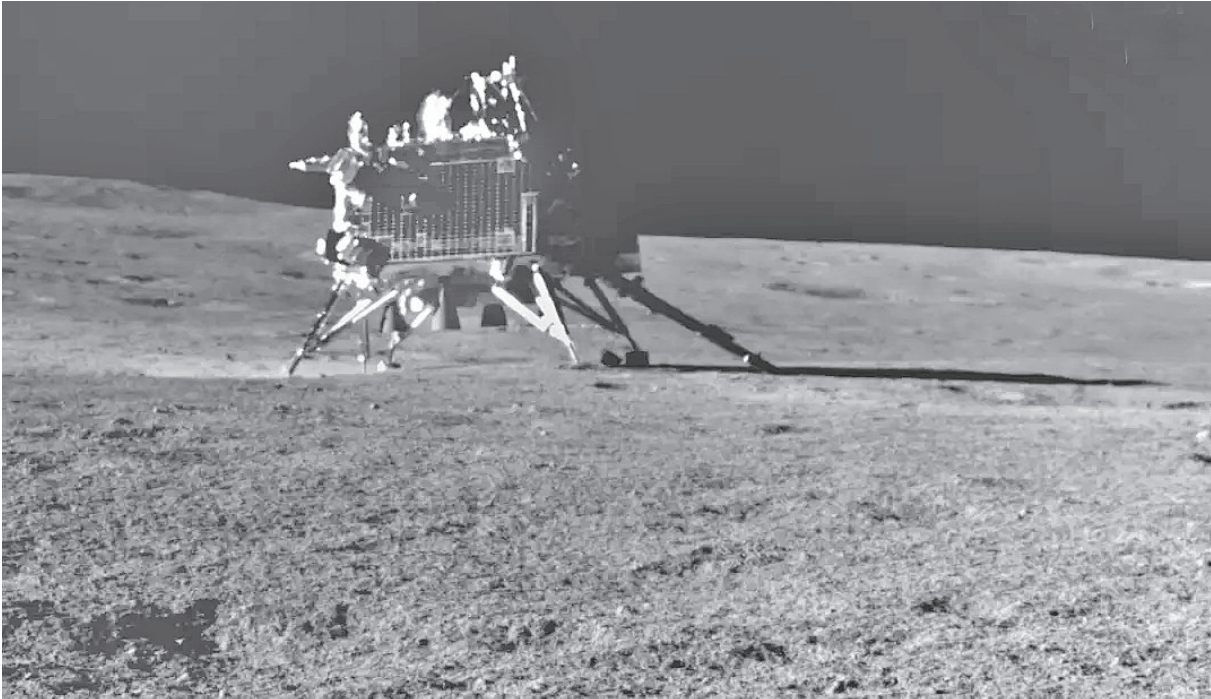




# Space sector: Slow burn, hard-won successes — and then liftoff

Isro’s decades of achievements laid the groundwork long before the reforms in 2020, when the sector finally opened up and unlocked today’s private investment boom



SHINE JACOB  
Chennai, 27 September

In the early 1990s, India was busy dismantling an old economic order, taking its first tentative steps into the era of liberalisation. As the economy pushed into a new orbit, its space sector, led by the Indian Space Research Organisation (Isro), was still struggling to get its own rockets reliably off the ground. The Indian National Satellite System (INSAT) was slowly transforming the country’s communications sector, becoming an invisible highway for television and telephone traffic alike. It had been barely 16 years since India’s first satellite, Aryabhata, was launched on April 19, 1975. This was the period when India’s space programme was moving from the experimental to the operational.

And yet the 1990s brought two successive failures of Isro’s small-lift Augmented Satellite Launch Vehicle (ASLV), earning it the derisive nickname “Always Sea Landing Vehicle”. The anecdote, shared by a former scientist, is a reminder that behind the now-familiar stories of grit, including rockets being transported by bicycle, lies a less comfortable history of pain, humiliation and failure endured by Indian scientists from the 1970s through the 1990s. The struggle, in fact, began well before the 1990s. The two preceding decades were hardly an easy ride for India’s space scientists. There were incidents of people blocking an Isro bus and jeering at its occupants. On another occasion, a sounding rocket failed because of a technical glitch and landed on the premises of a nearby college, prompting protests from students. They took the rocket and paraded it to Isro’s Thumba centre, about four kilometres away, perhaps mocking the scientists along the way. The 1990s, then, was a decade in which India had its share of naysayers about its space ambitions. Newspaper articles and even cartoons questioned the relevance of the country’s space missions. The successes in communications, earth observation and agriculture

## Beyond the skies

- 35:** Foreign satellites launched by India between 1990s and 2014
- 399:** Foreign satellites launched between 2014 and March 2026
- 300:** Overseas space cooperation agreements by India
- 61:** Number of countries with which India is having space-sector tieups
- 5:** Multilateral organisations having space tieups with India
- \$8 billion:** Size of India’s space economy now
- \$40 bn-45 billion:** Projected size of India’s space economy over a decade

## India’s rapid expansion of space launch infra

- India’s second spaceport to come up soon at Kulasekarapattinam in Tamil Nadu
- The foundation stone for the Small Satellite Launch Vehicle (SSLV) complex was laid on February 28, 2024
- Complex to support 20-25 orbital launches annually, with the first SSLV launch targeted for FY27
- In January 2025, third launch pad at Sriharikota at a cost of ₹3,984.86 crore approved
- The facility will support next-generation launch vehicles, human spaceflight missions, and future lunar exploration

were acknowledged, but the real turning point came with the success of the Polar Satellite Launch Vehicle (PSLV) in 1994. It followed the failure of the PSLV’s first mission in September 1993, a setback that cost India nearly ₹150 crore. “For India, PSLV was the turning point. Until then, our space sector was aided by countries like Russia, France and the United States. PSLV and the Vikas engine opened our doors to the international space arena in the 1990s. PSLV was the first Indian launch vehicle to be equipped with liquid stages,” said Sudheer Kumar N, who spent decades at Isro before moving into the private space ecosystem and now works with XDLINX

Space Labs. “This was followed by the success of the Geosynchronous Satellite Launch Vehicle (GSLV), leading to the sector’s takeoff,” he added. During the operational phase of the 1990s, major space infrastructure was built around two broad systems: One for communications, broadcasting and meteorology through the multipurpose INSAT system, and the other for earth observation through the Indian Remote Sensing (IRS) satellite system. After its first successful launch in October 1994, PSLV emerged as India’s reliable and versatile workhorse. Its upgraded versions would eventually power missions such as Chandrayaan-1 in 2008 and the Mars Orbiter Mission in 2013, sending Indian spacecraft towards the Moon and Mars.

The 1990s were also when India began thinking commercially. Antrix Corporation was established in 1992 as the commercial arm of the space programme. Slowly, India began exploring opportunities to sell satellite data, launch services and other space-related capabilities internationally, moving beyond a programme largely funded and driven by the government. Then came the 2000s, when India’s ambitions began reaching towards the Moon and, eventually, other planets. The idea of an Indian mission to the Moon was first mooted at a meeting of the Indian Academy of Sciences in 1999, followed by discussions at the Astronautical Society of India in 2000. Based on the recommendations of these forums, a National Lunar Missions Task Force was constituted, bringing together leading scientists and technologists from across the country. In 2003, it unanimously recommended that India undertake a mission to the Moon.

In a recent interaction with Business Standard, former Isro Chairman G Madhavan Nair recalled a meeting between a group of scientists led by him and then Prime Minister Atal Bihari Vajpayee that helped set the proposal in motion. Their argument was that the space agency had already achieved the goals set by its founding chairman, Vikram Sarabhai: Using space technology for communications, agriculture, weather forecasting and more. It was time, they argued, to aim higher, extending India’s footprint to the Moon, Mars and beyond.

After reviewing the proposal, Vajpayee, in a characteristically poetic flourish, exclaimed: “Let us name it Chandrayaan!”, Nair recalled. The rest is history. The three Chandrayaan missions (in 2008, 2019, and 2023) and the Mars Orbiter Mission (Mangalyaan, in 2013) helped propel India into the ranks of the world’s leading space-faring nations. Some landmarks have already been reached; others are still ahead. Chandrayaan-3’s Vikram lander touched down softly near the lunar south pole on August 23, 2023, followed just over a week later by the launch of the Aditya-L1 solar mission on September 2. Next comes Gaganyaan, the human space-flight programme, targeted for 2027, and the Bharatiya Antariksh Station — its first module already approved, with launch planned for 2028 and further modules to follow by 2035. Beyond that lie a Venus mission and a crewed Moon landing, both pencilled in for 2040. According to Lt General (retd) A K Bhatt, director general of the Indian Space Association (ISpA), the past decade has seen the Indian space sector evolve from an operational programme into a more commercially oriented one, with wider global partnerships, stronger scientific collaboration, technology exchange and joint mission development. The scale of India’s emergence as a global launch hub can be seen in the number of foreign satellites it has put



(Left) Chandrayaan-3’s Vikram lander touched down near the lunar south pole on August 23, 2023; (above) An indigenously-built PSLV-C2 was successfully launched on May 26, 1999, from the Satish Dhawan Space Centre in Sriharikota. It was India’s first commercial launch and the first time Isro deployed multiple satellites (three) in a single-vehicle mission

PHOTOS: ISRO, REUTERS

into orbit. India launched 35 foreign satellites between 1990 and 2014. Between 2014 and March 2026, that number rose sharply to 399. It has also signed more than 300 space cooperation agreements with 61 countries and five multilateral organisations.

**Liberalisation of the space sector** Although economic liberalisation began in 1991, India’s space sector opened to private participation only in June 2020, allowing industry and startups to enter areas including satellites, launch systems and space applications. Bhatt believes the 2020 reforms were the decisive turning point, opening the space economy to commercialisation. Until then, private-sector participation had largely been confined to Isro’s supplier base. The reforms received another push in February 2024, when foreign direct investment (FDI) rules were liberalised. Up to 74 per cent FDI is now permitted automatically for satellite manufacturing and operations, 49 per cent for launch vehicles and spaceports, and 100 per cent for satellite and ground-segment components. “The real shift in the space sector happened in just the past few years: Private players were let in from 2020, the Space Policy was unveiled in 2023, FDI was opened up in 2024, and Chandrayaan-3 showed that Indian space technology is world-class on a fraction of anyone else’s budget,” said Sreeram Ananthasayanam, partner, DigiGov and SpaceTech, Deloitte South Asia. “The road ahead isn’t about proving we can build satellites and rockets any more. It’s more about building the capital, manufacturing scale, harnessing talent and competing in the global marketplace,” he added. Thanks to these reforms, India’s space ecosystem has expanded from just one startup in 2014 to around 440 as of August 2026. The country has also set an ambitious target of growing its space economy from about \$9 billion today to \$40-45 billion over the next decade.

“We have seen a massive spike in private-sector investment in space, too. Both the public and private sectors should work jointly to achieve our space goals,” said Pawan Goenka, chairman of the space regulator, the Indian National Space Promotion and Authorisation Centre (IN-SPACe), in an interview with Business Standard earlier this month. Goenka later added that India has set an ambitious target of conducting 50 launches a year by 2030. “The 1991 reforms gave Indian entrepreneurs the confidence that private enterprise could build for the nation. That spirit drove the IT revolution, and the 2020 space reforms have now carried it into a domain once reserved for the state,” said Amit Kumar, cofounder of space startup Suhora Technologies. Private investment has risen sixfold, from \$100.5 million in 2021-22 to \$618.5 million by March 31, 2026, with as much as \$187 million recorded during the first three months of this calendar year alone. “Isro is going to be the guiding force, looking at larger national-interest projects, while private-sector expansion will add to India’s reputation as a space hub. Isro, the private sector, academia and customers, everyone should contribute to this rise,” Bhatt said. In January 2025, India demonstrated its Space Docking Experiment (SpaDeX), becoming the fourth country to demonstrate autonomous docking and undocking in space. The technology is a precursor to its planned Bharatiya Antariksh Station, as well as future Gaganyaan human-spaceflight missions. Perhaps the biggest achievement of India’s space programme over the past 35 years is not any single rocket, satellite or mission. It is the confidence, once hard to imagine, that the sky is no longer the limit.



ASSET RECOVERY BRANCH, 15, NBCC Towers, 3rd Floor, Bhikaji Cama Place, New Delhi – 110066  
Phone (011) 26164817 / 26197769, e-mail: bom1933@bankofmaharashtra.bank.in,  
Head Office: Lokmangal, 1501, Shivajinagar, Pune-411005



**Sale notice for sale of immovable properties (Appendix - IV –A)**

E-Auction Sale Notice for Sale of Immovable Assets under the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 read with proviso to Rule 8 (6) of the Security Interest (Enforcement) Rules, 2002.  
Notice is hereby given to the public in general and in particular to the Borrower/s and Guarantor/s that the below described immovable properties mortgaged/charged to the Bank of Maharashtra, the possession of which have been taken by the Authorised Officer of Bank of Maharashtra, will be sold on “As is where is”, “As is what is”, and “Whatever there is” on **31/10/2026**, for recovery of the balance due to the Bank of Maharashtra from the Borrower (s) and Guarantor(s) as mentioned in the table. Details of the Borrower/s and Guarantor/s, amount due, short description of the immovable property and encumbrances known thereon, possession type, reserve price and the earnest money deposit are also given as under –

| Sr. No. | Name of Borrower and Guarantors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Amount Due and details of encumbrances                                                                                                                                                                                                                                                                                                     | Short description of the immovable property with known encumbrance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Possession Type                      | Reserve Price / Earnest Money Deposit                                                                                                                                                                                                             |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | <b>1.M/s Shri Gopal Agro Food Pvt. Ltd.</b><br>Regd. Add.: H. No. 52, T/F, B/Side, Tamoor Nagar, N.F. Colony, New Delhi 110065<br><b>Also At: M/s Shri Gopal Agro Food Pvt. Ltd.</b><br>Unit Add.: Khasra No. 793, 794, 797, 798, 799, Pisangan, Lamana, Ajmer, Rajasthan-305202<br><b>2.Mr. Kavinder Kumar S/o Mr. Sher Singh ((Guarantor)</b><br>R/o C-127, C Block, Sector-26 Gautam Buddha Nagar U.P.-20301<br><b>Also At: Mr. Kavinder Kumar S/o Mr. Sher Singh (Guarantor)</b><br>52, Taimoor Nagar Delhi-110065<br><b>3.Mr. Siddharth Panwar S/o Mr. Ganesh Dutt Panwar</b><br>R/o 24-A, Surya Apartments, Kalkaji Extension, Delhi-110019 | <b>Rs. 3,71,77,173/- (Rupees Three Crores Seventy One Lakhs Seventy Seven Thousand One Hundred and Seventy three only) + further interest from 02.01.2025 onwards @ 10.35% p.a + cost, charges &amp; expenses incurred since date of NPA i.e., 31.12.2024, less recovery if any after 02.01.2025</b><br><br><b>Encumbrances: NOT KNOWN</b> | Industrial property admeasuring 13453 sqr. mtrs. situated in Village Lamana, Tehsil Pisangan, District Ajmer, Rajasthan in the name of M/s Shri Gopal Agro Food Pvt. Ltd. comprising of:<br><br>1).Industrial property admeasuring 5200 sqr. mtrs. (0.5200 hectare) at <b>Khasra No. 783</b> admeasuring 0.2800 hectare and <b>Khasra No 784</b> admeasuring 0.2400 hectare situated at Village Lamana, Tehsil Pisangan, District Ajmer, Rajasthan<br><br>2).Industrial property admeasuring 8253.00 sqr. mtrs (0.8253 hectare) at <b>Khasra No. 793</b> admeasuring 0.0894 hectare, <b>Khasra No. 794</b> admeasuring 0.1178 hectare, <b>Khasra No. 797</b> admeasuring 0.1700 hectare, <b>Khasra No. 798</b> admeasuring 0.2821 hectare and <b>Khasra No. 799</b> admeasuring 0.1750 hectare situated at Village Lamana, Tehsil Pisangan, District Ajmer Rajasthan | <b>Symbolic Possession With Bank</b> | <b>Reserve Price:</b><br>Rs. 413 Lakh<br><br><b>EMD Amount:</b><br>Rs.41.30 Lakh<br><br><b>Bid increment Amount:</b><br>Rs. 25000/-<br><br><b>Contact person for queries of auction:</b><br>Ms. Yangchan Dolma,<br><br><b>Mob No.:</b> 8968022441 |

**Date of E- Auction: 31/10/2026, between 1.00 P.M and 5.00 P.M**  
**Last Date of Submission of EMD:31/10/2026 till 12:00 Noon.**

For detailed terms and conditions of the sale, please refer to the link <https://bankofmaharashtra.in/asset-for-sales-search> provided in the Bank’s website and also on Baanknet.com portal (PSB Alliance).

**Date: 27.09.2026**  
**Place: Delhi**

**Authorised Officer**  
**Chief Manager, Delhi Zone**

# Navigate the market’s twists and turns

Take a deep dive into a stock or sector with **Compass** in Business Standard, and gain insights into the trends, triggers, and shifts that could shape market movements ahead.



**Business Standard**  
Insight Out

 [businessstandard](#)  [bsindia](#) [business-standard.com](#)

