Annexure-1

Achievements during FY 2025-2026

31.03.2026

i) Major Missions

- ISRO successfully demonstrated the docking of the **SPADEX** satellites (SDX 01 & SDX 02) for the second time along with power transfer between the two satellites. These satellites were launched by the PSLV C60 mission that made India the fourth nation to demonstrate docking/undocking in space.
- The PSLV Orbital Experimental Module (**POEM-04**) of the SPADEX mission, after the successful completion of in-orbit experimentation of multiple payloads from ISRO, space startups & academia, made a safe re-entry into the Earth's atmosphere on April 04, 2025.
- In the **Axiom 4** mission, Gaganyatri Group Captain Shubhanshu Shukla became the first Indian astronaut to board the International Space Station, conducting seven microgravity experiments. The collaboration provided vital insights into training, crewed mission coordination and emergency response.
- The **GSLV-F16/NISAR** mission, the first joint ISRO-NASA mission, was launched on July 30, 2025. NISAR, the first dual frequency SAR satellite, along with NASA's L-band SAR payload & ISRO's S-band SAR payload is now fully operational and providing valuable Earth Observation data.
- The **LVM3-M5 / CMS-03** mission launched on November 02, 2025 achieved the milestone of the heaviest GTO satellite form Indian soil. In this mission, for the first time, re-ignition of the Thrust Chamber of C25 cryogenic stage was demonstrated which will enable mission flexibility for future multi-orbit missions.
- The **LVM3-M6 / BlueBird Block-2** launched on December 24, 2025 set the record of the launch of heaviest ever satellite from Indian soil. This mission also validated the electro-mechanical actuation for the S200 motor along with composite thrust frame for C25 stage and other modifications to improve the payload performance by 176kg.
- The failure encountered in two **PSLV's [C61 & C62]** are being addressed by National Level Expert Committee.

ii) Technology Demonstration tests

- Multiple successful short-duration hot tests completed on Semicryogenic Engine Power Head Test Article (**PHTA**), including the latest modified-subsystem test on January 13, 2026. Qualification of the Isrosene propellant tank fully completed on February 20, 2026 — major milestone towards semicryogenic stage for future missions of LVM3.
- Demonstrated the **boot-strap mode ignition technology for CE20** Cryogenic engine on October 16, 2025 at the High Altitude Facility, first time in the world for a cryogenic engine that works in Gas Generator cycle.
- ISRO successfully conducted a **sea level hot test of its CE20** at 22 tonne (earlier 19 tonne) thrust using nozzle protection system and multi-element igniter on March 10, 2026, demonstrating engine operation for Gaganyaan programme.
- Successful long duration hot test of the **PS4 engine with Stellite Nozzle divergent** on April 08, 2025. Successful off-nominal qualification hot test for the PS4 engine with Carbon composite nozzle divergent for a duration of 200 seconds on January 05, 2026

- Development **hot tests of 3.1 kN P9 engine**, planned to be used as the Landing Engine for the LuPEx/ Chandrayaan-5 mission, was successfully conducted.
- Hot test of the **Throttleable Vikas** engine with the newly developed water control valve, was successfully conducted on June 16, 2025.
- The static test for the **SS3 motor**, the third stage of SSLV vehicle was carried out successfully on December 30, 2025. The SS3 solid motor stage is the first Carbon-epoxy solid motor case realized by ISRO, which has significantly reduced the mass of the stage, improving the payload performance of SSLV by 90 kg.
- ISRO has successfully conducted the first hot test of the **high thrust LOX-Methane engine** at thrust chamber level with a single element injector, both of which were realized through additive manufacturing.
- The **32-bit Vikram Processor**, the first 32-bit processor qualified for use in space applications, and jointly developed by ISRO with SCL was presented to Honourable PM during the Semicon India 2025 event organised by MeitY in September.
- An indigenous **250nm process technology** was developed for fabrication of RF Gallium Nitride High Electron Mobility Transistor.
- An indigenous **baseband ASIC** to support NavIC & other GNSS signals has been realized on 28nm technology for use in civilian and strategic platforms.

iii) Gaganyaan Programme

- All propulsion tests have been completed for human rating. Software simulations are in progress at the test beds. Till date, more than 8000 ground tests including the various structural qualification tests have been completed.
- An Integrated Mission Review Committee was constituted to address the critical aspects of design & simulation gaps towards a more robust mission strategy.
- Tests were carried out at Chandigarh for demonstration of **drogue parachutes deployment** for Gaganyaan.
- For the first Uncrewed Gaganyaan (G1) Mission, **Indian Data Relay Satellite Series feeder station for** IDRSS at SDSC SHAR is inaugurated.
- **IADT-01** mission was successfully accomplished on August 24, 2025. Chinook Helicopter of IAF was used for the drop testing experiment.

iv) Thriving Indian Space Ecosystem

- India now boasts 400+ Space start-ups fostering a vibrant and innovative space-tech ecosystem. Liberalised FDI Policy brought out by Govt. of India for the space sector promotes international investments, technology transfers, and collaborative research opportunities.
- Over **800 professionals** have been trained in Space Technology through various skill development programs organized and conducted by IN-SPACe.
- Six NGEs (Non-Government Entities) have launched 18 satellites into orbit, demonstrating private sector capabilities in space.
- India's first indigenous **commercial EO satellite constellation** to be built under Public Private Partnership. Pixxel-led consortium (with Piersight, Satsure & Dhruva) to invest ₹1200+ crore in building 12 advanced satellites.

- ₹1,000 crore **Venture Capital fund** has been established to promote space technology and drive exponential growth in India's space economy.
- The TAF (**Technology Adoption Fund**) scheme was launched with an outlay of ₹500 Cr. to take early-stage space technologies from lab-scale (TRL 3/4) to commercial scale (TRL 7/8 & above).
- An Announcement of Opportunity (AO) for development of **Satellite Bus** which could be used for Satellite Bus as a Service (SBaaS) was released on April 26, 2025. Expert committee reviewed the 15 proposals and three NGEs have been selected.
- To accelerate adoption of space-based solutions in government and industry, IN-SPACe launched the "**Space Applications Adoption Workshops (SAAW)**". 10 workshops have been conducted across thematic and regional domains, like Agriculture & Food Processing, Defence & National Security, Disaster Mitigation etc.
- One **orbital slot** was allocated to M/s Ananth Technologies Limited (ATL) by IN-SPACe – first ever slot secured under the Indian Space Policy 2023 and the first access granted to an Indian NGE through AO.

v) Technology Transfer

- IN-SPACe, NSIL & ISRO achieved milestone of **100 Technology Transfer** Agreements signed with NGEs post Space Sector Reforms. During the financial year, about 24 agreements have been signed.
- SSLV is first-of-its-kind complete launch vehicle technology transfer to an Indian company (HAL) to independently build, own, and commercialize SSLV launches. Technology Transfer is underway.
- Committees constituted for the Technology Transfer of PSLV and GSLV MkIII (LVM3) to a Private Indian Industry Entity/Consortium.
- Committee constituted to study the modes of operation and maintenance of SSLV Launch Complex (SLC) through Private Sector.

vi) Realisation of Launch Vehicles and Satellites by NSIL

- Polar Satellite Launch Vehicle (PSLV): NSIL has entered into a contract with M/s HAL [the lead partner of M/s HAL & L&T consortium] for end-to-end production of 5 nos of **PSLV-XL**. Stacking of 1st Indian Industry realized PSLV-N1 vehicle has commenced.
- Small Satellite Launch Vehicle (SSLV): Streamlined realization of 15 nos. **SSLV** through NSIL with maximized industry work content to support SBS-3 Program.
- Complied the technical requirements and submitted the Techno-commercial proposal for GSAT-7C Satellite, Ground Segment, Launch Services and Hubless SATCOM Solution.
- Playing a key role in advancing the "**Make in India**" initiative in the space sector by enabling end-to-end Earth Observation satellite realization through Indian industry partners. Completed Key project milestones, viz., BDR (Base Line Design Review) and PDR (Preliminary Design Review) for 31 satellite being realized by 3 Indian industry partners.

vii) Launch services and space based services by NSIL

- NSIL signed a Launch Service Agreement with **M/s. Astroscale, Japan**, the first dedicated launch for a Japanese satellite and an MoU with D-Orbit, Italy for future Orbital Transfer Vehicle (OTV) Program.
- Executed a **tripartite MoU** with Indian Coast Guard and INCOIS (Ministry of Earth Sciences) for satellite-based oil spill detection and surveillance in the exclusive economic zone of Indian coast line.
- NSIL under "Pradhan Mantri Matsya Sampada Yojana (PMMSY) Scheme" is working with Indian Industry partners for Supply, Installation, Operation and management of **100,000 indigenous MSS terminals** ("Xponders") on-board the fishing vessels including creation/development of ground infrastructure and monitoring centres. Nearly 75,000 MSS Terminals delivered, about 49,000 MSS Terminals have been installed across coastal states and about 45000 Batteries have been supplied for installing on Motorized Boats along with MSS Terminals.

viii) Applications

- The Department of Space continued to provide **disaster management support** and also developed various Geospatial solutions for various ministries.
- Integrated Control Room for Emergency Response **(ICR-ER)** was inaugurated by Hon'ble Union Home Minister on June 16, 2025 for which the National Database for Emergency Management **(NDEM 5.0)** developed by ISRO serves as a key technological backbone for real-time disaster monitoring and decision support.
- Support is being provided for mapping of **flood, forest fire** etc. in the country. IRS data products were disseminated in response to requests from International Charter and Sentinel Asia.
- **Support is being provided to Ministries, Departments and State Governments** for various projects in Agriculture, Forestry, Housing & Urban Affairs, National Hydrology, North-Eastern Region etc.

ix) Infrastructure Development

- Foundation stone laid for Launch Pad at **SSLV Launch Complex (SLC)** at Kulasekarapattinam, Tuticorin Dt., Tamil Nadu on August 27, 2025. This dedicated launch complex will meet the growing launch demands of the country, primarily for SSLV launches and for the launch activities of Non-Governmental Enterprises (NGEs).
- A state-of-the-art **manufacturing facility for Titanium alloy tanks** was inaugurated at Tumkur along with the new monopropellant thruster test facility. Similarly, the Cryogenic Turbopump Test facility and the new satellite thruster test facility are also inaugurated.
- A state-of-the-art **Landing Gear drop test facility** was inaugurated on April 04, 2025 for the RLV programme, which is the only facility in the country that simulates actual run-way surface.
- **Doubling of Solid Propellant production** capacity through the commissioning of 10T vertical mixer and second process line at Ammonium Perchlorate Plant.

x) Space Science

- Several **National meets** related to Chandrayaan 4, Chandrayaan 5, XPoSat and Venus Orbiter mission were conducted and there is a growing user community for space science in the nation.

- Chandrayaan-2, Chandrayaan-3, Aditya-L1, XPoSat and Astrosat missions continue to provide **scientific data** for new discoveries and studies in the Lunar/Solar environment.

xi) Major Events

- The 4th edition of the Global Space Exploration Conference (**GLEX-2025**) was held from 7–9 May in New Delhi, co-hosted by ISRO and ASI under the International Astronautical Federation (IAF).
- For achieving the goals envisioned in Space Vision 2047 as well as to evolve space vision beyond 2047, the Department of Space (DoS) organized a three-day workshop, "**Chintan Shivir 2025**," from July 16 -18, 2025.
- The second National Space Day (**NSpD2025**) was celebrated with grandeur on August 23, 2025 at Bharat Mandapam, New Delhi, under the theme "Aryabhatta to Gaganyaan: Ancient Wisdom to Infinite Possibilities".
- This year's National Space Day celebration was preceded by National Meet 2025 **(NM 2.0)**, held on August 22, 2025, on the theme "Leveraging Space Technology and Applications for Viksit Bharat 2047.

xii) Capacity Building & Outreach

- The "North East Student's Program for Awareness, Reach and Knowledge on Space" (**NE-SPARKS**) program has exposed 786 students (378 boys, 408 girls) from the 8 states of North East region of India to the world of space and science.
- The annual **Yuvika programmes** witnessed more participation as 580 students visited SDSC as part of Jagriti Yatra.
- ISRO Academia connect programme covered all states across the nation. 41 new NGOs/Start-ups/institutes have been identified as ISRO registered space tutors. A special programme for around 4000 teachers was conducted to empower school teachers.

xiii) International Cooperation

- In the area of International Cooperation, 11 MoU's have been signed with foreign agencies and conducted about 175 bilateral/multilateral meetings.

xiv) Awards & Recognition

- Department of Space was honoured with various national & international laurels including major awards like IAA Von Karman Award of 2025, AIAA Goddard Astronautics award for Chandrayaan-3 landing, Broglio Award by Italian Aerospace Industry Association, Vigyan Sri Puraskar 2025, Rashtriya Vigyan Puraskar 2025, ASI and National Geospatial Award 2025. Department was also awarded Rajbhasha Kirti Award (Second Prize) for the year 2024–25 for the best implementation of Official Language Hindi.