paris Global Accelerator program 2026, The only space tech company in the cohort.
- Skyserve has reached stage 3 (final round)of AI Grand challenge organised by NCIIPC.
- won Elevate Next (grant by Govt of Karnataka) for developing FPGA based suite for edge AI inference
- shortlisted among 100 desi startups by SPF

MEMBERS' ACHIEVEMENTS

Spacefields*

- Received GoAP Cabinet approval and acquisition done for prime Defence Industrial Corridor land parcel of 121 acres for propulsion manufacturing and expansion
- Established and inaugurated DSIR/ISO-certified 42,000 sqft integrated R&D Facility
- Patents (7 granted+24 published) in fields of material science, energetics chemistry, solid propellants
- Attended the At-Home Reception at Rashtrapati Bhavan on Republic Day 2026 and interacted with Hon'ble President and the Hon'ble Prime Minister of India
- Winners of five iDEX - DIO (DDP MoD) development contracts
- Winner of various awards & recognitions - DRDO Dare to Dream 2026
- Winner GoK's flagship ELEVATE DeepTech NxT 2026
- Winner of Indian Navy Innovation Hackathon in Swavlamban
- 100 Desi Deeptechs by Startup Policy Forum,
- Winner of Nasscom Emerge50, as the top deeptech venture in the Spacetech & Defence category

Space Machines Co.

- Space MAITRI passes Critical Design Review (2026): Confirmed via a Space Machines Company employee's LinkedIn major milestone advancing the Australia-India rendezvous and proximity operations mission toward flight-hardware manufacturing.
- Manufacturing scale-up underway: Production now active at the company's UTS Tech Lab facility in Botany, with a new partnership with the Bradfield Advanced Manufacturing Readiness Facility to further scale capacity ambition to grow from producing "tens to hundreds" of spacecraft annually by decade's end.
- Solstice OS command-and-control platform: Continued development as a core focus area, alongside the Space MAITRI mission and manufacturing scale-up (per CEO Rajat Kulshrestha).
- Partnerships with Ananth Technologies and Digantara: Ananth Technologies (AIT, logistics support) and Digantara (short-range electro-optical payload for tracking resident space objects) supporting the second Optimus satellite build.
- LeoLabs partnership (March 2025): Pre-mission planning, launch/early operations support and safety-of-flight tracking for Space MAITRI.
- OrbitAID partnership (2025, per your submission): Cross-collaboration within the India-Australia in-space servicing ecosystem
- 2026 Endeavour Awards Innovation in Aerospace: Won this award for sustained momentum in aerospace/defence innovation.
- Mission specs: Second Optimus satellite (450kg, largest Australian-designed/built spacecraft to date) to launch via NSIL's SSLV, backed by an \$8.5M Australian Space Agency grant.

MEMBERS' ACHIEVEMENTS

Suhora Technologies*

- BITS Pilani (Goa) collaboration: Partnership for research, innovation and skill development in AI, Remote Sensing and Geospatial Intelligence.
- NCIIPC AI Grand Challenge: Shortlisted across all 3 submitted problem statements; advanced to Stage 3 for Hyperspectral Anomaly Detection.
- IN-SPACe Seed Fund: Selected to develop satellite-based Reservoir Rim Slope Stability Monitoring for critical infrastructure.
- STPI Award: Won "Excellence in Startup & Innovation" at the AI Summit.
- ISpA Industry Award 2025: Special Award for Operational Imagery Support.
- SAR Imaging & Analytics contract renewed: Third consecutive term.
- IGSTC Grant (FLAIR project): Selected as India's industry partner developing EO datasets and AI-powered flood forecasting with German research institutions.
- Satellogic partnership: Exclusive agreement for high-resolution EO services across India and Nepal.
- Strategic defence customer win: First Indian private company selected to support Maritime Domain Awareness for a strategic defence customer.

Thrustworks Dynetics

- India's first Resonance-Based Rocket Ignition System test-fired (Feb 27, 2026): Geometry-driven ignition enabling infinite restarts in vacuum, replacing single-use igniters.
- ₹7 crore (~\$789K) seed funding (Oct 6, 2025): Led by Jamwant Ventures, with Piper Serica and SINE-IIT Bombay total raised ~\$789K-\$792K across 2-3 rounds (varies slightly by source: Tracxn, Inc42, PitchBook).
- ANYA Liquid Rocket Engine Platform: 20,000N (20kN) thrust, kerosene/LOX, fully 3D-printed from a single metal piece, modular and customizable to cut customer development timelines from years to months.
- India's first Mobile Rocket Engine Test Bed and first Integrated Rocket Facility (IRF): Consolidating design, manufacturing and testing under one roof.
- In-house proprietary software: Combustion modelling, acoustic stability, performance validation kept internal to avoid foreign software dependency and export-control restrictions.
- Ecosystem partnerships: ISRO, IN-SPACe, Bharat Forge, Godrej Aerospace, INOXCVA.

MEMBERS' ACHIEVEMENTS

Ulook Technologies*

- Secured \$2M in pre-seedfunding to accelerate technological R&D and platform expansion.
- Selected for the US Space Force-backed Catalyst Campus Mini Accelerator in Colorado Springs, USA.
- Engineered and validated a Time Difference of Arrival (TDOA) geolocation algorithm using drone swarms, proving the capability of distributed platforms for RF emitter detection.
- Validated prototype payloads through a high-altitude balloon flight to 31 km at TIFR's National Balloon Facility, demonstrating end-to-end signal acquisition and processing in a relevant atmospheric environment.
- Closed the Preliminary Design Review (PDR) for the technology demonstrator satellite, achieving a critical milestone in the space-based RF sensing roadmap.
- Emerged National finalists in two national NTRO/NCIIPC challenges focused on Emitter Geolocation and Acoustic Fingerprinting.
- Won the Karnataka DeepTech ELEVATE Nxt Grant to fund and accelerate next-generation deep-tech capabilities.
- Selected among the Top 12 International SpaceTech Startups of 2026 by Taiwan's International SpaceTech Startup Supporting Program (TACC+).

VEDCOMSPOC

- JV formation: SamKalpa Systems (India) and COMSPOC Corporation (US) formed VEDCOMSPOC (Feb 9, 2023) incorporated in India under the Companies Act 2013, operating out of New Delhi and Bengaluru offices. This remains the single defining, independently-corroborated event, though it predates your one-year window.
- Product suite (confirmed via VEDCOMSPOC's own site): ODSSA (Orbit Determination SSA), SSS (SSA Software Suite full Space Operations Center capability) and SOTA (Space Object Threat Assessment).
- Technology base: Built on COMSPOC's military-grade physics engine (13M+ lines of code), covering all orbital regimes VLEO to cislunar and interplanetary.
- Positioning: Serves the Indian government and national stakeholders, with an ambition to extend to "other friendly countries."

MEMBERS' ACHIEVEMENTS

Vihaan SpaceTech

- 2026: Published "Fundamentals of Model Rocketry" a guidebook for India's model rocketry/space experimenter community, covering ballistics, propulsion and aerodynamics fundamentals.
- 2025: Signed MoU with IN-SPACe and LPSC/ISRO for performance validation testing of Vihaan's 20 mN and 70 mN thrust-class plasma thrusters.
- 2025: Filed patent for "Dual-Burn Indigenous Rocket Propulsion System for Air-Ground and Ground-Air Rocket Counter UAV Rocket Systems."

VyomIC*

VyomIC is building India's first private LEO satellite constellation for Positioning, Navigation and Timing (PNT) – a GPS-independent system with stronger signals, centimeter-level accuracy and jamming resistance.

Technology Milestones

- Completed testing of VyomIC's in-house atomic clock ensemble architecture using bench-top instruments.
- Hardware development on the Navigation Signal Generation Unit (NSGU) and Demodulator, key components of the signal transmission chain underway.
- Completed algorithm development of Precise Orbit Determination (POD) module and achieved centimeter level accuracy. Now moving towards hardware realisation.
- Completed a 1st version of mission planning. Optimisation is underway.
- 5+ patents currently in the filing process.

Timeline

- On track to demonstrate India's first LEO-PNT payload by October 2026, integrating the atomic clock ensemble, orbit determination module and signal generation unit.
- First two satellite launches targeted for 2027 to demonstrate complete LEO-PNT architecture.

Team & Infrastructure

- Now a 32-member team, scaling to 50+ members in the coming months, supported by 11 advisors across specialized domains.
- Scaling up to a dedicated ~30,000 sq. ft. facility by Q4 2026, which is the new Payload Center with an in-house Assembly, Integration & Testing (AIT) facility in future.

MEMBERS' ACHIEVEMENTS

XDLINX space labs*

MILESTONES

- **2022:** Incorporation of Startup
- **2023:** JANUS 1 Launch; Signed a contract to build XDSAT-M600
- **2024:** Raised \$7.3 Million Seed Fund
- **2025:** Elevation 1 Launch; Received Order to build 15 nos. M400 satellites as a consortium partner; Signed Agreement to Establish 60,000 sq ft Satellite R&D Facility.
- **2026:** Delivered 190 kg, XDSAT- M600 and MSI payload within contract period

KEY ACHIEVEMENTS

- Built and launched **JANUS-1**, one of India's largest 6U nanosatellites, in a record **10 months**, featuring indigenous subsystems and multi-tenancy capability.
- Launched **Elevation-1** featuring the world's first **miniaturized space-grade E-band payload**.
- Delivered XDSAT-M600 to domestic customer, featuring India's largest privately built **190 kg microsatellite bus** and a high-resolution **MSI payload** engineered by XDLINX.
- Designed a satellite bus for M400 platform in a record time of 12 months. PDR is completed and CDR is nearing completion.

Xovian Aerospace

- \$2.5M pre-seed funding (Aug 7, 2025): Led by Piper Serica and Turbostart, with Inflection Point Ventures (IPV) and Eaglewings Ventures to launch its multi-frequency RF payload aboard an ISRO launch vehicle for indigenous core sensing tech validation, followed by nanosatellite development, with customer pilots/data trials slated for 2026.
- \$2M follow-on strategic round (announced April 1-2, 2026): Led by prominent investor Ashish Kacholia, with continued participation from Inflection Point Ventures bringing total disclosed funding to \$4.5M-\$4.56M. Earmarked for accelerating satellite development, expanding engineering/AI teams and building strategic commercial partnerships.
- Roadmap disclosed: Payload validation on ISRO's PSLV targeted by end of 2026; pilot trials with 5-6 enterprise customers across India, Southeast Asia and the Middle East targeted by Q2 2026; full 10-satellite constellation targeted by 2027 for near-continuous global coverage.
- Enterprise/government pilot programmes: Demonstrating RF-based space intelligence for maritime security, defence surveillance and communications monitoring consistent with the company's stated go-to-market strategy, though I found no independently dated press confirming specific named pilots.
- Technology positioning: Building the world's first AI-native RF satellite infrastructure, fusing SIGINT and GEOINT into a unified intelligence layer designed to track vessels/aircraft that "go dark" (switch off transponders), which optical imaging satellites miss.

Disclaimer:

Companies marked with an asterisk (*) have verified their profiles. The profiles of all other companies have been compiled from publicly available sources and may contain inaccuracies. ISpA does not assume responsibility for any errors or omissions and welcomes corrections or updates from the respective companies.*

MISSION DEFSPACE: DEFENCE SPACE CHALLENGES

MISSION DEFSPACE

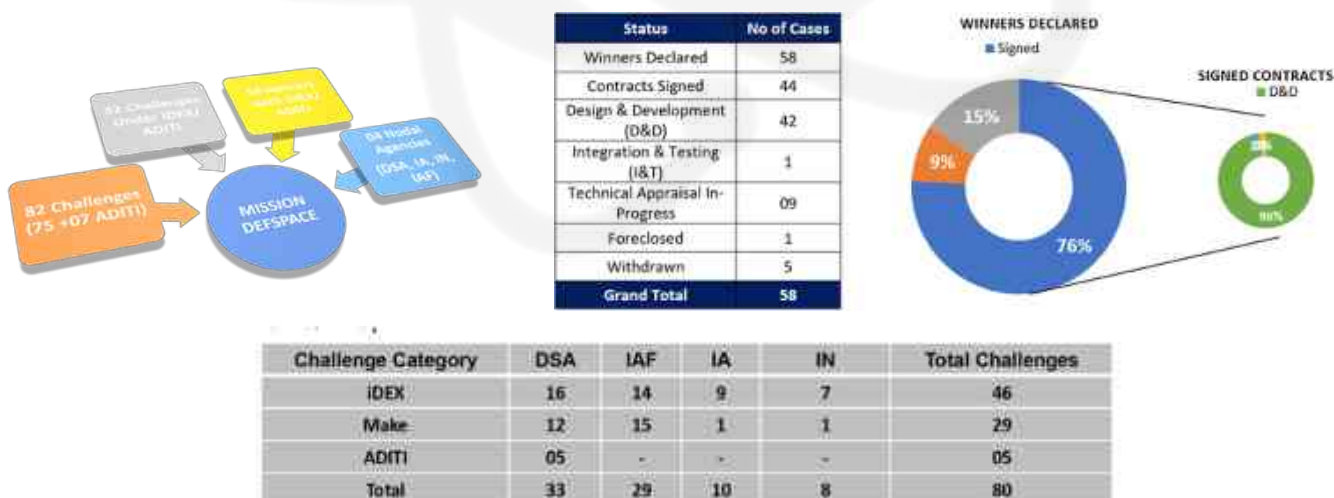
The Office of the Principal Scientific Adviser to the Government of India, in collaboration with iDEX (Innovations for Defence Excellence) under the Defence Innovation Organisation (DIO), is facilitating Mission DefSpace. The initiative aims to make India Atmanirbhar in defence technologies in the space domain by engaging start-ups and young entrepreneurs through structured innovation challenges.

Objective and Scope

Mission DefSpace was launched by the Hon'ble Prime Minister during **DefExpo 2022 at Gandhinagar**, introducing **75 Defence Space Challenges** across various Department for Defence Production (DDP) initiatives such as **iDEX**, **'Make-I'** and **'Make-II'**. These challenges cover the entire spectrum of a space mission—from mission planning to satellite data analytics—with a focus on dual-use technologies that ensure strategic security while supporting national development.

Key Highlights

- First iDEX Contract: Signed between DIO and InspeCity for a Micropropulsion System for CubeSats, led by the Defence Space Agency.
- Pixxel: Signed its second SPARK grant agreement with iDEX (June 2025) to develop hyperspectral and MWIR payloads for the Indian Air Force building on its earlier 2023 Mission DefSpace selection.
- Kepler Aerospace: Awarded a \$4 million iDEX Prime contract (July 2025) to develop a 6-satellite ISR swarm constellation for the Defence Space Agency, HQ IDS and Ministry of Defence India's first autonomous swarming satellite architecture, targeted for launch in 2027.
- CubeSats and satellite swarms remain critical to launch-on-demand and persistent ISR capability, requiring advanced propulsion, autonomous coordination and precise orbit control.



✓ iDEX – Up to 20 Cr, ADITI – 20 to 50 Cr

- 24 MSMEs 07 Ltd Companies 45 Start-Ups identified in Space Tech ecosystem
- ADITI - 07 Total - 82



iDEX Challenge Winners

Ch #	Challenge Name	Startup
18	Secure Satellite Comm – Automated Info Broadcast (Receive Only)	Fleetr Pvt Ltd
18	Same – Alt Winner	Avantel Pvt Ltd
19	Secure Compact Handheld SatPhone (Voice/Data/PNT)	Avantel Pvt Ltd
19.1	Anti-Jamming Circuits for SatPhone	Paras Anti-Drone Tech
19.2	Anti-Spoofing Circuits for PNT Services	Parachute Technologies
20	Space-Based Troop/Convoy Management (SATCOM)	Avantel Pvt Ltd
21	GEO IoT Platform – Remote Facilities Monitoring	Meridian Data Labs
21.1	Cloud Geo-AI Software for IoT Asset Monitoring	Meridian Data Labs
22	V/UHF Satellite Appliance Unit for SDRs	TBD
23	Handheld Adapter to Convert Android to SatPhone (L/S)	Dhruva Space
3.1	Intelligent Onboard System for Satellite Mission Planning	Spacekawa Explorations
3.2	Ground-Controlled Satellite Antenna Freq Switching System	Paras AntiDrone Tech
3.3	Multiband RF Sensor Data Processing & Analysis System	Spacekawa Explorations
5.1	L/P Band CW SAR Payload for LEO Small Satellites	Sisir Radar Pvt Ltd
5.2	Unfurlable Electronically Steered Antenna for SAR Payload	Sisir Radar Pvt Ltd
6	Miniaturised Multi-Payload Satellite (EO/IR/SAR/HSI ≤150 kg)	SpacePixel Technologies
6.2	Miniaturisation of Payloads (IR & Hyperspectral, ≤150 kg)	SpacePixel Technologies

Ch #	Challenge Name	Startup
6.3	Miniaturisation of On-board Antenna using Additive Mfg	Antsys Innovations
6.4	High-Speed On-board Data Processing for LEO Imaging	GalaxEye Space
6.5	AI/ML Change Detection for Multi-Payload Fused Imagery	Omnipresent Robot Tech
E1	Space Domain Awareness – Space Military Surveillance (OC7)	Digantara Res & Tech
ADITI	Autonomous Docking for On-Orbit Maintenance & Refuelling	InspeCity Space Labs
25	Low Latency Multicast Data Links for Video/File over SATCOM	Qbit Labs
26	Below-Noise-Floor Modems (S/C/Ku band, 1K–20Mbps)	Big Cat Wireless
27	Portable Handheld/Manpack Ku Band Terminal for IN SATCOM	Avantel Pvt Ltd
27	Same Challenge – Alt Winner	TSC Technologies
28	On-board Processing & Beam Switching Payload (Ku/Ka GEO)	Krisemi Design Tech
29	Beam Steering Ku-Band SATCOM Antenna for MR Aircraft	Avantel Pvt Ltd
29	Same Challenge – Alt Winner	Jisnu Communication
30	Compact Multiband SATCOM SDR (UHF/S/C/Ku/Ka) for Ships & Submarines	Azista Industries
31	Ruggedized FPGA Modem with Post-Quantum Encryption for VSAT	Astrome Technologies
31	Same Challenge – Alt Winner	Big Cat Wireless

Category / Ch	Challenge Name	Startup
Prime X-10 (Ch 9)	200W Ka-Band SSPA for Satellite Ground Station	MMRFIC Technology
Prime X-11 (Ch 10.1)	Space-Grade Robotic Arm with Ground Control	InspeCity Space Labs
Prime X-12 (Ch 10.2)	Intelligent Object ID (LIDAR+EO sensors)	InspeCity Space Labs
Prime X-13 (Ch 34)	High-Res Optical Telescope (1–3 m Aperture)	Light Guide Optics
DISC 8 (Ch 35.2)	Micro Propulsion System for CubeSats	Bellatrix Aerospace
DISC 8 (Ch 35.2)	Same challenge – Alt Winner	Manastu Space
DISC 8 (Ch 35.3)	Hall Effect Plasma Thrusters for Orbit Corrections	Bellatrix Aerospace
DISC X-58 (Ch 4.1)	Imagery Data Fusion: Optical & Radar Sources	Digantara Res & Tech
DISC X-59 (Ch 4.2)	Geo-AI Multi-Sensor Siting Simulator (Opt/Radar)	Digantara Res & Tech
ADITI 1.0 (Ch 14)	Mobile Ground Station (S/X/Ka Band Satellite Data)	Paras Anti-Drone Tech
ADITI 1.0 (Ch 16)	CubeSat Deployers of Various Configurations	Space Kidz India

TESTIMONIALS

"India's space sector has undergone a remarkable transformation—reforms over the last five years have turned what was once a dispersed, uncounted part of our economy into an \$8 billion industry today, with the potential to reach \$44-45 billion within the next decade. Around 70% of our space-driven applications are focused on improving ease of living for the common citizen, a people-first approach that sets India apart on the global stage. Platforms like the India International Space Conclave, organized by the Indian Space Association (ISpA) in collaboration with ISRO and IN-SPACE, are helping bring together government, industry and global partners to accelerate this growth story. As we move up the ranks, space is set to become one of the most important contributors to India's economic future."



- Dr Jitendra Singh
Union Minister of State:
Science & Tech., Earth
Sciences, Space

"Space is no longer a support function—it is a strategic domain that shapes deterrence and war-fighting outcomes. India must move towards distributed, resilient space architectures co-developed with industry and innovators, with AI at the core transforming space from passive sensing into active decision-making capability. The Indian DefSpace Symposium must be a catalyst for decisive action and the synergy between our armed forces, industry and academia will determine whether India remains a participant in the space domain or emerges as a leading space power."



- Gen Anil Chauhan
PVSM UYSM AVSM SM VSM
Chief of Defense Staff, Indian
Armed Forces

TESTIMONIALS

"India's achievements in space—from becoming the fourth nation to reach the Moon to the first to land at its South Pole—reflect its rise as a key global player in the space domain. Italy, with a €7.5 billion national investment and a presence across the entire space value chain, sees strong complementarity with India's dynamic and fast-growing space ecosystem. Following the joint strategic action plan signed by our Prime Ministers in November 2024, our space agencies ASI and ISRO have deepened cooperation across exploration, industry matchmaking and research. Organizations like the Indian Space Association (ISpA) are vital in strengthening this bridge between our industrial ecosystems. Together, we continue to look at the stars not in competition, but in partnership."



H.E. Antonio Bartoli
Ambassador of Italy to
India

"India is a key partner for the EU, mattering profoundly to Europe's security, prosperity and resilience—together we represent nearly a quarter of global GDP and population. As space becomes ever more contested, congested and competitive, our shared interest in a secure, safe, stable and sustainable space environment has never been more important. The success of the first EU-India Space Dialogue in November 2025 marks a key milestone in our cooperation and we look forward to deepening this structured engagement in the years ahead. Events like the India International Space Conclave, bringing together government and industry alike, reflect the inclusive approach to space security that the EU proudly promotes."



H.E. Marjolijn Van Deelen, EU Special
Envoy for Space,
Brussels

TESTIMONIALS

"India has always had the inherent capability and competence to conquer space—what we lacked was the ecosystem and the economy to match it. As a late mover, we carry the advantage of learning from others' experience while moving fast on our own innate strength. But technical excellence alone is not enough; India must also assert itself on the legal and governance side of outer space, ensuring our laws keep pace with manufacturing, investment and satellite launches. As we take our place at the high table of global space governance, India—representing the Global South—can make institutions like the UN Committee on Outer Space more inclusive, becoming a voice for those who currently have none. This is essential as space grows more congested, with debris and traffic posing risks that only genuine collaboration, not dominance by a few, can solve."



Smt Meenakshi Lekhi
Former Minister of
State for External
Affairs & Culture of
India, GoI

"Japan and India are unwavering partners sharing fundamental values of freedom, democracy and the rule of law and space stands as an extremely important field in our deepening strategic partnership. Under Japan's new Basic Plan on Space Policy, we aim to double our space industry to 8 trillion yen by the early 2030s—and strengthening collaboration with key partners like India is essential to achieving this. From security cooperation on satellite navigation and space situational awareness, to joint lunar exploration through Chandrayaan-5 and LUPEX investigating water resources, our partnership spans science, industry and academia alike. I hope this Conclave helps forge new networks that build a strong, shared space ecosystem for both our nations."



Mr Takashi Ariyoshi
Minister & Deputy
Chief of Mission,
Embassy of Japan in
India

MEMORANDUM OF UNDERSTANDING

The European Space Agency (ESA)

The European Space Agency (ESA) is an intergovernmental organization established in 1975 to coordinate Europe's space activities. It consists of 23 member states and works to advance scientific research, Earth observation, satellite navigation, telecommunications, space exploration and launch systems. ESA collaborates with international partners, including NASA, JAXA and other space agencies, to develop innovative space technologies and conduct missions that benefit science, industry and society.



The purpose of this Letter of Intent (LoI) is to express the mutual intent of the Indian Space Association (ISpA) and the European Space Agency (ESA) to explore and promote cooperation in areas of shared interest within the space sector. This LoI aims to provide a framework for dialogue and collaboration, including joint industrial, commercial, research and academic initiatives; exchange of information and expertise; facilitation of cooperation between the European and Indian space ecosystems; and support for knowledge-sharing and strategic engagement between researchers, institutions and industry stakeholders connected to both organizations.

Novaspace

Novaspace is a leading global consulting and market intelligence firm specializing in the space sector. Formed through the merger of Euroconsult and SpaceTec Partners, the company provides strategic consulting, technology advisory, market intelligence and executive summits to governments, space agencies, investors and commercial space companies. With over 40 years of industry expertise and a global presence, Novaspace supports informed decision-making across the space value chain through data-driven insights, market analysis and strategic guidance.



The purpose of this Memorandum of Understanding (MoU) is to establish a collaborative framework between the Indian Space Association (ISpA) and Novaspace SAS to promote cooperation in areas of mutual interest within the space sector. The MoU seeks to facilitate joint initiatives aimed at strengthening international market access, industry engagement, capability building and knowledge exchange for the Indian space ecosystem.

MEMORANDUM OF UNDERSTANDING

Amity University

Amity University is one of India's leading private, multidisciplinary universities, recognized for its strong emphasis on academic excellence, research, innovation and industry collaboration. With campuses across India and abroad, the university offers a wide range of undergraduate, postgraduate and doctoral programmes in engineering, management, sciences, law, humanities and emerging technologies. Through its research initiatives, global partnerships and focus on experiential learning, Amity prepares students to address real-world challenges and contribute to technological and societal advancement.



The purpose of this Memorandum of Understanding (MoU) is to establish a collaborative framework between the Indian Space Association (ISpA) and Amity Universities and its Institutions to promote cooperation in areas of Space and Defence Space (DefSpace) research, space exploration, space and defence industries, national security and other strategic domains.

Codimaths (Dhankesh and Baikoo EduTech) Private Limited

Codimaths Private Limited is a leading organization in the e-learning Space Startup dedicated to making quality education more accessible, engaging and effective for students. Codimaths focuses on Space Education, Technology and Exploration and STEM Education, integrating innovative learning methodologies to simplify complex concepts.

The purpose of this Memorandum of Understanding (MoU) is to establish a collaborative framework between ISpA and Codimaths to promote space science education and outreach. The partnership aims to jointly advance initiatives such as the International Space Science Olympiad (ISSO) and associated hackathons, expand access to space education—particularly in rural and underserved regions—and provide industry exposure and mentorship to students. The MoU also seeks to support curriculum development aligned with industry standards and to build global partnerships and publications that strengthen ISSO's international standing.

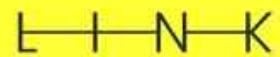


MEMORANDUM OF UNDERSTANDING

Link Innovations

Link Innovations is a global innovation platform that helps corporations, startups, investors and ecosystem partners collaborate to drive innovation and business growth. Headquartered in India, the organization designs and manages open innovation programs, startup acceleration initiatives, corporate innovation workshops and ecosystem-building activities. Operating across multiple countries, Link Innovations enables organizations to identify emerging technologies, co-create solutions with startups and accelerate the adoption of innovative ideas to address industry challenges and create sustainable impact.

The purpose of this Memorandum of Understanding (MoU) is to express the mutual intent of the Indian Space Association (ISpA) and Link Innovations to strengthen India's space innovation ecosystem through structured industry innovation linkages. This MoU aims to provide a framework for collaboration, including space-based joint research, co-education initiatives, strategic studies and capacity-building programmes, with a focus on emerging technologies, policy-relevant research and international cooperation.

The logo for Link Innovations, featuring the word "LINK" in a stylized, black, sans-serif font. The letters are connected by horizontal lines, with the 'I' and 'N' having vertical bars extending from their top and bottom. The logo is centered within a yellow square.

ENGAGEMENTS



BITS Pilani
Pilani | Dubai | Goa | Hyderabad



ENGAGEMENTS



ENGAGEMENTS



STRATEGIC INTERACTIONS

ISpA has been very actively engaging and reaching out to various authorities and organisations nationally and internationally to enhance space collaborations. Some of the interactions that have been taken so far are as follows:

June 2025

- DG session at the USI Hybrid Summer Internship Programme on India's Space Technology, New Frontiers, June 18, 2025.
- ISpA meeting with UAE Space Agency on delegation visit to India, June 19, 2025.
- Meeting with Dr Saku Tsuneta, Vice Chair, Committee on National Space Policy, Cabinet Office, Government of Japan, June 23, 2025.
- DG attended BIF Conference to commemorate World Wi-Fi Day, June 24, 2025.

July 2025

- FICCI Conference cum Exhibition on New Age Military Technologies, July 04, 2025.
- DG podcast at Escape Velocity Media on India's Space Strides, July 04, 2025.
- DG meeting at PMO, New Delhi, July 14, 2025.
- DG session at 3rd Broadband India Summit 2025 by Bharat Exhibitions, July 17, 2025.
- DG session at ITU APT – Indian Space Policy Conference, July 24, 2025.
- Meeting with Ms Antonietta Baccanari, Trade Commissioner, Embassy of Italy in India, July 24, 2025.

August 2025

- DD News interview at the ISpA office, August 01, 2025.
- Attended the COAI Dialogues in association with Voice & Data, August 29, 2025.

September 2025

- CII International Conference, Bangalore, September 8-9, 2025.
- Chairman and DG ISpA met Chairman ISRO, Bengaluru, September 11, 2025.
- Meeting at the Economic and Commercial Office of Spain, New Delhi, September 12, 2025.
- 3rd Edition of Bharat Defence Conclave 2025, September 25, 2025.
- Talk at USI on 'Opening the Sky Eye: Empowering Armed Forces through Space Innovations,' September 25, 2025.
- DG meeting with Chief of the Army Staff, September 29, 2025.

STRATEGIC INTERACTIONS

October 2025

- DG meeting with Minister of State (Space), New Delhi, October 06, 2025.
- Panel on SatCom – Policy & Ecosystem Enablement, India Mobile Congress 2025, October 08, 2025.
- Meeting with Mr Watanabe, Science and Technology, Embassy of Japan in India, October 08, 2025.
- Meeting with H.E. Ambassador of Luxembourg to India at the Luxembourg Embassy, October 13, 2025.
- VIF Vimarsh session on ‘Challenges of Governance for Viksit Bharat 2047,’ October 27, 2025.
- Meeting with Mr Louis Vermersch, Trade Advisor, Business France, Embassy of France in India, October 28, 2025.

November 2025

- Italian National Unity and Armed Forces Day event, Hotel Hyatt Regency, November 01, 2025.
- Keynote at SAIAC Public Discussion, November 07, 2025.
- ISRO-Japan-ISpA meeting, November 12, 2025.
- Keynote Speaker at UPES, Dehradun, November 14, 2025.
- CLAWS Chanakya Defence Dialogue 2025, November 27, 2025.
- DG presentation to TATA Nelco Board, November 28, 2025.

December 2025

- DG chaired panel session at GeoSmart India 2025 on Space and Business Models of PPP, December 01, 2025.
- Meeting with METI, JETRO and NRI during METI’s visit to the ISpA office, December 01, 2025.
- India-Japan Space and GeoSpatial Round Table at GeoSmart India 2025, December 02, 2025.
- DG chaired the GeoSmart India 2025 session on Sovereign Space Infrastructure, December 04, 2025.
- DG delivered a special address at the 2nd Bharat Defence Summit 2025, December 12, 2025.
- DG attended the NWC Programme for Space and Counter-Space Operations Capsule, Goa, December 24, 2025.

January 2026

- DG shared consolidated industry inputs for Pre-Budget Recommendations 2026-27, January 12, 2026.
- DG interviewed by Times of India, January 13, 2026.
- AI Innovation Roundtable for Viksit Bharat 2047, January 15, 2026.
- ‘The Gravity of Inspiration: From Earth to Orbit’ – exchange led by Astronaut Sunita L. Williams, January 20, 2026.
- CAPS 22nd Subroto Mukerjee Seminar on National Security Imperatives, January 21, 2026.
- DG interviewed by Rishi Raj on Aaj Tak, January 29, 2026.

STRATEGIC INTERACTIONS

February 2026

- Times of India – Budget Dialogues 2026, February 03, 2026.
- Meeting with Dr Yang, Director, NSTC Taiwan embassy, February 04, 2026.
- DG addressed IN-SPACE officers during a session at IIPA, New Delhi, February 05, 2026.
- DG speaker and Chief Guest at Advitiya'26 – The Space Odyssey, IIT Ropar, February 06, 2026.
- Moderated a session at the US-India Space Business Forum on prospects for start-ups and entrepreneurs, February 09, 2026.
- Panelist at the US-India Space Business Forum session on India's call for FDI in the space sector, February 10, 2026.
- U.S.-India Space Commerce event organised by the U.S. Department of Commerce and BCIU, February 12, 2026.
- DG delivered the keynote address at Bharat Defence Tech Show 2026, February 17, 2026.
- Welcome reception hosted at the Embassy of France in India, New Delhi, February 18, 2026.

March 2026

- Meeting with the trade advisor, Business France, at the Embassy of France in India, New Delhi, March 03, 2026.
- DG ISpA meeting with VK Bhattacharya and Priya Tiwari of Amazon Web Services, March 17, 2026.
- CENJOWS Centre for Joint Warfare Studies Seminar, March 11, 2026.
- DG chaired the plenary session on “Space for National Security” at NXT Conclave 2026, March 12, 2026.
- Roundtable discussion on developments in West Asia at USI, March 18, 2026.
- Vimarsh on the ‘Role of Culture in India's Global Strategy’ at VIF, March 23, 2026.
- DG attended a session with Mr Elbridge Colby, Under Secretary of War for Policy, United States, March 24, 2026.

April 2026

- CAPSS-IMR joint seminar and exhibition, April 07, 2026.
- DG met AVM Michael Fernandez, India Country Head and South Asia Lead, Lockheed Martin and Lockheed Martin's Space Business Lead from the USA, April 07, 2026.
- DG panellist at Spacecraft Mission Operations (SMOPS-2026), Session 5, April 09, 2026.
- India-Australia Roundtable on Space & Geospatial Innovation, April 09, 2026.
- IN-SPACE one-day workshop on SSA and ITU filing, April 13, 2026.
- Closed-door roundtable discussion on “West Asia: Post Ceasefire” at USI, April 16, 2026.
- India-UK Roundtable on AI, Geopolitics and Industrial Strategy, April 22, 2026.

STRATEGIC INTERACTIONS

◆ May 2026

- DG meeting with Chief of Defence Staff, New Delhi, May 04, 2026.
- Meeting with Ambassador of Sweden in India, May 04, 2026.
- Portugal-India Business Mission Ministerial Visit at the Embassy of Portugal, New Delhi, May 12, 2026.
- DG meeting on Global Technology Summit stakeholder engagement, New Delhi, May 14, 2026.
- TAC meeting on Gujarat Space Tech Policy (2025-30), May 14, 2026.

◆ June 2026

- 10th IN-SPACE Industry Connect (IIC-10), June 10-11, 2026.
- Chief Guest at Closing Ceremony of IRDC 2025-26 & NSRC 2026, June 14, 2026.
- II Russian-Indian Youth Forum 2026, June 16, 2026.
- 'BrahMos at 25: A Playbook for India's Strategic Self-Reliance,' June 17, 2026.
- BIF's World Wi-Fi Day Celebration 2026, June 18, 2026.
- Luxembourg National Day Reception, June 23, 2026.
- 4th Broadband India Summit 2026, Mumbai, June 24, 2026.
- Talk at IN-SPACE Skill Development Course, IIT Bombay, June 24, 2026.

OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2025-26

During the 2025-2026 period, the Indian Space Association (ISpA) significantly bolstered India's global footprint in the space domain. Through a series of high-level strategic partnerships, ministerial-level dialogues and industry-focused roundtables, ISpA has actively bridged the gap between Indian private space enterprises and the Global Aerospace Ecosystem.

Institutional Milestones & Strategic Agreements

ISpA solidified its operational capacity and global commitment through the formalization of key international agreements, serving as the foundation for deeper technical and industrial collaboration:

Formal Partnerships:

- **Novaspace:** ISpA entered into a strategic Memorandum of Understanding (MoU) with Novaspace. This MoU reflects a shared commitment to empower India's space sector with global expertise, support industry development and strengthen strategic collaboration across the ecosystem.
- **Letters of Intent (LOI):** Furthered formal alignment with the European Space Agency (ESA) through a signed Letter of Intent. Areas of mutual interest to be explored pursuant to this letter include space research, information exchange on space research and commerce and a dialogue for capability building.

Key International Highlights



Japan: Deepening Strategic Ties

The partnership with Japan remained a cornerstone of ISpA's international agenda, centered on the LUPEX (Lunar Polar Exploration) project. Through diligent and dedicated dialogue and ongoing mutual cooperation, ISpA continues to strengthen its bilateral engagements with the Embassy of Japan.

- **IISC 2025:** Showcased the Indo-Japan strategic space partnership, featuring a distinguished delegation from the Japan Cabinet Office, the National Space Policy Secretariat and the Chiba Institute. The event included a keynote address by Saku Tsuneta, Vice-chair, Committee on National Space Policy, Government of Japan, on the Current Status and Future of Japan-India Space Cooperation and a virtual address by former JAXA astronaut Dr. Naoko Yamazaki. The Deputy Chief of Mission at the Embassy of Japan in India served as the Guest of Honour on the inaugural day of IISC 2025.
- **Industry & Policy Engagement:** ISpA held a top-level meeting at its office with the METI Space Industry visiting delegation, NOMURA and JETRO and participated in the Indo-Japan Space and Geospatial Roundtable in December 2025.
- **Asia Leaders' Summit 2026:** Acting as an Ecosystem Partner with Incubate Fund Japan at the Asia Leaders' Summit 2026, ISpA curated B2B matchmaking, speaker engagements and facility visits for startup space companies in Bangalore in July 2026.

OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2025-26



United States: Strengthening Commercial & Security Synergy

Collaboration with the U.S. focused on both commercial scalability and security-oriented strategic dialogues, sustained by diligent and dedicated bilateral engagement with the U.S. Embassy.

- **High-Level Space Dialogue:** ISpA co-hosted a closed-door industry roundtable with the U.S. Space Command, featuring General Stephen N. Whiting, Commander of the U.S. Space Command. It was a high-stakes conversation between eminent space companies and the U.S. Space Command delegation.
- **Commercial & Diplomatic Engagement:** ISpA collaborated with the U.S. Commercial Service and the American Center to host exclusive industry events, including a highly anticipated interaction with NASA astronaut Sunita Williams for an audience of Indian space industry leaders.
- **Business Forums:** ISpA played a lead role at the U.S.-India Space Business Forum in Bangalore, facilitating deep engagement between our members and the U.S. delegation and securing member invitations for official diplomatic receptions at the U.S. Embassy.

Europe: A Multi-Nation Collaborative Framework

ISpA maintained active, multi-faceted engagements across the European continent, consistently fostering bilateral ties through dedicated dialogue and mutual cooperation.



Italy

ISpA served as a key supporting partner for the India-Italy Joint Strategic Action Plan (2025-2029), reflecting a commitment to ongoing collaboration with the Embassy of Italy in India and the Italian Trade Agency.

- **Italy-India Aerospace Roadshow:** ISpA was honoured to be a supporting partner in this vibrant multi-city initiative, driving stronger ties between the Italian and Indian space ecosystems alongside the Italian Trade Agency (New Delhi), Agenzia Spaziale Italiana (ASI), Indian Space Research Organisation (ISRO) and IN-SPACE. ISpA facilitated high-value facility visits for the delegation to leading Indian space companies in Hyderabad, Bengaluru and New Delhi, including Skyroot, Bellatrix, Galaxeye, Pixxel, BEL and Dhruva Space.
- **IISC 2025:** His Excellency Mr. Antonio Bartoli, Ambassador of Italy to India, served as the Guest of Honour, with industry participation from global leaders like the ELT Group and Leonardo Space.

OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2025-26

United Kingdom

Diplomatic and sectoral engagement with the British High Commission in India to explore partnership opportunities and bilateral engagements.

France

Sustained high-level engagement with the Embassy of France, Business France and GIFAS, featuring expertise from Thales, Axon and Safran, through continued and diligent bilateral outreach.

European Union

Maintained continuous engagement with the Delegation of the European Union in India and facilitated high-level policy dialogue, including a special virtual address by H.E. Marjolijn van Deelen, the EU Special Envoy for Space, regarding the EU-India Space Dialogue at IISC 2025, underscoring our dedication to mutual cooperation. Active engagement with prominent space initiatives through the Head of Research & Innovation, EU in India.

Netherlands

Ongoing engagements and cooperation with the Science & Innovation Centre, Embassy of Netherlands in India.

Luxembourg

Ongoing engagements and cooperation with the Science & Innovation Centre, Embassy of Netherlands in India.

Slovenia

Conducted bilateral engagements with the Embassy of Slovenia in India, including participation in the Trade and Economic Cooperation Forum, to ensure continued mutual cooperation.

Hungary

Fostered continued cooperation and engagements with the Embassy of Hungary through dedicated bilateral dialogue.

Greece

Maintained bilateral engagements with the Embassy of Greece, driven by a dedicated effort to foster cooperation and outreach.

OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2025-26

Nordic & Other Global Engagements

Finland

ISpA facilitated high-level B2B matchmaking alongside Business Finland between Indian space companies and a Finnish business delegation led by Prime Minister Petteri Orpo at the India AI Impact Summit in New Delhi on February 18, 2026. This initiative, supported by diligent engagement with the Embassy of Finland, deepened bilateral cooperation and explored concrete business opportunities.

Portugal

Supported the Portugal-India Ministerial visit, focusing on B2B synergies and cross-border cooperation. ISpA represented the Indian space sector at the Portugal-India Business Mission in New Delhi in May 2026, a milestone in our dedicated bilateral relationship with the Embassy of Portugal.

Australia

- Maintained continuous, focused engagements with the High Commission of Australia in India, Austrade and the Australian Chambers of Commerce through diligent and dedicated ongoing dialogue.
- Facilitated an MoU between an Australian company and an Indian startup at IISC 2025.
- Engaged the Trade Commissioner as a speaker and collaborated consistently with Austrade to create mutual collaboration avenues.
- Participated as an Alliance Partner for the India-Australia Business Summit 2025, which aimed to play a pivotal role in strengthening bilateral engagement, fostering deeper economic partnerships, advancing knowledge exchange and creating new pathways for innovation and collaboration.
- The India-Australia Roundtable on Space & Geospatial Innovation: From Upstream Technologies to Downstream Applications was organised by AusCham India in collaboration with ISpA (as the ecosystem partner) in April 2026 in Bengaluru. This event brought together industry leaders, startups, policymakers and stakeholders to explore collaboration opportunities across the space and geospatial value chain.

Russia: Deepening Traditional Bonds

Building on the momentum of the December 2025 Presidential visit, ISpA has prioritized transforming high-level vision into tangible B2B and academic synergies through diligent and dedicated engagement with the Embassy of the Russian Federation.

- **Bilateral Engagement:** Fostered cooperation through meetings with the Honourable Trade Commissioner of the Russian Federation in India, reinforcing the mutual trust that serves as the bedrock of our partnership.
- **Youth & Industry Outreach:** The DG of ISpA served as the Guest of Honour at the Russian-Indian Youth Forum 2026 at the Russian House, further cementing the collaborative future of our space sectors.

OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2025-26

Other International Engagements



Maintained continuous bilateral cooperation and dedicated dialogue with the Embassy of Taiwan in India and the Taipei Economic and Cultural Center in India to foster mutual growth. Supporting global space industry collaboration, ISpA was proud to be one of the official endorsers for the Taiwan Accelerator Plus (TAcc+) Program.



Maintained continuous bilateral cooperation and dedicated dialogue with the Embassy of Taiwan in India and the Taipei Economic and Cultural Center in India to foster mutual growth. Supporting global space industry collaboration, ISpA was proud to be one of the official endorsers for the Taiwan Accelerator Plus (TAcc+) Program.

INTERNATIONAL CAPACITY BUILDING & DEFENCE OUTREACH

- **International Capacity Building:** Hosted the “Indian Space Industry Capability Workshop” at the USI for 28 delegates from 14 nations (including Algeria, Nigeria, Ethiopia, Madagascar, Ivory Coast, Eswatini, Bangladesh, Paraguay, Mauritius, Philippines, Myanmar, Nepal and Turkmenistan) as part of the IN-SPACE ITEC course, actively positioning India as a mentor in space capability development.
- **Defence Outreach:** Maintained continuous, robust engagements with Defence departments and Defence attachés from various esteemed Embassies in India, as well as the science, innovation and economic sections of these missions. These diligent and dedicated efforts remain pivotal to strengthening the global space ecosystem and our bilateral relationships worldwide.

As ISpA looks toward the future, these strategic partnerships and ongoing bilateral engagements remain the bedrock of our commitment to elevating India’s space industry, fostering global synergy and driving collaborative innovation in the final frontier. Throughout the 2025-2026 period, ISpA has consistently shaped its international cooperation framework by bridging private sector ambition with global institutional support, ensuring that our outreach remains a steady, diligent and dedicated catalyst for India’s growing influence in the global space ecosystem.

OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2025-26



OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2024-25

COUNTRY PRESENCE & PARTICIPATION (Embassies, High Commissions, Companies, Science & Research Institutions, Trade Agencies):

During 2025-2026, ISpA's flagship events, the **India International Space Conclave** and the **Indian DefSpace Symposium**, witnessed participation of **40 delegates representing 22 countries**, including **10 international speakers**, highlighting the growing global recognition of India's private space sector.

PARTICIPATING COUNTRIES



OVERVIEW OF INTERNATIONAL COOPERATION & COLLABORATIONS 2024-25



AFRICA



Ghana



Egypt



Seychelles



South Africa



Morocco



Kenya



Rwanda



Ethiopia



Congo



Nigeria



OCEANIA



Australia

IMPACT:

The period of 2025-2026 has been marked by a significant acceleration in ISpA's international outreach, firmly positioning India as a key player in the global space arena. This growing presence not only strengthens strategic partnerships but also paves the way for sustained growth and collaborative opportunities in the years ahead.

POLICY ADVOCACY

TRAI

- Consultation Paper on the Framework for Satellite Communication Network Authorisation and Assignment of Spectrum to Satellite Communication Network Providers
- Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT)
- Comments on TRAI's Response on Recommendations on Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services
- Comments on TRAI's Response on Recommendations on the Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023

IN-SPACE

- IN-SPACE Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorisation for Undertaking Planned Re-entry of Space Objects
- IN-SPACE Releases Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorisation for Undertaking Space Situational Awareness (SSA) related Activities
- Draft Safety and Security Guidelines for Space Activities
- Draft Policy Framework & Guidelines Addressing the State's Liability Towards Third-Party Damage Arising from Indian Space Objects

States Space Industrial Policy 2025

- **Telangana** SpaceTech Framework. (2021)
- **Karnataka** SpaceTech Policy (Draft)
- **Kerala** IT Policy (Space Park, 2023)
- **Gujarat** SpaceTech Policy.(2025)
- **Tamil Nadu** Space Industrial Policy. (2024)
- **Maharashtra** Space Policy. (to be released)
- **Madhya Pradesh** SpaceTech Policy (2026)

POLICY ADVOCACY

TRAI

Consultation Paper on the Framework for Satellite Communication Network Authorisation and Assignment of Spectrum to Satellite Communication Network Providers

- **21.06.2024 & 26.07.2024:** DoT sent separate references to TRAI seeking recommendations on service authorisation (Section 3(1)(a)) and network authorisation (Section 3(1)(b)) under the Telecommunications Act, 2023.
- **18.09.2024:** TRAI recommended a dedicated Satellite-Based Telecommunication Service Authorisation.
- **14.01.2025:** DoT's back-reference proposed dropping the separate satellite service category.
- **17.02.2025:** TRAI recommended a Satellite Earth Station Gateway (SESG) authorisation and concluded no additional SCN authorisation was needed at that stage.
- **03.07.2025:** DoT informed TRAI it had not accepted the satellite service authorisation recommendation and proposed introducing an SCN Authorisation instead.
- **13.08.2025:** TRAI flagged the resulting regulatory gap and agreed to initiate a fresh consultation on SCN authorisation and spectrum terms.
- **08.04.2026:** TRAI released Consultation Paper No. 6/2026, inviting comments (due 06.05.2026) and counter-comments (due 20.05.2026).

Key implications for the Space, Satcom and Telecom sectors:

Shift from Service to Network Authorisation: Unlike the earlier proposal for a dedicated satellite service authorisation, the current framework proposes authorising satellite communication as a network (SCN) under Section 3(1)(b) a structural shift that industry bodies like BIF have separately contested (see BIF's 8 July 2026 submission).

Regulatory Gap Flagged by TRAI: TRAI itself has acknowledged that non-acceptance of its satellite service authorisation recommendation creates a regulatory gap, which the SCN framework is intended to address though the adequacy of this fix remains a live point of industry debate.

Spectrum Assignment Method: DoT has clarified that SCN-related spectrum, where covered under the First Schedule, would be assigned administratively rather than through auction a significant point of interest for satcom operators.

Open Consultation Window: With comments due by 6 May 2026 and counter-comments by 20 May 2026, this remains an active, evolving regulatory process ISpA members are encouraged to review and respond within the window.

POLICY ADVOCACY

TRAI

Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT)

While this paper is primarily focused on spectrum auction methodology for International Mobile Telecommunications (IMT), several provisions directly affect the space and satellite communications sector:

Coexistence and Keep-Out Zones Near DoS Earth Stations: The paper reaffirms NFAP-2022 provisions requiring IMT base stations to maintain protective keep-out/keep-off distances around Department of Space (DoS) satellite earth stations at multiple locations, including Thiruvananthapuram, Hassan, Bhopal, Jodhpur, Shillong, the Andaman & Nicobar Islands, Delhi, Shadnagar, Khambaliya, Hut Bay and Tirunelveli safeguarding critical uplink, feeder-link and TT&C operations for existing and future satellite missions.

Shared and Adjacent-Band Usage: In the 3600–3670 MHz range, IMT deployment is permitted while satellite services retain access to C-band frequencies beyond 3670 MHz with a 10 MHz guard band. In the mmWave 27.5–28.5 GHz band, TRAI has proposed shared use between IMT and satellite services "subject to feasibility" a band of direct relevance to satellite gateway and NGSO ground infrastructure.

Open Consultation on Coordination Distance: TRAI has specifically sought stakeholder views (Q16) on the appropriate keep-out distance for IMT base stations around satellite uplink stations at the time of commercial IMT rollout in shared bands an area where satcom industry input will directly shape the final coordination framework.

Relevance for ISpA Members: As IMT spectrum auctions proceed, the coordination distances and shared-band rules finalized through this consultation will determine how much operational buffer satellite ground infrastructure retains against expanding terrestrial 5G/6G deployment making this a paper worth tracking closely, even though its primary subject is terrestrial mobile spectrum rather than satellite authorisation itself.

POLICY ADVOCACY

TRAI's Response to the Back Reference dated 12.11.2025 received from DoT on Recommendations on Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services

TRAI carefully examined DoT's back reference on its May 2025 recommendations and reconsidered select provisions while firmly reiterating its core positions on pricing and market-development issues. Key elements of the response included:

- **Accepted Frequency Band Clarifications:** Agreed that frequency assignments should align with NFAP as amended from time to time, but flagged that "UHF for MSS" needs further examination since the Telecommunications Act's First Schedule does not expressly cover MSS in UHF band.
- **Aligned Rollout Timelines:** Revised Recommendation 4.6 to include a 30-day grace period for installing/commissioning satellite earth station gateways, bringing it in line with rollout obligations already recommended for satellite network deployment.
- **Held Firm on NGSO Spectrum Pricing:** Rejected DoT's proposal to replace the rural/urban pricing distinction with a border/hill/island-based incentive structure (5% AGR with 1% discount). TRAI reiterated its original framework 4% of AGR plus Rs. 500/subscriber/year in urban areas only arguing rural-urban classification is well-established, administratively simpler and covers a far larger underserved population (~65%) than hard-to-connect terrain alone (~5%).
- **Reiterated Terminal Subsidy Recommendation:** Pushed back on DoT's rejection of subsidy support for NGSO-FSS user terminals, clarifying that funding could be routed through third-party Implementers under Digital Bharat Nidhi rules and that this complements rather than duplicates BharatNet's fibre-first approach.
- **Rejected Preferential Treatment for BSNL:** Disagreed with DoT's proposal to retain a discounted 1% AGR spectrum charge for BSNL's GSPS license, holding that differential pricing based on "strategic purpose" would be discriminatory once multiple MSS operators enter the market.

POLICY ADVOCACY

TRAI's Response to the Back Reference dated 03.07.2025 received from DoT on Recommendations on the Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023

TRAI examined DoT's back reference on its February 2025 recommendations governing network authorisations under the Telecommunications Act, 2023, accepting several harmonisation requests while firmly reiterating positions where it found DoT's rationale unconvincing or insufficiently substantiated. Key elements of the response included:

- **Preserved TRAI's Consultative Role on Amendments:** Refined Recommendation 4.1(c) to clarify that TRAI's recommendations are needed only for substantive changes to authorisation terms (not minor/procedural amendments), balancing investor certainty with administrative flexibility that DoT had sought.
- **Held Firm on In-Building Solution (IBS) Exemption:** Rejected DoT's proposal to require authorisation for property managers deploying in-building telecom solutions. TRAI reiterated that IBS should remain authorisation-exempt, noting that DoT's five cited concerns (network degradation, safety, standards compliance) are all addressed through complementary recommendations on MTCTE certification and TEC design guidelines—making a separate authorisation regime unnecessary and likely to further stall IBS deployment.
- **Reiterated DCIP Scope Restrictions:** Maintained that Digital Connectivity Infrastructure Providers should not be allowed to offer "end-to-end bandwidth" (effectively leased circuits) to service providers or for captive use, as this would blur the line between network infrastructure and telecommunication services reserved for service-authorised entities.
- **Defended CDN Authorisation-Exempt Status:** Pushed back on DoT's proposal to bring Content Delivery Networks under Section 3(1)(b) licensing, arguing CDNs have operated safely in India for two decades without documented QoS or resilience issues and that safeguards (fair/non-discriminatory agreements, information-sharing powers) already address DoT's concerns.

POLICY ADVOCACY

TRAI's Response to the Back Reference dated 03.07.2025 received from DoT on Recommendations on the Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023

- **Clarified IXP and SESG Technical Conditions:** Directed DoT to examine (with MHA and TEC) the technical feasibility of content-blocking obligations for Internet Exchange Points given their Layer-2 architecture and agreed SESG baseband equipment could be owned by gateway providers (not just service providers) provided end-user control remains with the service-authorised entity.
- **Introduced New "Private Wireless Network Service" Authorisation Concept:** Endorsed DoT's proposal to create a distinct Section 3(1)(a) service authorisation for enterprise private wireless network-as-a-service, suggesting the name "Private Wireless Network Service Authorisation" to differentiate it from the existing CNPN framework.
- **Reiterated Financial Conditions Where DoT Gave No Rationale:** Held firm on SESG, MNP and Gross Revenue definition-related financial recommendations (no authorisation fee/bank guarantee for SESG; specific bank guarantee slabs for MNP providers) after DoT's responses (including a specific clarification exchange dated 17.07.2025-23.07.2025) failed to substantiate reasons for deviation.
- **Opened Fresh Consultation on Satellite Communication Network (SCN) Authorisation:** Agreed to re-examine through a new stakeholder consultation whether a standalone SCN network authorisation (with feeder/user link spectrum assignment) is needed, after DoT flagged that its non-acceptance of the Satellite-based Telecommunication Service Authorisation had created a potential regulatory gap for supplemental coverage from space.

POLICY ADVOCACY

IN-SPACE

IN-SPACE Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorisation for Undertaking Planned Re-entry of Space Objects

IN-SPACE has released the "Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorisation for Undertaking Planned Re-entry of Space Objects" (IN:ISP2023:NGP-Re-entry:2026/V1.0), dated July 23, 2026 and approved by the IN-SPACE Board under Chairman Pawan Goenka. It is to be read alongside the existing NGP (May 2024).

Key highlights:

- **Scope:** Only "Planned Re-entry" (intentionally controlled landing area/time/trajectory) needs authorisation. Natural, unguided decay under standard PMD is exempt if covered in the Space Debris mitigation plan.
- **Who needs it:** Indian entities directly; non-Indian entities via an Indian-incorporated entity, which bears compliance responsibility.
- **Filing timeline:** If declared upfront, risk analysis (Appendix-I) accompanies the main satellite/launch-system authorisation, with re-verification ~3 months before re-entry. If planned post-launch, application must be filed 6 months in advance. A separate authorisation is mandatory either way.
- **Threshold risk:** Expected casualty risk must stay below 1 in 10,000, backed by survivability, fragmentation, and ground casualty assessments.
- **NOTAM process:** Applicant obtains an 'Advisory Note' from IN-SPACE to secure NOTAM/Danger Zone Notification ~45 days before re-entry; mandatory before final authorisation.
- **Liability & insurance:** Applicant bears full risk, indemnifies the Government of India under the Liability Convention (1972), and needs mandatory third-party liability insurance.
- **Cross-border re-entry:** Requires clearance from the relevant foreign nation (incl. EEZ).
- **Change triggers:** Fresh authorisation/amendment needed if non-Indian ownership hits 10%+, control shifts to non-Indian hands, or re-entry parameters change.

This gives India its first dedicated framework for controlled re-entry, setting a clear casualty-risk threshold and NOTAM timeline for satellite operators and launch providers.

POLICY ADVOCACY

IN-SPACE

IN-SPACE Releases Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorisation for Undertaking Space Situational Awareness (SSA) related Activities

IN-SPACE has released the "Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorisation for Undertaking Space Situational Awareness (SSA) related Activities" (IN:ISP2023:NGP-SSA:2026/V1.0), effective June 25, 2026 and approved by the IN-SPACE Board under Chairman Pawan Goenka.

Key highlights:

- **Three separate authorisations are required for:** establishing/operating space-based SSA sensors, establishing/operating ground-based SSA sensors and providing SSA services. Astronomy remains outside IN-SPACE's ambit.
- **Two-tier model:** A Restricted Tier (enhanced scrutiny, mandatory India-hosted data routing, no foreign MCC access) applies to entities with non-Indian control or serving foreign government/defence clients. A Controlled Tier offers simplified norms for standard domestic, academic and hobbyist use with exemptions for activities meeting strict non-commercial and technical thresholds.
- **Validity & deadlines:** Ground-based sensors carry 10-year validity; SSA services authorisation is valid for 5 years. Existing unauthorised ground sensors must be regularised by May 31, 2027.
- **Security & compliance:** Mandatory onboard encryption, Trusted Sources procurement, Lawful Interception Management (LIM) provisions, immutable activity logs (3 years) and End-Use Certificates (EUC) from all data recipients.
- **National security safeguards:** Government can designate protected Resident Space Objects that cannot be catalogued or disseminated and reserves rights to data-sharing or takeover of SSA infrastructure during emergencies, with fair compensation.

This marks a significant regulatory milestone for India's growing SSA and debris-tracking ecosystem, directly impacting companies engaged in SSA sensors, tracking services and data dissemination.

POLICY ADVOCACY

IN-SPACe

Draft Policy Framework & Guidelines Addressing the State's Liability Towards Third-Party Damage Arising from Indian Space Objects

IN-SPACe released a draft policy framework on third-party liability insurance requirements for commercial space activities, seeking industry feedback. Key provisions of the draft include:

- **Insurance Mandate Tied to State Liability:** Grounded in India's obligations under the 1972 Liability Convention (which holds the Launching State absolutely liable for third-party damage on Earth/in air and on a fault basis in outer space), the draft requires operators to obtain third-party insurance to address the Government's potential exposure.
- **Launch Missions Capped Insurance Requirement:** Launch operators must maintain insurance for an amount set by IN-SPACe, capped at INR 500 crore, for a nominal one-year duration covering the re-entry phase of spent rocket stages, adjustable for sub-orbital or other mission profiles.
- **Maximum Probable Loss (MPL) Methodology:** Insurance amounts are computed using a Maximum Probable Loss (MPL) methodology the greatest financial loss expected at a 1-in-10-million probability threshold based on accident scenario modelling, debris/casualty area estimation, impact probability and financial damage (human life, property, loss of use, environment).
- **Government Backstop Beyond Insurance:** Claims exceeding the insurance value, falling outside the policy period, or falling under standard market exclusions are to be borne by the Government of India, with "standard exclusions" to be notified by IN-SPACe from time to time.
- **Exemptions:** Government department/ministry launches are exempt from the insurance requirement (claims met from the Consolidated Fund of India) and satellite operators are exempt from third-party insurance for in-orbit operations though both launch and satellite operators must comply with UN-COPUOS debris mitigation guidelines.
- **Multi-State Launch Scenarios:** Where multiple states qualify as "Launching State" for a given mission, liability is to be shared/transferred through appropriate agreements (MoU/contract), wherever feasible and legally tenable.

POLICY ADVOCACY

IN-SPACe

IN-SPACe Draft Safety and Security Guidelines for Space Activities

IN-SPACe circulated draft guidelines establishing mandatory safety and security requirements across the space activity lifecycle, applicable to all authorised entities and new applicants. Key features:

- **Risk-Tiered Framework:** All activities are classified into five risk/threat classes (Class I-V) via a Risk Classification Matrix (severity × likelihood) and Security Matrix (Top Secret to Unclassified), with obligations scaled as Mandatory, Recommended, or Not Applicable by class.
- **Six Activity Categories:** Space objects; launches; launch facilities (fixed/leased/mobile); planned re-entry; ground systems; and EO/remote sensing data dissemination each with paired Safety (SaG) and Security (SeG) guidelines.
- **Space Object & Launch Requirements:** Fail-safe design, reliability margins, environmental testing, satellite health monitoring, frequency coordination, ≥90% separation success rate, collision thresholds (5 km GEO miss distance; ≤1/10,000 LEO probability), debris mitigation, flight termination systems (≥0.999 reliability) and pyrotechnics SOPs.
- **Launch & Facility Safety:** Covers flight termination systems (≥0.999 reliability at 95% confidence), pyrotechnics handling SOPs, TNT-equivalent risk assessment for launch site selection, structural/environmental standards for launch pads and mobile-platform resilience requirements.
- **Re-entry Safety:** Design-for-Demise principles, breakup recorders, controlled deorbit targeting uninhabited ocean zones and coordination with aviation/maritime authorities.
- **Cross-Cutting Security:** Encryption (e.g., AES-256) for telemetry/command links, ISO 28001-certified supply-chain security, personnel background checks, MTCR/export-control compliance and mandatory ISO/IEC 27001 certification for higher-risk (Class I/II) activities.
- **Audits & Reporting:** Bi-annual internal audits; annual third-party certified audits for Class I/II; standardised Safety and Security Incident Reporting Forms.
- **Data Dissemination:** Encrypted access controls, masking of sensitive imagery, usage restrictions and blockchain-based data traceability.

POLICY ADVOCACY

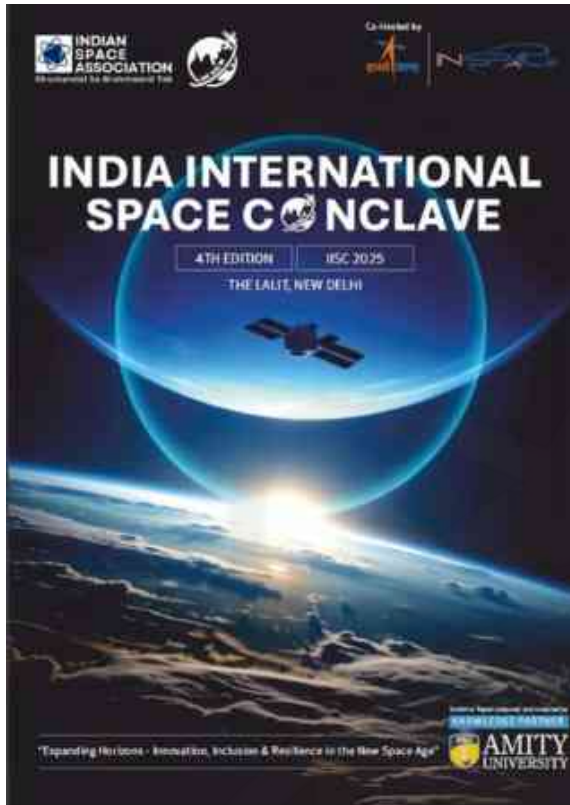
States Space Industrial Policy 2025

This year marked the "Rise of the States," with regional governments aligning with national goals, year saw states move to align with national priorities through dedicated sectoral policies:

- Gujarat: Unveiled the dedicated state sectoral policy -SpaceTech Policy 2025-2030
- Tamil Nadu: Approved its Space Industrial Policy 2025, targeting ₹10,000 crore in investments.
- Karnataka: Released the draft Space Technology Policy 2024-29, aiming to capture 50% of the national market.
- Andhra Pradesh: Launched Space Policy (4.0) 2025-30 to drive space-tech investment, manufacturing and innovation through incentives, Space Parks, single-window clearances and downstream space-data applications.
- Maharashtra: Announced a dedicated Space Policy is currently under release.
- Madhya Pradesh: Cabinet approved the MP SpaceTech Policy 2026

	Telangana SpaceTech Framework (2021)	Kerala IT Policy (Space Park, 2023)	Gujarat SpaceTech Policy (2025-30)
Incentives	Grants + incubation; IP generation, licensing & technology transfer support	Land at subsidised rates; tax incentives in SEZ zones	100% SGST refund (7 yrs); up to INR 5 Cr R&D + capex grant; IP filing up to INR 50L
Job Creation Target			25,000 jobs (confirmed from state sources)
Investment Target	No fixed figure, aligned with Telangana Innovation Policy	Part of broader INR 50,000 Cr IT investment target (2023-28)	\$5 billion in 5 yrs from space startups + manufacturing
Startup Support	Access to HPC infrastructure, Telangana Innovation Hub, seed funds	Support via Kerala Startup Mission; product dev + infrastructure access	Space-park in Sanand to provide infrastructure, testing facilities, and industry-academia collaboration
Infrastructure Development	Dedicated innovation clusters, testing infra via T-Hub	Space Park in Trivandrum with design, fab, integration facilities	Offering capital subsidies of up to 25% on eligible fixed capital investments.
Skill Development	Academia-industry linkages via TASK & TRIC programs	ICT Academy-led training, partnership with C-DAC & ISRO units	Skill centres with ISRO, IIT training, satellite integration modules
	Tamil Nadu Space Industrial Policy (2025)	Karnataka SpaceTech Draft (2024-29)	Madhya Pradesh SpaceTech Policy (2026)
Incentives	Land cost subsidy; up to INR 1 Cr IP grant; 25% R&D reimbursement	25-100% land rebate; INR 7 Cr support per project; patent grants	40% capital subsidy (₹10 Cr min, ₹150 Cr cap); +2% for women-led entities; land rebate & stamp duty exemption; DLI up to 50% (₹50L cap); IP support 50% (₹5L/₹10L)
Job Creation Target	10,000 high-value jobs in launch, sat systems, & data analytics	5,000 trained (1,500 women); aim to place in 50+ firms	2,000 highly skilled jobs (10-yr horizon)
Investment Target	₹10,000 Cr investment goal with major anchor tenants	\$3B FDI + domestic goal; driven via PPPs & outreach events	₹1,000 Cr; 30 new SpaceTech startups/companies in 5 years
Startup Support	Set up INR 500 Cr corpus to support new ventures	500 startups to be incubated; 30 indigenized satellite projects	Idea-to-Prototype Grant (50% up to ₹75L; ₹200 Cr Matching Fund via AIFs); incubator grants; revenue-linked & employment incentives
Infrastructure Development	Dedicated Space Hubs in southern TN; multi-modal logistics	Dedicated parks in BLM, Tumkur, Hubli; public-private testing hubs	Capital subsidy scheme; Space Systems & Applications Parks (₹200 Cr PPP support); Testing Infra Scheme (₹50 Cr/facility); HPC & Data Grant (₹10 Cr/centre)
Skill Development	SpaceTech Finishing School + hands-on labs with IITM, VIT	MOUs with ISRO, ISAT, MSMI; dept; blended offline-online skilling	R&D Centre in Udaipur; Hub & Spoke CoE; internship stipends; employee upskilling; SpaceTech Fellowships; Antariksh Vihar park; Mission Kalpana

RELEASED PUBLICATIONS



AMITY ISPA: TECHNICAL REPORT ON INDIA INTERNATIONAL SPACE CONCLAVE 2025

ISpA's flagship India International Space Conclave (IISC 2025), the 4th edition, co-hosted with ISRO and IN-SPACe, convened over 1,000 global dignitaries, senior government officials, industry leaders and NewSpace pioneers at The Lalit, New Delhi. Held over two days on 18-19 November 2025, the conclave examined the diverse and emerging dimensions of the space industry around two central themes: Enabling the Space Ecosystem and Services & Opportunities in the Space Sector.

Why It Matters: IISC 2025 reinforced India's ambition to move to the forefront of the global space economy—unlocking emerging opportunities, forging strategic partnerships and defining pathways for financing, industrial capability and governance that will shape India's space decade.

- This report captures fireside chats, industry presentations, an inaugural ceremony, panel discussions and key takeaways spanning financing and economic foundations, industrial capability, Earth observation and geospatial intelligence, launch vehicles and propulsion, human spaceflight, NavIC ecosystem development and international/regional partnerships.
- It documents major moments including the felicitation of Gaganyatri Shubhanshu Shukla and astronaut-designates Group Captains Prasanth Balakrishnan Nair and Angad Pratap, the signing of a Letter of Intent between ISpA and the European Space Agency, multiple MoUs (including Azista-Take Me 2 Space and ISpA-Amity Universities), release of key publications (Valuation and Fundraising in Aerospace Startups, IN-SPACe Assembly and Manufacturing report) and presentation of the ISpA Industry Awards 2025.
- The conclave underscored the imperative of financial innovation (PPPs, blended finance, sovereign-backed instruments), indigenous manufacturing scale-up, recognition of space as critical national infrastructure and deeper regional and global collaboration to steer India's space economy toward its projected USD 44 billion valuation by 2033.

RELEASED PUBLICATIONS



ISpA Year-End Review 2025

2025 marked a decisive shift for India's space sector—from policy articulation to measurable execution, asset creation and commercial validation.

Key Highlights:

- **Policy Milestones:** Administrative spectrum assignment formalized, customs duty exemptions announced and ₹1,000 crore SpaceTech Venture Fund plus ₹500 crore Technology Adoption Fund launched.
- **Major Initiatives:** Third Launch Pad approved at Sriharikota, SSLV launch complex foundation laid at Kulasekarapattinam, Chandrayaan-5/LUPEX approved with Japan and SSLV technology transferred to HAL.
- **ISRO Achievements:** 100th launch from Sriharikota, SpaDeX docking success, NASA-ISRO NISAR launched and Shubhanshu Shukla's Axiom-4 mission marking India's return to human spaceflight.
- **Private Sector Growth:** \$150M+ raised (94% surge) across 380+ startups; milestones by Pixxel, Skyroot, Agnikul, Dhruva Space and Digantara.
- **Defence Integration:** Operation Sindoor demonstrated space-enabled ISR capability; SBS Phase-III fast-tracked for 52 surveillance satellites by 2029.
- **ISpA Activities:** Hosted the 3rd Indian DefSpace Symposium and India International Space Conclave 2025, with sustained policy advocacy and global MoUs.

India's space journey in 2025 positioned the country to actively shape—not just participate in—the global space economy.

ORBITAID-ISPA CONCEPT PAPER : ADVANCING ISAM: BUILDING THE FOUNDATION FOR ON-ORBIT SERVICING & REFUELLING

OrbitAID's whitepaper, published with ISpA, examines In-Space Servicing, Assembly and Manufacturing (ISAM) as the next frontier of the space economy and India's path to leadership in on-orbit servicing and refuelling.

Key Highlights:

- **Understanding ISAM:** Life extension, refuelling, repair and debris mitigation are shifting satellites from disposable to serviceable, upgradeable assets, driven by growing satellite constellations.
- **India's Readiness:** Cost-efficient engineering, deep talent and IN-SPACe reforms position India to leapfrog into high-value ISAM rather than follow legacy paths.
- **Supply Chain Gap:** India's EO-focused industrial base lacks ISAM-specific components (propulsion, sensors, robotics), creating import dependency.
- **Building the Foundation:** Calls for government demand anchors, a national ISAM supply chain database and shared testing infrastructure.
- **Policy & Standards:** Recommends anchor procurement, docking standardisation, ISAM-linked insurance models and dedicated IN-SPACe authorization regimes.
- **OrbitAID's Contribution:** SIDRP (docking/refuelling interface) and ARCAS (legacy satellite servicing), backed by missions like AayulSat and an upcoming docking demonstration.
- **Global Positioning:** India can become a cost-efficient ISAM hub and partner of choice for the Global South.



The report frames ISAM as strategic infrastructure that could help India move from launch-cost leader to architect of the global in-space economy.

RELEASED PUBLICATIONS

SATSURE-ISpA Joint Publication: Geospatial Foundation Models as an Enabler of Earth Observation Impact at Scale



SatSure's whitepaper, published with ISpA, examines Geospatial Foundation Models (GFM) as the next frontier of AI in Earth Observation and India's readiness to deploy them at scale.

Key Highlights:

- **Understanding GFM:** Trained on multi-modal, multi-sensor imagery, GFM (e.g., SatMAE, Prithvi, CrossEarth) generalize across tasks with minimal retraining, unlike narrow traditional EO models.
- **India's Readiness:** National Geospatial Policy 2022, EO-PPP and DPI platforms (Bhuvan, GatiShakti) support a full-stack approach—sovereign sensing, shared models and governance integration.
- **SatSure-KaleidEO Play:** KaleidEO's AI-enabled satellites feed SatSure's GFM-powered analytics, delivering decision-grade outputs across agriculture, aviation, infrastructure and utilities.
- **Demonstrated Impact:** Sage platform serves 2.1 million farms; Route Optimization engine cut transmission planning time 3x; SatSure Forest monitors 667,000+ hectares for carbon MRV.
- **Policy Alignment:** GFM can power PMFBY, NMCG/AMRUT and forest REDD+ programmes, improving speed and auditability across government.

The report positions GeoAI as core public infrastructure that could help India leapfrog legacy bottlenecks and lead globally in spatial intelligence.

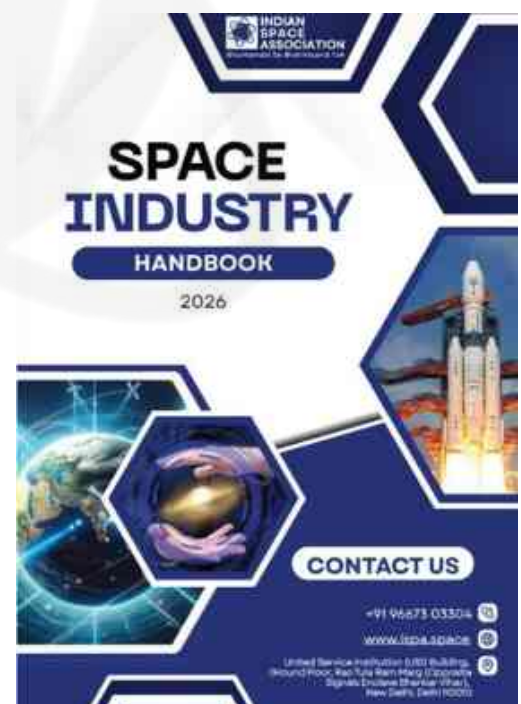
ISpA SPACE INDUSTRY HANDBOOK 2026

ISpA Space Industry Handbook 2026 the First Edition of this flagship publication offers a comprehensive, one-stop reference to India's rapidly evolving space ecosystem, highlighting key industry players, emerging capabilities and sectoral opportunities.

What It Covers:

- **Company Profiles:** Detailed profiles of 90+ ISpA member companies across Founding Members, Core Members, Associate Members and 60+ Start-up Members. Each profile covers company background, year of establishment, employee strength and products/services.
- **Industry-by-Verticals Mapping:** Companies are cross-indexed across nine functional verticals—Earth Observation, Communication, Space Transportation, In-Orbit Solutions, Full-Stack Space Solutions, Satellite Assemblies & Components, Satellite Subsystems (Propulsion & Other Services), Positioning-Navigation-Timing, Ground Stations, Emerging Technologies and Space Education—giving readers a quick way to identify players by capability.

By bringing together policy context, technological capability and commercial opportunity in a single reference, the Handbook positions ISpA as the authoritative voice of India's private space industry—supporting informed decision-making for domestic and international stakeholders.



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- **HOW INDIA IS BUILDING A DECENTRALISED SPACE ECONOMY TO POWER ITS \$44 BILLION ORBIT**
- **L1 TO QUALITY-CUM-COST: INDIA'S SPACE AMBITIONS AND THE CRITICAL SHIFT IN PROCUREMENT STRATEGY**
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- **INDIA'S SPACE SURGE: WHY DEFENCE-FOCUSED PPPS ARE THE FUTURE**
- **WHERE INDIA'S DEFENCE SPACE CAPABILITIES TOOK SHAPE**
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TG0026, 2:09 PM

A new satellite data partnership: How India could shape the future of G20 nations - India Today

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A new satellite data partnership: How India could shape the future of G20 nations

Prime Minister Narendra Modi has proposed the G20 Open Satellite Data Partnership to give developing nations free access to cutting-edge Earth observation data. The bold move could close the global data divide.



The G20 Open Satellite Data Partnership aims to make satellite data from the world's leading space agencies openly accessible to developing countries. (Photo: India Today)



Lt. Gen. AK Bhatt (Retd.)

New Delhi, UPDATED: Dec 6, 2025 19:49 IST

ISpA ARTICLES

Shubhanshu Shukla's mission is more than a launch. It's a partnership milestone

It's not just another milestone in going to space—it's proof of the ingenuity of humans and the increasing contribution of Indian talent to changing the face of the future.

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It is the first time an Indian astronaut is traveling with a private space company. (Photo: Axion)



Lt. Gen. AK Bhatt (Retd.)



New Delhi, UPDATED: Jun 25, 2025 13:06 IST

India is [set to experience a historical moment of great pride](#) in the space domain. It has been almost four decades since Wing Commander Rakesh Sharma's historic flight in 1984, when an Indian is now going to space once again.

The journey this time is different. It marks not only a return, but also the beginning of a new chapter. Group. Captain [Shubhanshu Shukla](#), a serving Indian Air Force test pilot, is all geared to make history for India in the space saga by docking with

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How India is building a decentralised space economy to power its \$44 billion orbit

AK Bhatti

June 14, 2023, 10:04 IST / 4 min read

Summarise

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As the global space economy charts an ambitious trajectory towards the \$1 trillion mark by 2030, India is also poised for a major transformative leap. With over 11,000 space startups having emerged in the past decade, over 200 space startups are based out of India with funding, regulatory and incubation support from ISRO, IN-SPACe, DoS as well as state governments.

Even before the Indian Space Policy 2023 came into effect and unlocked formal entry points for private space players, several Indian states have played pivotal roles in nurturing the country's space ambitions. Karnataka, has been home to ISRO's headquarters and Telangana has always been a strong supporter for space-tech startups through initiative like the T-Hub incubator and the Image Tower.

Emergence of State-level Space Policies: A Decentralised Strategy

Building on this ongoing momentum, several Indian states have proactively begun drafting or announcing dedicated space policies tailored according to their regional strengths. These policies not only aim to attract private investment and talent but also to strengthen local manufacturing, foster academia-industry collaboration and streamline regulatory support for emerging space ventures. This decentralised approach is completely in sync with the Indian Space Policy 2023, which encourages private participation and commercialisation.

ISpA ARTICLES

L1 to quality-cum-cost: India's space ambitions and the critical shift in procurement strategy

India's earlier space successes were built on cost-efficiency. But the future lies in complexity, collaboration and competition. As the country aims for ambitious goals, including lunar landings, Mars rovers, and private satellite launches, it must essentially recalibrate its procurement philosophy.



Lt. Gen. AK Bhatt & Akshat Johri • ETGovernment

Published On Jul 22, 2025 at 07:02 AM IST • Read by 642 Professionals



ISRO astronaut Shubhanshu Shukla waves as he comes out of a SpaceX capsule loaded at the recovery ship after parachuting into the Pacific Ocean off the coast of Southern California on July 15.

As India's space and defence sector enters a new phase marked by growing private participation, deep-space ambitions, and international partnerships.

There is a critical need to review the procurement strategy: should India continue favouring Least

Cost Selection (LCS), or should it pivot towards Quality-Cum Cost Based Selection (QCBS)? With the Indian government aiming to make the country a global hub for commercial space activities, the procurement model chosen could define the success or stagnation of this ambition.

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CONTRIBUTORY ARTICLES DISRUPTIVE TELECOMS SATELLITE COMMUNICATIONS

Satellite-Driven Communication Networks: Connecting India's Digital Divide

 By Lt. Gen. A.K. Bhatt July 23, 2025 IST 11:00 AM

Spotlight on SatCom Innovations | [TelecomDrive.com](#)

India's digital evolution is reaching an inflection point—a point where universal, quality connectivity is no longer a luxury but an essential requirement. For much of rural and remote India, assured access still remains a dream.

As we look ahead for measures to bridge this chronic digital divide, satellite communication (Satcom) stands to play a critical role in scripting India's future communication destiny. Satcom will in case of India play a crucial role in providing ubiquitous, inclusive digital connectivity to all parts of the country. It is not a question of one technology over another anymore—it is about integrating terrestrial, satellite, and wireless systems to reach the most difficult geographies and the remotest part of India.

The Expanding Satcom Ecosystem

We see interesting and exciting changes in the Indian SatCom horizon. Operators such as Eutelsat OneWeb, SES-Jio Satellite Communications, and Space X's Starlink are entering the Indian market with the assurance of low-latency, high-speed satellite broadband. Other players, both international and domestic, will also follow soon, indicating strong faith in India's potential and demand in the digital ecosystem.

From a consumer's point of view, the future is seamless connectivity anywhere, anytime—whether it's the mountains of Ladakh, Andaman Islands, or Jharkhand's rural heartlands. Satellite connectivity is the most viable and optimum solution to connect most of these locations.

The decadal vision released by IN-SPACE on October 10, 2023 predicts, SatCom is to contribute the largest chunk to India's space economy (Targeted to be of \$14.8 Billion by 2033 with a CAGR of 1%). That vision captures not only technological advancement, but also a national ambition to make digital ecosystem accessible to all equitably.

Policy Progress, But Critical Gaps Remain

India has taken major strides to ensure the opening up of the Satcom sector. The Indian Space Policy 2023 promotes private entry, and GMPCS licenses have been issued to major Satcom companies such as Eutelsat, OneWeb, SES Jio, and Starlink. However, delays in spectrum allocation have inhibited commercial launch. In spite of approval of licenses, no operator has so far been able to roll out satellite broadband services because of continued uncertainty regarding allocation of spectrum—most specifically in the critical Ka and Ku bands.

This unplanned slowdown has practical implications. For Eutelsat OneWeb, which has its satellite constellation in space since almost two-fifths of the service life of their LEO satellite constellation has already elapsed without any earnings from monetizing services in India. If these kinds of regulatory slowdowns persist, India may lag in what would otherwise be a leadership role in the international LEO SatCom space.

Balancing Promise and Practicality

While SatCom offers unrivaled reach and flexibility, we do need to recognize some of its challenges. First is the cost per user, which is currently much higher than alternative terrestrial options. In order to make satellite broadband competitive, we need to allow administrative allocation of spectrum at minimum AGR and encourage government support in form of subsidies or USOF-funded infrastructure, which will bring costs down to end users, especially to low-income and rural communities.

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**INDIAN AEROSPACE
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Aerospace

Securing India's Space Future Through Semiconductor Sovereignty

Lt Gen A.K. Bhatt (r)



Lt Gen AK Bhatt PVSM UYSM
AVSM SM VSM (r)

Executive Summary

India's space and defence ambitions hinge on an often-overlooked foundation: semiconductors. From radiation-hardened (rad-hard) chips powering satellites and Gaganyaan to AI-driven electronics for surveillance and secure communications, self-reliance in semiconductors is no longer a matter of industrial policy alone; it is a question of strategic sovereignty.

In this article, we argue why India must urgently build a **space-grade semiconductor ecosystem**, how the **Indian Semiconductor Mission (ISM)** and private industry initiatives fit into this vision, and what global benchmarks teach us about combining commercial scale with niche high-reliability capability.

“

“Satellites do not fail because their rockets falter. They fail when a single chip inside them cannot withstand the radiation of space.”

”

The Silent Backbone of Space Power

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Aerospace

Shubhanshu Shukla: The Pilot Who Carried 1.4 Billion Hopes Into Orbit

July 31, 2025

Lt Gen AK Bhatt (r)



Lt Gen. AK Bhatt

The Icon Returns: Rekindling a Dormant Dream

On a cold January morning in 1984, the entire nation held its breath as **Rakesh Sharma** soared into space aboard the Soviet Soyuz T-11. His iconic journey as part of the space station program, immortalized by the PM's question, "How does India look from space?" and his poignant reply, "**Saare Jahan Se Achcha**" (Better than the whole world), etched itself into our collective memory. But as decades passed, that proud memory slowly dimmed, becoming a distant echo, until now.

With the historic **AXIOM-4 mission**, **Group Captain Shubhanshu Shukla** has rekindled that dormant pride. His voyage aboard the **SpaceX Dragon spacecraft "Grace,"** which lifted off from NASA's Kennedy Space Centre on **June 25, 2025**, has **reinvigorated that dream, breathing new life into India's human spaceflight narrative.** Within 10 minutes of liftoff, the Dragon capsule entered Earth's orbit, and Gp Captain Shukla addressed India in Hindi: "**Kya kamaal ki ride thi!**" (What an amazing ride!), calling the moment the start of India's human space program. With the Indian Tricolor on his shoulder, he emphasized that he carried the hopes of 1.4 billion Indians to the stars. He returned not just as an astronaut, but as a living testament to India's re-emergence on the global human spaceflight journey. The Indian Air Force rightly noted this mission as a moment of **déjà vu**, a reaffirmation of India's continually expanding horizons.

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**INDIAN AEROSPACE
& DEFENCE BULLETIN**



Decades Of Collaboration, A New Era In Orbit: India-Italy Cooperation In The Space Sector

August 1, 2025



By Lt Gen AK Bhatt (r)



Lt Gen AK Bhatt (r), Founding
Director General of ISpA

As space becomes the next great frontier for technological innovation and strategic partnerships, the collaboration between India and Italy in the space domain stands out as a quietly evolving success story. Bridging decades of scientific exchanges, institutional linkages, and private sector dialogue, this relationship is entering a new phase, driven by shared interests in sustainability, advanced materials, human spaceflight, and commercial space ventures.

As a space industry body with deep involvement in global aerospace evolution, we've had the privilege of witnessing partnerships rise, missions transform into milestones, and scientific curiosity drive engineering marvels. The growing collaboration between India and Italy in the space sector is profound, full of potential, and grounded in mutual trust.

ISpA ARTICLES



Space

India's Space Surge: Why Defence-Focused PPPs Are The Future

January 25, 2026

Lt. Gen. AK Bhatt (r) & Akshat Johri



Lt. Gen. AK Bhatt (r)

Akshat Johri

As dawn breaks over Sriharikota and the steel of a launch gantry glitters under the first light, India's space ambitions feel both familiar and entirely new. Familiar because ISRO's precision and ingenuity have long been the envy of the world. New because the space economy India seeks to build today is no longer confined to missions or milestones — it is about creating an industrial and strategic infrastructure that

can support a nation's ascent into the next era of global power. To do this, India must now embrace a framework that every major spacefaring nation has employed to scale: Public-Private Partnerships.

Around the world, PPPs have rewritten the rules of space development. The United States used them to create commercial cargo and crew programs. Europe adopted them to build Earth Observation constellations that serve both government and commercial markets. Japan leveraged PPPs to seed entirely new segments such as debris removal. India, with its rapidly expanding private space ecosystem, sits at a similar crossroads. What it requires now is a procurement and partnership architecture that enables industry to scale, investors to participate, and government agencies — particularly defence — to access space-based capabilities with the speed that current geopolitical realities demand.

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ANALYSIS

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OPINION

A PRECARIOUS PEACE

Sustained Partnership locked in war machine

EDITORIAL

Asit Mukherjee
Editorial Director, Business Standard

Aditya Shankar
Senior Editor, Business Standard

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Where India's Defence Space Capabilities Took Shape

Inside the DSA-ISpA DeISpace Capability Dialogue on Delivery, Accountability, and Mission-Ready Outcomes

LT Gen AK Bhat (Retd)
Former CDR, Andhra Air Force
Director General
Indian Space Association (ISpA)

India's Defence Space capabilities marked an important moment of convergence and alignment with the successful convening of the DSA-ISpA DeISpace Capability Dialogue, organised by the Indian Space Association (ISpA) on January 14, 2026, at the Indian Space Association of India (ISI), New Delhi. The dialogue reflected a deep progression in industry-academia engagement, moving from exploratory interaction to a more structured, mission-focused, and mission-oriented approach.

India's Defence Space capabilities institutions and broad stakeholder groups, including the five nations comprising the US, Russia, China, and France, have established a dedicated organisation to focus on the military use of space as an operational domain. Defence Space Agency (DSA), a division under the Integrated Defence Staff, the DSA is led by Air Vice Marshal Manoj Kumar, VSM, and functions as a tri-service organisation responsible for integrating space capabilities across the Army, Navy, and Air Force. Operationalised in 2019, the DSA focuses on the planning, coordination, and operational oversight of space-based defence capabilities, including satellite communications, intelligence, surveillance and reconnaissance (ISR), and space domain awareness (SDA). Under the Indian Armed Forces, the DSA is a military organisation that manages 'protected space', overseeing the nation's space warfare strategy, satellite intelligence (including the ISPAAC and Bharat Satellite Control Centre), and Space Situational Awareness (SSA). Working in close coordination with ISPAAC, DSAO, and the Defence Space Research Agency (DSRA), the Agency plays a central and crucial role in ensuring that India's space assets remain secure, resilient, and mission-ready for its increasingly congested and contested space environment.

In this evolving landscape, the Indian Space Association (ISpA) has emerged as a credible institutional bridge between industry and government, representing India's private engineering, space and satellite ecosystem across upstream, midstream, and downstream segments. Through structured policy engagement

and platforms such as the Defence Capability Dialogue, ISpA enables focused, outcome-oriented interaction between defence users and private industry, enabling innovation, investment, and capability development with national security priorities and strategic autonomy objectives.

A First-of-its-Kind Industry-Defence Engagement

Designed as a closed-door, capacity-focused interaction, the DeISpace Capability Dialogue enabled open and candid exchanges on defence operational needs, future mission architectures, and industry readiness. For the first time, Indian space companies reviewed their viability into both short-term operational priorities and long-term strategic requirements of the Armed Forces in the space domain. Simultaneously, the DSA gained direct insight into the technological maturity, development readiness, and economic forces behind domestic space companies, laying the groundwork for more realistic, mission-aligned procurement and collaboration pathways.

Comprehensive Participation across Defence and Industry

The dialogue was attended by senior leadership, including Air Vice Marshal Manoj Kumar, VSM, Director General, Defence Space Agency and Shri Anil T. Ramchandani, Chairman, ISPAAC. LT Gen Anil Kumar Bhat (Retd), Director General, ISpA, brought together the leadership and operational team of the DSA, along with a dedicated team of ISPAAC, underscoring the strategic importance of the initiative and strong institutional commitment to industry-government collaboration in the defence space domain. Participants from over 40 Indian and foreign defence companies highlighted the growing breadth and maturity of India's private space ecosystem. Companies represented capabilities spanning satellite payloads, payloads, electronics, secure communications, ISR, geospatial intelligence, navigation technologies, and system integration, reflecting the increasingly wide-in and nature of industry engagement with defence requirements.

Direct, Open & Trust-Building Engagement with Decision-Makers and Practitioners

A key value of the DeISpace Capability Dialogue for industry participants was the opportunity to interact in person with DSA

— ADVERTORIAL —

officials involved in decision-making, programme execution, and technical evaluation. This direct engagement helps companies gain clear insight into policy, approval pathways, evaluation criteria, and integration capabilities, significantly reducing uncertainty and building trust. The dialogue was marked by an open and two-way exchange with DSA, with officials engaging in a candid conversation with industry experts and participating in technical discussions. The presence of DSA's research and development teams further enriched the interaction, allowing for substantive exchanges on feasibility, suitability, and the transition from concept development to deployment.

A Clear, Joint, Integrated Capability Development Outlook

A common message emerging from the discussions was the need to move away from siloed technology demonstrations toward fully integrated, interoperable defence space systems. ISPAAC highlighted that future defence space systems will require a more holistic approach, capable of operating in a contested and denied environment. Discussions centred around four key pillars critical to defence operations: ● Positioning, Navigation and Timing (PNT) ● Intelligence, Surveillance and Reconnaissance (ISR) ● Satellite Communications (SATCOM) ● Space Domain Awareness (SDA) Participants acknowledged that these domains must function as interconnected elements of a single operational ecosystem, rather than as siloed capabilities.

Focus on PNT and ISR Integration

Significant attention was directed toward PNT and ISR, including discussions on LEO-based PNT architectures and their role in enhancing military and civilian systems. These conversations were closely linked to ISPAAC's ongoing regional navigation systems work. Participants emphasised that future PNT solutions must be secure, sovereign, and interoperable, and developed through cooperative, multi-stakeholder efforts, rather than fragmented approaches.

DeISpace Challenges

The dialogue also highlighted the importance of the DeISpace challenges issued under ISPAAC's Initiatives for Defence Excellence (IDEX) - Defence Innovation Organisation (DIO). These challenges were recognised as a structured mechanism to channel private sector innovation into clearly defined, defined, and measurable outcomes across space and counter-space domains. ISpA has played a pivotal role in advancing the DeISpace challenge framework by facilitating industry participation and ensuring early-stage alignment. Industry participants welcomed the newly announced challenge-based framework, stating that this helped to align ISpA's ecosystem with operationally relevant use cases.

and ensuring consistent and adaptive and deployment pathways. The interaction reflected a growing convergence between DSA, ISPAAC, and industry, aimed at accelerating the transition from capability development to operational readiness.

Institutional Coordination

The dialogue highlighted the importance of institutional coordination and structured processes in expediting India's defence space programmes. Participants noted that technologies are typically reviewed and validated through agencies such as DRDO and ISRO before progressing to the Defence Space Agency (DSA), ensuring robust vetting and operational security.

As the ecosystem grows in scale and complexity, participants emphasised that continuous refinement of workflows and early-stage alignment between operational needs and technical outcomes will be key to sustaining future readiness. Such alignment enables smoother transitions from concept development to deployment, improving predictability, and ensuring timely decision-making, while maintaining the right oversight, and assurance standards fundamental to national security and mission-critical outcomes.

The existing role of facilitation bodies, single-window mechanisms, and institutional coordination across DRDO, ISRO, and DSA was recognised as central to improving efficiency across satellites, launchers, and ground infrastructure, enhancing the ability of industry and defence stakeholders to collaboratively and effectively delivering mission-ready capabilities.

A Clear and Candid Message from DSA: Transition to Critical

A key takeaway from the dialogue was DSA's clear emphasis on delivery and accountability. While recognising the importance of innovation and technological enablement, DSA highlighted that meeting commitments, adhering to timelines, and demonstrating incremental progress are critical to the defence space domain. The Agency underscored that defence space capabilities must ultimately be reliable, deployable, and mission-ready, particularly in contested and operationally demanding environments.

ISpA's Role as a Trusted Enabler

Throughout the dialogue, ISpA's role as a trusted enabler platform was widely acknowledged for bringing together defence leadership, operational teams, researchers, and industry representatives in a focused and structured setting. ISpA enabled meaningful, outcome-oriented engagement. ISpA's stewardship ensured that discussions remained centred on mission development, delivery, and robust outcomes, reinforcing its position as a key institutional bridge supporting India's integrated defence space ecosystem.

ISpA ARTICLES

Interview

BUSINESS INDIA • THE MAGAZINE OF THE CORPORATE WORLD



Bright future for space sector

The Indian Space Association (ISpA) plays a comprehensive role across the entire space domain. It has undertaken policy advocacy and engaged with stakeholders, including the government and its agencies, to make India self-reliant, technologically advanced, and a global leader in the space arena. India's private space sector is experiencing an unprecedented boom. Lt Gen AK Bhatt (Retd), Director General of ISpA, shares a variety of issues related to this sector with SM Roothem

Tell us about ISpA's activities and current role in the space sector

ISpA is the apex industry body representing the interests of India's space companies across satellite communications, launch services, downstream applications, and emerging spacetechn segments. It acts as a collaborative platform between the government, ISRO, IN-SPACe, regulators, and private industry, providing structured policy inputs on issues such as remote sensing, satellite communications, technology transfer, spectrum use, and ease of doing business, so that India can emerge as a leading global space economy.

ISpA's activities span policy advocacy, industry representation, and ecosystem development, including detailed recommendations on draft space-based communication and remote-sensing policies, satellite gateway regulations, and spectrum apportionment for satellite versus 5G/IMT services. The Association also convenes members through councils and events, showcases India's capabilities in international forums, and works to align industry growth with the Prime Minister's broader vision of a \$5 trillion economy.

How is the space startup ecosystem growing in India?

The space startup ecosystem in India has grown from a few dozen firms in 2020 to well over 300 today, spanning launch vehicles, full-stack satellite manufacturers, and Earth-observation and data-analytics companies. Many of these startups are building technology for small-satellite constellations, responsive launch,

hyperspectral imaging, and satellite-enabled connectivity, supported by liberalised policies, better access to testing facilities, and rising interest from domestic and global investors.

Policy moves such as opening end-to-end space activities to non-government entities under the Indian Space Policy 2023, along with IN-SPACe schemes for seed funding, ISRO facility utilisation, and technology transfer, are giving founders a clearer pathway from idea to commercial missions. Collaborative platforms, accelerator programmes, and ecosystem studies are further strengthening confidence that Indian spacetechn startups can scale from prototyping to revenue-generating, export-oriented businesses integrated into global supply chains.

What is the market size and economic impact on the sector?

India's space economy is currently estimated at around \$8.4 billion, roughly 2-3 per cent of the global space market, and is projected to rise nearly fivefold to about \$44 billion by 2033, as per the government's vision. This growth is expected to come from satellite manufacturing, commercial launches, broadband from space, navigation, imaging-based services, and a wide array of data-driven applications for agriculture, logistics, infrastructure, and disaster management. As the value chain deepens, the sector is positioned to generate high-skill employment, spur advanced manufacturing and electronics ecosystems, and help India capture a significantly higher share of the global space economy.

How do public-private partnerships (PPPs) work in the space industry?

Public-private partnerships in the space sector are increasingly structured around a model in which public agencies such as ISRO provide core infrastructure, legacy expertise, and strategic oversight, while private companies bring in capital, innovation, and operational efficiency. The Indian Space Policy 2023 explicitly allows non-government entities to design, own, and operate satellites, ground infrastructure, and even launch vehicles, while IN-SPACe promotes, authorises, and regulates these activities on behalf of the government.

In practice, this is taking shape through models where ISRO shares test facilities, tracking networks, and heritage technologies with private firms; NSIL structures commercial contracts and PPPs for missions; and private players invest in manufacturing and operate services for both government and commercial customers in communications and Earth observation.

What is the future growth potential for this sector?

The future growth potential for India's space sector is widely viewed as transformational, driven by continued reform, liberal foreign investment norms, and targeted funding mechanisms for high-risk R&D and commercialisation. The government has already cleared a dedicated venture capital fund of about ₹1,000 crore for space startups and announced a target for India to capture around 8 per cent of the projected \$1.8 trillion global space economy by the mid-2030s. *

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ISpA ARTICLES

DISRUPTIVE TELECOMS

Enable. Innovate. Transform

WORLD REPORT

July 2026

REINVENTING TELECOMS WITH AI



From connected to intelligent
The next frontier for wireless critical edge networks

L.P. Singh
Editor



Why 5G networks matter
Beyond 4G, the next frontier for wireless critical edge networks

Nishant Kumar
Managing Director



The Space Economy's Biggest Revenue Engine
Satellite Communications

L. Gen. AK Bhatt (Retd.)
Director General



From Connectivity to Data
New frontiers for the Space Economy

Rajat Chandra
Chairman



Why AI matters
Communication: A key to the future of the Space Economy

Anil Kumar
Chairman

An Initiative by TelecomDrive.com

The Space Economy's Biggest Revenue Engine Isn't Launch. It's Connectivity

By Lt. Gen. AK Bhatt (Retd.), Director General, Indian Space Association (ISpA)

When people think about the global space economy, they often picture spectacular rocket launches, reusable launch vehicles, lunar missions or ambitious plans for deep space exploration. These well-known facets of the industry have undoubtedly lowered the cost of reaching orbit, but they tell only half the story.

The real economic value of space is not created at launch. It begins once satellites are in orbit and information starts flowing. According to Navigant, the global space economy reached \$180.25 billion in 2025, with secure-enabled applications accounting for the largest share of the market. This underscores a fundamental shift in value creation: the future of the space economy will be shaped not by how many rockets are placed in orbit, but by how effectively those assets are leveraged into always-on digital infrastructure powering industrial and commercial life on Earth.

This evolution of the space economy is a significant shift in the evolution of the global space industry. Satellite communications, once viewed as a specialized capability serving specialized defense and remote communities, has evolved into a foundational layer of global digital infrastructure. The convergence of Low Earth Orbit (LEO) constellations, software-defined satellites, virtualized ground architectures and multi-orbit architectures is transforming satellite communications from a standalone



service into a integral extension of terrestrial network operations.

Connectivity as the Foundation Layer of the Space Economy

Historically, the commercial space value chain was primarily linear. Satellites were designed, launched and operated to deliver specific services. Today, that equation has fundamentally changed. Launch costs have plummeted, but connectivity costs remain a significant economic value. Every connected aircraft, vessel,

remote-area industrial facility, logistics corridor or disaster response network depends not simply on satellites in orbit, but on resilient, always-available connectivity.

As launch costs continue to decline and satellite capacity expands, value is increasingly flowing downstream from infrastructure (satellites) towards managed services, enterprise applications and digital platforms.

This is why satellite communications has become one of the strongest contributors to the global

space economy. Today, satellite communications and Earth Observation together account for almost 50% of total commercial space revenue, underscoring how connectivity has become one of the principal engines of commercial value creation across the global space ecosystem. It is no longer just another space-enabled service. It is the digital foundation upon which new industries are being built.

Where the Next Disruption Economy Begins

Perhaps the clearest evidence of this transformation lies in how satellite communications unlocks the value of other space technologies.

Earth observation imagery has increased commercial utility if it can be delivered faster, enabling support for precision agriculture, disaster response and defense intelligence. Navigation and Timing (PNT) services, which are foundational to everything from autonomous vehicles to financial trading, become significantly more valuable when integrated with continuous positioning services. Satellite enables to deliver information in real-time

Enabling the Next Disruption Economy

infrastructure, supply chains and critical assets across geographies where terrestrial networks cannot penetrate.

The result is an expanding ecosystem of downstream applications, from precision agriculture and smart logistics to autonomous transportation, digital twins, predictive maintenance and AI-powered geospatial analytics. In each case, satellite communications acts as the digital transport layer connecting data, applications and users in real-time. This downstream impact, which will expand the space sector itself, industry estimates suggest that every dollar invested in downstream infrastructure can generate approximately \$2.5 in downstream economic activity. As this is transformed into software, digital services and enterprise applications that create sustained economic value.

When Space Becomes Part of the Terrestrial Network

This evolution is also reshaping the telecommunications industry itself. For decades, terrestrial and satellite networks developed as separate ecosystems. That distinction is rapidly disappearing. The consolidation of Non-Terrestrial Networks (NTN) through successive 3GPP releases, coupled with advances in direct-to-device connectivity, software-defined networks and multi-orbit architectures, is creating a future where users move seamlessly between terrestrial and satellite infrastructure without even recognizing the transition.

Satellite networks will not simply act as a backup for terrestrial networks. They will simply provide the most efficient path to deliver connectivity. Satellite communications is therefore no longer an alternative to terrestrial networks; it is becoming an integral component of future network architecture, extending coverage, enhancing resilience and enabling new digital

services across sectors.

The Next Disruption is an Intelligent Network in Orbit

The next phase of disruption will be driven largely by the growing integration of AI. This evolution is also being enabled by a dramatic shift in satellite capacity. The cost of satellite capacity has fallen from over \$100,000 per Mbps per month in the mid-2010s to now \$100-\$150 per Mbps per month in modern LEO networks, fundamentally changing the commercial viability of satellite-enabled services.

Digital infrastructure, cloud, edge computing, AI-enabled traffic orchestration and integrated 6G architectures are transforming satellites from specialized tools into intelligent network nodes capable of processing, routing and managing data closer to where it is generated. It is this shift, the convergence of space, air and ground networks, will redefine connectivity itself, enabling seamless digital experiences irrespective of geography.

India's Opportunity Lies Beyond Launch

For India, this transformation presents a defining opportunity. The country's ambition should extend beyond launching satellites or manufacturing spaceports. The larger prize lies in building downstream services powered by satellite communications, integrating space-based connectivity into non-generation telecom networks and creating innovative applications across agriculture, logistics, healthcare, industry, disaster management and national security.

As India strengthens both its digital economy and private space ecosystem, satellite communications can become the bridge connecting technological capability with economic growth.

Connectivity Will Define the Next Space Economy

The first chapter of the downstream space economy is about making sense of space efficiency. The next chapter is about making space indispensable to the global digital ecosystem. Satellite communications is no longer simply another application within the space sector. It is the digital infrastructure that enables downstream innovation, accelerates telecom convergence and unlocks entirely new economic opportunities. In the years ahead, the biggest winners in the global space industry will not necessarily be those who launch the most satellites, but those who create the greatest value from the connectivity those satellites deliver.



Lt. Gen. AK Bhatt (Retd.)

Lt. Gen. AK Bhatt (Retd.) is currently the Director General of the Indian Space Association (ISA), an industry body created to be the collective voice of the Indian Private Space industry. Among his many appointments, he has been Principal Staff Officer (PSO) to the Chief of Army Staff (CofA), while serving in the Ministry of Defense. He has been the recipient of several awards from the Government of India. These include the Padma Shri (2014), Padma Bhushan (2015) and other prestigious distinctions. He is also a member of the Indian Space Association (ISA) and the Indian Space Association (ISA). He is also a member of the Indian Space Association (ISA) and the Indian Space Association (ISA).

ISpA AFFILIATES

ISpA has developed a proposal for affiliation categories, aiming to enhance the effectiveness of the reach of Space to a larger audience. We see the affiliates as our Goodwill Ambassadors of Space PAN India.

There are three distinct Affiliate Categories:

Space Enthusiasts (Individual): This category includes individuals interested in space exploration, education, or advocacy, regardless of professional qualifications.

- Eligibility Criteria: Demonstrated passion for space-related activities through participation in events, projects, or publications.

Subject Matter Experts (Individual): This category encompasses professionals with significant expertise in space-related fields, including scientists, engineers, researchers, professors and industry specialists.

- Eligibility Criteria: 5-10 years of experience in a relevant field, a record of contributions to space science, technology, or industry and a postgraduate qualification in a related discipline.

Institutional Entities: This category comprises colleges, universities, educational institutes, space associations, think tanks, venture capitalists and other organisations involved in space-related activities.

- Eligibility Criteria: Varies based on the type of institution or organization and emphasize recognition or accreditation for academic institutions and a commitment to supporting space-related ventures for venture capitalists and financial institutions.

The Affiliates are ISpA's commitment for enhancing collaboration, knowledge sharing and engagement within the Space community.



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ASSOCIATION**

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EVENTS SUMMARY

INDIA INTERNATIONAL SPACE CONCLAVE

18th -19th November, 2025
The Lalit, New Delhi

Indian Space Association, along with ISRO and IN-SPACE, hosted the fourth edition of the India International Space Conclave (IISC) on November 18-19, 2025, at The Lalit, New Delhi, bringing together key stakeholders from Government Departments, Private Industry and Academia.

The discussions covered topics like NewSpace regulatory reform, financing innovation, Earth Observation, NavIC (GNSS), SatCom and spectrum, launch vehicles, propulsion, human spaceflight, in-orbit servicing and debris management, with an emphasis on overcoming financing and enabling deeper global collaboration in the Indian space sector.

On the second day, sessions focused on governance, sustainability and international cooperation, featuring speakers addressing space's contribution to India's GDP and partnerships with Japan, Italy, the EU and Asian nations.



The Conclave attracted over 1,000 attendees, including policymakers, business leaders, researchers, entrepreneurs and students, representing 15+ countries from around the world.

India International Space Conclave 2025 served as a dynamic platform for meaningful discussions and collaborations, bringing together stakeholders from across the government, industry and academia, featuring 75+ eminent speakers across 17+ sessions.

With an enriched policy framework, increased private sector engagement and deepening strategic international partnerships, India is strongly positioned to accelerate its transformation into a global leader in space exploration, innovation and commerce. The outcomes of the Conclave are expected to have a lasting impact, driving the country's space ambitions and reinforcing its role at the forefront of the global space community.



EVENTS SUMMARY

HIGHLIGHTS (IISC-2025)

- **Strategic Announcements:** Five MoUs were signed and four major reports released, including the Valuation & Fundraising in Aerospace Startups Guide and the India DefSpace Symposium 2025 Technical Report.
- **Policy and Industry Focus:** Sessions emphasized regulatory reform, blended/patient capital financing, space sustainability and building a self-reliant space ecosystem.
- **Eminent Participants:** Dignitaries included Shri Jitendra Singh, Air Chief Marshal VR Chaudhari (Retd), H.E. Antonio Bartoli, Dr. Pawan Goenka, Smt Meenakshi Lekhi and Ms Naoko Yamazaki, among others.
- **Public-Private Collaboration:** Leaders highlighted the need for stronger government-industry partnerships and deeper cooperation with Japan, Italy and the EU.
- **Recognition and Innovation:** ISpA Industry Awards 2025 honored Pixxel, GalaxEye, Digantara, Skyroot Aerospace, L&T and Amity University, alongside an exhibition showcasing cutting-edge space developments.



EVENTS SUMMARY



23-24 APRIL 2026
INDIAN DEFSPACE SYMPOSIUM
MANEKSHAW CENTER, NEW DELHI



Indian Space Association (ISpA), in collaboration with DRDO, hosted the 4th Indian DefSpace Symposium (IDS'26) from 23-24 April at the Manekshaw Centre, New Delhi, marking another milestone in India's pursuit of defence space excellence. Gathering senior military leadership, policymakers, industry pioneers, startups and academic experts, the event catalyzed new collaborations and strategic thinking to strengthen India's security and technological edge in outer space.

Day 1, themed "Commercial Space: Navigating Threats and Military Employment," examined the growing role of commercial space in shaping modern warfare, featuring the inaugural address by General Anil Chauhan, Chief of Defence Staff. Discussions covered space-enabled ISR and PNT in recent conflicts, resilient SATCOM for network-centric warfare and the integration of commercial Earth observation and SAR into defence workflows,

alongside the release of the OrbitAid-ISpA Concept Paper and SatSure-ISpA Joint Publication.

Day 2, themed "Empowering the Space Industry to Enhance Defence Operational Readiness," focused on institutional preparedness and industrial enablement, with senior perspectives from DRDO, the Defence Space Agency and the Indian Army. A highlight was the felicitation of astronauts Group Captain Prasanth Balakrishnan Nair and Group Captain Shubhanshu Shukla, followed by discussions on Gaganyaan and India's human spaceflight trajectory, alongside sessions on the defence space industrial base and resilient NavIC-based navigation.

Building on previous editions, IDS'26 has solidified its role as a pivotal force for fostering a globally competitive, strategically autonomous and technologically advanced defence space ecosystem for India.



EVENTS SUMMARY



23-24 APRIL 2026
INDIAN DEFSPACE SYMPOSIUM
MANEKSHAW CENTER, NEW DELHI



HIGHLIGHTS (IDS-2026)

- **Key Publications:** Release of the ISpA Space Industry Handbook 2026, OrbitAid-ISpA Concept Paper, SatSure-ISpA Joint Publication and the IISC 2025 technical report.
- **Astronaut Felicitation:** Group Captain Prasanth Balakrishnan Nair (Kirti Chakra) and Group Captain Shubhanshu Shukla (Ashoka Chakra) were honored, followed by a fireside chat on Gaganyaan and human spaceflight opportunities.
- **Cutting-Edge Technology:** Sessions focused on space-based ISR, SATCOM resilience, SAR constellations, PNT/NavIC systems and anti-jamming navigation for GPS-denied environments.
- **Innovation & Collaboration:** The Symposium fostered partnerships between defence, industry and startups to strengthen India's defence space industrial base and accelerate indigenous technology adoption.
- **Technology Showcase:** The exhibition featured 15+ leading Indian and global exhibitors, including L&T, Pixxel, Digantara, GalaxEye, Synspective and Vantor, showcasing satellite systems, AI-driven geospatial intelligence and secure mission systems.



EVENTS SUMMARY

Italy-India Aerospace Roadshow 2025

The Italy-India Aerospace Roadshow 2025, organized by ITA, ASI, ISRO and IN-SPACE with ISpA facilitation, took place across Hyderabad, Bengaluru and New Delhi, marking a landmark multi-city collaboration between the two space-faring nations.

In Hyderabad, the Italian delegation, welcomed by Telangana Minister Sri Sridhar Babu Duddilla, visited ISpA members Dhruva Space, Astra Microwave and Skyroot Aerospace. In Bengaluru, visits to Bellatrix Aerospace, Pixxel, Ananth Technologies and GalaxEye were followed by a reception hosted by H.E. Antonio Enrico Bartoli, Ambassador of Italy to India. The roadshow concluded in New Delhi on 26th September with an ISpA-led panel on Earth Observation and data-driven applications, plus a visit to Bharat Electronics Limited (BEL).

- **Key Sessions:** Panel on India-Italy Earth Observation opportunities, featuring Italian firms like Leonardo and Thales Alenia Space alongside Indian counterparts.
- **Industry Visits:** Tours of leading Indian space companies across manufacturing, propulsion, RF systems and EO.
- **High-Level Engagement:** Participation from Shri Pawan Goenka (Chairman, IN-SPACE) and senior Italian-Indian industry leaders.
- **Outcome:** Strengthened Indo-Italian space cooperation, paving the way for deeper commercial partnerships.



EVENTS SUMMARY

DSA-ISpA DefSpace Capability Dialogue

The ISpA-DSA DefSpace Capability Dialogue, held on 14 January 2026 at the United Service Institution of India (USI), New Delhi, marked a significant milestone in India's Defence-Space ecosystem, enabling for the first time a direct engagement between the complete Defence Space Agency (DSA) team and India's private space industry.

Organised by the Indian Space Association (ISpA), the dialogue brought together over 45 Indian space companies with defence space leaders to deliberate on critical domains including ISR, PNT, SatCom and Space Situational Awareness (SSA). The platform provided industry stakeholders clarity on the armed forces' operational plans and capability requirements, while enabling DSA to better understand industry readiness and challenges.

Senior leadership present included Air Vice Marshal Manu Midha (Director General, DSA), Shri Arun Ramchandani (Chairman, ISpA) and Lt Gen Anil Kumar Bhatt (Retd) (Director General, ISpA).

- Participation: 45+ Indian space companies engaged directly with DSA leadership.
- Focus Areas: ISR, PNT, SatCom and Space Situational Awareness.
- Outcome: Laid the foundation for sustained industry-defence collaboration, advancing self-reliance and accelerating induction of critical space capabilities for national security.



EVENTS SUMMARY

The Gravity of Inspiration: From Earth to Orbit- a Meaningful Exchange

ISpA supported the U.S. Embassy in India in organising a memorable interaction with Astronaut Sunita (Suni) L. Williams during her visit to India, hosted at the American Center, New Delhi.

The event brought together CEOs and leaders from India's space industry as Sunita Williams shared insights from her time aboard the International Space Station, including her spacewalks and unique perspective gained from spaceflight, along with reflections on her personal roots in India, her father's homeland.

- Participants: CEOs and leaders from India's space industry.
- Highlight: Interaction with Astronaut Sunita Williams sharing ISS experiences and spacewalk insights.
- Outcome: Strengthened people-to-people ties and global cooperation within the space community



EVENTS SUMMARY

India-U.S. Space Command Dialogue

ISpA hosted a landmark, closed-door industry roundtable on 5th March 2026 in New Delhi, welcoming a distinguished U.S. delegation led by General Stephen N. Whiting, Commander, U.S. Space Command. Held under the theme "Transforming the Relationship Utilizing Strategic Technology Space" (TRUST-Space), the session served as a strategic bridge between the Indian private sector, U.S. Space Command and American industry partners.

Lt Gen Anil Kumar Bhatt (Retd), Director General, ISpA, opened with an overview of India's rapidly evolving private space ecosystem and its readiness for global high-end technology partnerships, while General Whiting underscored U.S. Space Command's commitment to a shared, secure and resilient space domain. The dialogue, moderated by Tejas Bharadwaj (Carnegie India), brought together a select group of Indian and U.S. space companies curated by U.S. Space Command, ensuring focus on high-end technological synergy and real-world mission requirements.

- **Focus Areas:** Co-production and co-development opportunities between Indian and U.S. industry, advancement of Space Domain Awareness (SDA/SSA) technologies and progress under the INDUS-X and TRUST initiatives.
- **Other Priorities:** Strengthening cyber resilience across the space ecosystem and enhancing market access through supportive policy and regulatory frameworks.
- **Outcome:** Reinforced India-U.S. strategic collaboration in defence space, setting actionable pathways for deeper industry partnership.



EVENTS SUMMARY

Indian Space Industry Capability Workshop for ITEC Delegates (Global South)

ISpA conducted a Space Industry Capability Workshop on 8 May 2026 at the United Service Institution of India, New Delhi, as part of a two-week space capacity-building programme organised by IN-SPACE with the Ministry of External Affairs under the ITEC framework.

The workshop was attended by delegates from 14 partner countries across Africa and Southeast Asia, including Nepal, Myanmar, Algeria, Ethiopia, Bangladesh and Nigeria, for a day of knowledge exchange with India's commercial space sector. Leading Indian companies including Azista Space Systems, Dhruva Space, Tata Advanced Systems, Pixxel, Kristellar Aerospace, VyomILC and AgniKul Cosmos presented on satellite systems, launch technologies and geospatial intelligence, showcasing the strength of India's NewSpace ecosystem.

- Participation: Delegates from 14 partner nations across Africa and Southeast Asia.
- Industry Presenters: 7 leading Indian space companies spanning satellites, launch and geospatial applications.
- Outcome: Strengthened India's role as a trusted global space partner, advancing international collaboration and support for emerging spacefaring nations.



ISpA SPACE TECH WEBINAR SERIES



ISpA SpaceTech Expert Talk Webinar on "Decoding the SpaceX IPO: Valuation, Assets & Financial Insights"

(10th July, 2026)

The ISpA webinar on "SpaceX IPO: Decoding the Commercial Space Milestone" explored one of the most anticipated events in the global commercial space sector, featuring expert speakers Akshat Johri, Rajat Kumar Singh and Deepika Arora from IIFCL Projects Ltd.

The session unpacked SpaceX's valuation methodology, business fundamentals and asset portfolio—including launch services, Starlink and satellite infrastructure—while examining implications for the space economy, capital markets and investor participation. Discussions also covered IPO structure, listing landscape, software-driven growth opportunities and broader financial and policy perspectives shaping the sector.

ISpA in collaboration with Actum LLC for an exclusive webinar on "The Evolving Role of Space in the Geopolitical Environment." (24 July 2026)

ISpA hosted an exclusive webinar for its members and partners on "The Evolving Role of Space in the Geopolitical Environment," featuring Kevin Kelly and Morris Reid, Partners at ACTUM LLC, alongside Lt Gen A. K. Bhatt (Retd), Director General, ISpA. The session explored how shifting global alignments are reshaping the space economy, offering members insights into emerging risks and commercial opportunities within the global space supply chain and positioning Indian industry to lead the next frontier of aerospace.



Key Speakers



Lt Gen AK Bhatt (Retd)

Kevin Kelly

Morris L. Reid

Director General, Indian Space Association

Partner, Actum LLC

Partner, Actum LLC

UPCOMING EVENTS

INDIA INTERNATIONAL SPACE CONCLAVE 2026



23-24 NOVEMBER 2026



APRIL 2027

MEDIA COVERAGE

ISpA HIGHLIGHTS OF THE YEAR

The prime focus of ISpA media strategy was to ;

1. Policy, Industry & Startup Thought Leadership

- Proactive engagement on policy issues like satellite spectrum pricing & allocation (TRAI recommendations).
- Commentary on key developments:
 - Axiom-4 Mission & Shubhanshu Shukla going to Space
 - ISRO PSLV launches, NISAR Mission launch, LVM3 Rocket launch
 - G20 Open Satellite Data Partnership
 - Draft National Telecom Policy
 - Cabinet approval of Research Development and Innovation Scheme
- Media engagement on industry topics:
 - Featured stories: "In-space industry set to unlock multi-billion dollar mkt in manufacturing" (Business Standard); "Space-tech companies get an opening as India seeks more eyes in the sky" (Economic Times)
 - Coverage across Times of India, Economic Times, Business Standard, Hindu BusinessLine, Mint, ThePrint, NDTV Profit, Bloomberg, Analytics India Magazine, Moneycontrol, Inc42, Indian Aerospace & Defence Magazine
- Promoting the Indian space startup ecosystem:
 - Interactions with Business Standard, Outlook Business, Economic Times, Financial Express

2. Industry & ISpA-Led Events

ISpA strengthened its position by organizing flagship events such as the Indian Space Conclave, Indian DefSpace Symposium alongside key dialogues like the DSA-ISpA DefSpace Capability Dialogue and India-U.S. Space Command Dialogue.

DG ISpA also participated in other industry events across the year like 10th IN-SPACE Industry Connect (IIC-10), NXT Conclave 2026, SMOPS-2026 etc.

3. Key Developments in the Indian Private Space Sector over the year

First Private Orbital Rocket – Skyroot's Vikram-1 becomes India's first private rocket to reach orbit (July 2026); Skyroot becomes India's first space-tech unicorn

Cabinet approval of the Research, Development & Innovation (RDI) Scheme for space & deep-tech startups

₹1,000 Cr VC Fund for Space Sector goes live – SIDBI VC gets SEBI registration, ₹1,005 Cr corpus closed

Government push for Downstream Spacetechnology – IN-SPACE's ₹500 Cr Tech Adoption Fund; Gujarat, TN, AP, Karnataka release state SpaceTech policies

Rise in PPP initiatives from ISRO, Defence Ministry and IN-SPACE – SSLV tech transferred to HAL; LVM3 commercialization grows; Pixxel-led consortium (SatSure, PierSight, Dhruva Space) wins India's first PPP EO Constellation

Startups like Dhruva Space, Pixxel, GalaxEye, Digantara win foreign contracts

MEDIA COVERAGE

India's Defence authorities to use LEO satellites for communication: ISpA

Over 2500 stars in India will drive the space sector



India's Defence authorities are set to use Low Earth Orbit (LEO) satellites for communication, according to a report by the Indian Space Association (ISpA). The report states that the Indian government has approved the use of LEO satellites for communication, which will be a significant step towards the development of a robust space-based communication system. The report also mentions that the Indian government has approved the use of LEO satellites for navigation, which will be a significant step towards the development of a robust space-based navigation system.

Terrestrial mobile services to stay as Satcom services will be expensive for India: ISpA

ISpA, following an initial capital payment of around ₹100,000 for the hardware and a monthly fee of around ₹1,000 for additional data



ISpA, following an initial capital payment of around ₹100,000 for the hardware and a monthly fee of around ₹1,000 for additional data, has stated that terrestrial mobile services will remain as Satcom services will be expensive for India. The report also mentions that the Indian government has approved the use of LEO satellites for communication, which will be a significant step towards the development of a robust space-based communication system.

EtherealIX to Agnikul, Indian startups enter a domain. Op Sindoor was the pivot

Agnikul is a space-based communication system that will be used for various purposes, including navigation, communication, and surveillance. The system is expected to be launched in the near future.



The Agnikul team members are shown in a group photo. The team is led by the founder, who is also the CEO of the company. The team is currently working on the development of the system, which is expected to be launched in the near future.

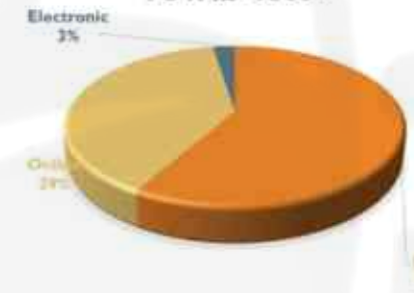


Lt Gen AK Bhatt (Retd)
Director General, Indian Space Association



Lt Gen AK Bhatt (Retd)
Director General, Indian Space Association

TOTAL- 1500+



The pie chart shows the distribution of the total 1500+ units. The chart is divided into three segments: Electronic (3%), Optical (2%), and Print (95%). The Print segment is the largest, followed by Electronic, and then Optical.



Lt Gen AK Bhatt (Retd)
Director General, Indian Space Association

You are the first Director General of the Indian Space Association, set up as the collective voice of India's space industry. How has the role evolved since ISpA's inception in 2017?

When I took over as the first Director General in 2017, I set a vision for ISpA to work with all stakeholders to create a enabling environment for strengthening the private industry in the Indian space sector. My initial task was to build ISpA as a credible, apex industry body and a single, coordinated voice for India's emerging private space sector. In those early days, a large part of my role was to bring together legacy space companies and new-age startups, articulate their concerns, be an industry voice for consultations on the new space policy, and ensure that issues like access to ISRO facilities, spectrum allocation policy, and FDI were addressed.

Over the past four years the Association has been far more time working the volume of reform a competent can move it across the entire global

Coming from a five-decade strategic role, how is sector? Given your age you view the internet differently? My four decades in uniform have helped me perspectives in the new warfare and, first and



New business opporturt 'ath to Global Leadership

Defence segment India, said director of Bhatt's C

"Multiple of some strategic offerings are also considered p because of their extensive cap constellations."

Anil Kumar Bhatt, director general Space Association (ISpA), said defence forces have so far been and radio communications, eve



Probability of Disruption?

The probability of a satellite being disrupted is relatively high, said Lt Gen AK Bhatt. He said that the Indian government has approved the use of LEO satellites for communication, which will be a significant step towards the development of a robust space-based communication system.



World's cleanest place to change: ISpA

ISpA, following an initial capital payment of around ₹100,000 for the hardware and a monthly fee of around ₹1,000 for additional data, has stated that terrestrial mobile services will remain as Satcom services will be expensive for India. The report also mentions that the Indian government has approved the use of LEO satellites for communication, which will be a significant step towards the development of a robust space-based communication system.



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MEDIA COVERAGE



NATIONAL ADVISORY COMMITTEE

NATIONAL ADVISORY COMMITTEE

The National Advisory Committee (NAC) was formed on 12 July 2022.

NAC has been set up to provide strategic vision, guidance & mentoring to ISpA in the execution of its role as the premier Space Industry Body of India, to strengthen India's Space Ecosystem to make India, a "Global Space Power" in alignment with the vision of the Hon'ble Prime Minister.

NAC works as an advisory body to ISpA for suggesting goals & milestones for achieving ISpA's Vision and highlighting issues that merit attention.

Dr Arvind Gupta, Director of Vivekananda International Foundation (VIF) is the Chairperson of NAC. The Secretarial Support to NAC is provided by the Director General of ISpA, Lt Gen AK Bhatt (Retd) as Convener and Director of ISpA, Gp Capt TH Anand Rao (Retd as Secretary).

The Committee comprises nine eminent professionals with a track record of distinguished service. They hail from multi-sectoral backgrounds which include, Academia, Bureaucracy, Defence, Industry, Technology and Space. ISpA also invites Serving Government Officers to attend NAC proceedings as Special Invitees, to seek their expert opinion on a case-by-case basis. *Refer 'Annexure A' at the end of the Annual Report for profiles of NAC members



NATIONAL ADVISORY COMMITTEE

HIGHLIGHTS OF THE 6TH NAC MEETING

Key Highlights:

1. Geopolitical/Strategic:

- Growing militarisation of space flagged; call for research-driven studies via Centres of Excellence.
- Continued concern over China's role in Pakistan's space/strategic capabilities and dual-use tech risks.
- Proposal to expand NAC's mandate into policy foresight, not just industry advocacy.

2. Policy & Regulatory:

- Recurring bottlenecks: licensing, spectrum, export controls, insurance, capital access, workforce, supply chains.
- Need for clearer government-vs-private demarcation in downstream applications.

3. Industry Challenges:

- Launch cadence has dropped, hurting momentum (vs. earlier high-frequency PSLV era).
- Component sourcing hit by import dependence, reduced Chinese components, global optics shortages.
- Infra financing weak (banks reluctant) despite decent tech-development funding; soft-loans recommended.
- ISRO tech transfer mismatched with industry needs needs rationalising.

4. Space Insurance (new focus area):

- Premiums at 5–20% of mission value; heavy reliance on overseas insurers.
- Recommended: common risk pool (IN-SPACE + NSIL), phased startup requirements, indigenous underwriting capacity.

5. NavIC/PNT/SatCom:

- Reliability and adoption issues persist despite mandatory defence procurement inclusion.
- Recommended: full NavIC review, ISRO-industry collaboration, LEO-PNT integration, firm procurement commitments.

6. Action Items:

- ISpA to escalate recommendations to relevant GoI departments.
- University collaboration via CoEs, IN-SPACE workshops for startups, Defence Space Agency dialogues, dedicated PNT session.

NATIONAL ADVISORY COMMITTEE



Dr Arvind Gupta, IFS (Retd)

Chairperson

Present Engagements Director, Vivekananda International Foundation

Professional Background Deputy National Security Adviser & Secretary at the National Security Council Secretariat (NSCS); Director-General at the Institute for Defence Studies and Analyses; served in various capacities at the Ministry of External Affairs and Indian missions abroad.

Area of Expertise National Security; International Relations & Foreign Policy; Governance; History, Culture & Civilization. He also writes articles on popular science.



Air Chief Marshal RKS Bhadauria PVSM AVSM VM ADC (Retd)

Member

Present Engagements President, Air Force Association | Chief Nodal Officer UP Defence Industrial Corridor

Professional Background Former Chief of the Air Staff; Fighter Pilot; & Experimental Test Pilot.

Area of Expertise National Security, Defence, Military Aviation; Defence & Aerospace Industry.



Air Chief Marshal VR Chaudhari PVSM AVSM VM (Retd)

Former Chief of the Air Staff Indian Air Force

Professional Background Former Chief of the Air Staff



Amb. Arun K Singh, IFS (Retd)

Member

Present Engagements Distinguished Fellow, Vivekanand International Foundation

Professional Background Member, NSAB; Ambassador to US, France & Israel. Joint Secretary, Ministry of External Affairs.

Area of Expertise Econometrics; Development Policy; Macroeconomics; and Indian economic history.

NATIONAL ADVISORY COMMITTEE



Air Marshal BR Krishna, PVSM, AVSM, SC, ADC (Retd)

Member

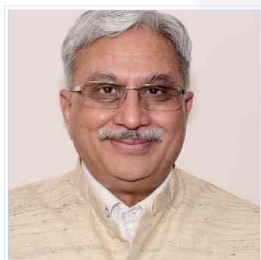
Professional Background Former Chief of Integrated Defence Staff (CISC)



Vice Admiral SN Ghormade PVSM AVSM NM ADC (Retd)

Former VCNS

Professional Background Former Vice Chief of Naval Staff (VCNS)



Dr. Shailesh Nayak
Member

Present Engagements Director, National Institute of Advanced Studies; Member, IN-SPACE; Chancellor, TERI School of Advanced Studies; Editor-in-Chief, Journal of Indian Society of Remote Sensing, Dehradun.

Professional Background Secretary, Ministry of Earth Sciences; Director, ESSO-Indian National Centre for Ocean Information Systems, Hyderabad; Group Director, Space Application Centre, ISRO, Ahmedabad; President, Technical Commission (TC) IV on 'Geodatabases and Digital Mapping'; International Society of Photogrammetric and Remote Sensing (ISPRS)

Area of Expertise Oceanography; Hazards; Remote Sensing; Climate change; Polar science



Lt Gen VG Khandare PVSM AVSM SM (Retd)

Member

Professional Background -Former Principal Advisor MoD, Former Military Advisor, NSCS; Former DG DIA & DC IDS(Int), HQ IDS.

Area of Expertise National Security; Policy; Defence; Human Resources; Space; Cyber; Data Sovereignty.

NATIONAL ADVISORY COMMITTEE



Air Marshal SP Dharkar PVSM AVSM SM VSM (Retd)
Member

Former Vice Chief of the Air Staff, Indian Air Force

Professional Background The Director General of the Defence Space Agency at Bengaluru, Air Defence Commander at HQ EAC and Assistant Chief of the Air Staff (Training) at Air Headquarters.



Prof. V. Kamakoti
Member

Present Engagements Director, IIT Madras

Professional Background The Director General of the Defence Space Agency at Bengaluru, Air Defence Commander at HQ EAC and Assistant Chief of the Air Staff (Training) at Air Headquarters.

Member of the National Security Advisory Board, Government of India.

Area of Expertise- Software aspects of VLSI design; Cluster computing; High-performance computing; Algorithms; Data structures and Computational geometry.



Dr. Siddharth Shekhar Singh
Member

Present Engagements Associate Professor of Marketing, Indian School of Business.

Professional Background Former Senior Associate Dean, ISB; Director of the Doctoral program, ISB; Former, Board of Directors of Dlabs; Independent Director on the Board of Directors, Petronet LNG Limited and International Schools of Business Management.

Area of Expertise Marketing and Finance, Electronics & Communications, Digital Transformation.

NATIONAL ADVISORY COMMITTEE



Maj Gen (Dr) R Siva Kumar (Retd)

Member

Present Engagements Director IIT Tirupati NiF, Director Emeritus OGC, Formerly President Geospatial Solutions, IIC Technologies

Professional Background Military Survey; Former Head NRDMS & CEO NSDI, DST

Area of Expertise Defense; Surveying & Mapping, Photogrammetry Cartography; Geo-intelligence; OGC, UNGGIM



Gp Capt Ajey Lele (Retd)

Member

Present Engagements Director General, Manohar Parrikar Institute for Defence Studies and Analyses

Professional Background Veteran Officer from Indian Air Force; Researcher.

Area of Expertise Weapons of Mass Destruction (WMD); Space Security & Strategic Technologies.



Mr JS Deepak, IAS (Retd)

Member

Present Engagements Group Director- International Strategy & Public Policy, Bharti Enterprises

Professional Background Former Secretary, Department of Telecommunications; Indian Administrative Service (IAS) officer of 1982 batch of UP cadre; Former Additional Secretary, Department of Commerce; Former Chief Negotiator at the World Trade Organisation (WTO)

Area of Expertise- Software aspects of VLSI design; Cluster computing; High-performance computing; Algorithms; Data structures and Computational geometry.

NATIONAL ADVISORY COMMITTEE

SUBJECT MATTER EXPERT



Dr Ranjana Kaul

Member

Present Engagements Partner, Dua Associates; Member, Board of Directors, International Institute of Space Law (IISL), Paris; and Founding Member of Spaceport SARABHAI (S2)

Professional Background Specialization in international space law treaty regimes. Dr Kaul was awarded the 2017 IISL Distinguished Services Award

Area of Expertise Space Law Treaty regimes, Advisor on Indian policy, regulatory, procedural and institutional ecosystems



Dr Ravinder Pal Singh

Member

Present Engagements Venture Capitalist

Professional Background Harvard Business School Alumni; Professor of Innovation, Entrepreneurship and Leadership, Rishihood University; C-Level

Leader: Technology & Engineering

Area of Expertise Deep Tech, Entrepreneurship, Artificial Intelligence, Robotics, Investment

NAC SPECIAL INVITEE



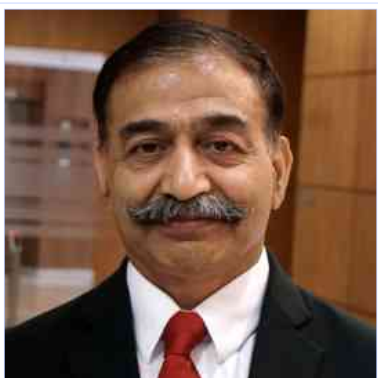
Mr Amit Kumar Ghosh, IAS

Member

Present Engagements Principal Secretary to Govt of UP, Department of Social Justice & Empowerment

Professional Background Health Services; National Highways; Infrastructure linked Policy; Departmental Reinvigorations and Transformations.

TEAM ISpA



Lt Gen AK Bhatt (Retd)

PVSM UYSM AVSM SM VSM

Director General

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Gp Capt TH Anand Rao (Retd)

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