

IN THE FIRST PART OF OUR YEAR-END SERIES, WE LOOK AT THE COSMIC MILESTONES THAT DEFINED INDIA'S JOURNEY IN 2023

When India touched the moon & looked to the sun

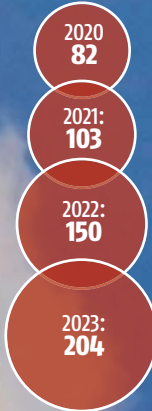
GALACTIC SOAR

Startup funding

Total \$380.25 mn

Year	Amount (in \$ mn)
Up to 2017	38.00
2018	3.08
2019	6.05
2020	22.50
2021	67.20
2022	119.52
2023	123.90

Space startups per year



Source: ISpA

India is only the fourth country in the world — after the US, the former Soviet Union, and China — to have achieved a soft landing on the Moon

SHINE JACOB

Chennai, 17 December

It started from T-Hub, short for “technology hub”, an incubator based in Raidurg in Hyderabad, Telangana. Two former scientists of the Indian Space Research Organisation (Isro), Pawan Kumar Chandana and Naga Bharath Daka, came together to launch a private aerospace company from the incubator. They named it Skyroot Aerospace. Among those who lent support to the venture were Vasudevan Gnana Gandhi, pioneer of cryogenic rocket science in India, and a clutch of entrepreneurs.

This was five years ago, in July 2018. Space was beginning to open up for private entities like Skyroot, but only just. Then came the Moon landing on August 23, 2023, and sent the fortunes of spacetechnology firms skyrocketing.

Skyroot Aerospace has now become India’s highest funded spacetechnology startup,

having raised \$95 million (₹789 crore) so far. The latest round of funding was in October, two months after the Moon touchdown, when it raised \$27.5 million (₹225 crore). In October, it also unveiled its second rocket, Vikram 1, which is expected to be launched early next year. The one before this — South Asia’s first and to date only privately developed rocket — was launched in November 2022.



“The Chandrayaan-3 landing has turned the spotlight on India. Since the event, we have seen a lot of interest, both for investment and collaborations,” says Chandana, Skyroot’s co-founder and chief executive officer.

India is only the fourth country in the world — after the United States, the former Soviet Union and China — to have achieved a soft landing on the Moon. And so far, it is the only to have landed on the lunar south pole. Moon was just one milestone the country achieved this year. Barely a week after the landing, on September 2, it reached

another with the successful launch of its maiden observation mission, Aditya-L1, destined for the Sun, from the Isro space centre at Sriharikota, Andhra Pradesh. These triumphs have served as catalysts, invigorating the aspirations of burgeoning space startups. Skyroot is now preparing for Vikram 1’s orbital and commercial launch.

According to the Indian Space Association (ISpA), till November-end, Indian space startups amassed \$124 million in funding, compared to \$120 million in 2022. The year welcomed 54 new such startups, taking the total to 204 and marking a significant surge from 82 startups in 2020.

“The success of Chandrayaan, followed by the Aditya mission, re-established India’s capability in space, which had a follow-through effect, even for the private sector,” says A K Bhatt, director general, ISpA. India’s cooperation with other countries also grew at a faster pace during the year, he says. “Our cooperation with the US and France was more significant. The signing of critical emerging technologies and Artemis Accords were major milestones,” he adds.

The Artemis Accords signed in June

LOOKING BACK

Getting set for low risks

Governance and business models of regulated entities came in for special attention of the central bank this year, reports Raghu Mohan



ILLUSTRATION: AJAY MOHANTY

PAGE 14

▶ M&As FEEL THE CHILL AS DEAL VALUE PLUMMETS 63% IN '23 P2

▶ HOSPITALS LOOK TO ADD BEDS AS PATIENT FOOTFALL RISES TO 8% P2

marked India’s 27th country collaboration with the National Aeronautics and Space Administration (Nasa) and Isro in space exploration. This is expected to help India’s private space players expand their presence globally, boosting India’s efforts to increase its footprint in the space economy. Turn to Page 6 ▶

duty rates applicable to completely knocked down (CKD) units. Presently, fully assembled CBUs exceeding \$40,000 incur a 100 per cent tax, while those below \$40,000 face a 70 per cent charge. In contrast, CKD units, involving reassembly in the destination country, are subjected to a 15 per cent import duty.

If Tesla receives the CKD duty rate and decides to launch its proposed \$25,000 (₹20 lakh) car in India, it would not only enter the luxury car market but also compete with India's mid-range and premium car segments. Although the MG Comet stands as the most affordable electric car offered by a prominent automotive player in India at ₹7.98 lakh, the average price of EV cars in India typically ranges between ₹12 lakh and ₹15 lakh.

Tata Motors, the leader in India's EV market, sells its highest-selling Nexon EV priced between ₹14.74 lakh and ₹19.94 lakh. Tata reached a milestone in June by selling 50,000 units of the Nexon since its launch in January 2020.

Moon...

The nod to OneWeb India from the Indian National Space Promotion and Authorisation Centre (IN-SPACe) to launch Eutelsat OneWeb's commercial satellite broadband services further bolstered India's prominence in global connectivity. OneWeb India is the country's first organisation to receive this authorisation. Eutelsat OneWeb is a low Earth orbit (LEO) operator.

The approval to OneWeb India is a critical step towards achieving the country's ambition of providing universal connectivity and realising the vision of a Digital India, says an official from Eutelsat OneWeb.

"We saw the completion of our LEO constellation as a result of the successful launches from Isro and NSIL (NewSpace India Ltd). We now

have more than 630 satellites in orbit delivering broadband around the world," the official says. NSIL, a public sector undertaking under the government's Department of Space, is responsible for producing, assembling and integrating launch vehicles with the help of industry consortium.

The official adds, "OneWeb and Eutelsat also successfully completed a merger, creating the world's first GEO-LEO satellite operator with India's Bharti as the largest shareholder in the merged entity."

Amidst these milestones, the year unveiled a game-changing Indian Space Policy in April 2023. "This is a landmark policy because it allows the private sector to have presence in all possible categories – launching, communication, application and even carrying out asteroid mining in the future," Bhatt says. "The FDI (foreign direct investment) policy," he adds, "is critical for the development of space and is in its final stages."

The policy lays down the roadmap for Isro's transition from an organisation manufacturing operational space systems to the research and development of advanced technologies. It also allows Indian consumers of space technology or services (such as communication, remote sensing, data-services, launch-services, etc) to procure them directly from any source, private or public. Besides startups, the policy is expected to be a booster for startups and around 1,500 micro, small, and medium enterprises (MSMEs).

Besides all of this, Isro's upcoming spaceport dedicated to small satellite launch vehicles (SSLVs) in Thoothukudi, Tamil Nadu, spanning 2,000 acres, promises to provide a crucial commercial platform for private sector players.

Given how space-related ventures are being propelled into prominence, major industrial players are aggressively foraying into the sector.

Tata Advanced Systems (TASL) has tied up with Satellogic Inc, a North Carolina-headquartered company that specialises in Earth-observation satellites, to develop local space technologies. And the HAL-L&T consortium is all set to come up with polar satellite launch vehicle (PSLV) rockets. As 2023 draws to a close, experts agree that it will be etched as a golden year for the Indian space sector, signalling a transformative era characterised by innovation, collaboration and growing opportunities.

SBI...

Khara says the loan sanction pipeline from the corporate sector is to the tune of ₹4.7 trillion. This may not entirely reflect in the immediate credit growth as there is a lag between sanction and disbursement. At the same time, he says if one looks at the investment commitment of India Inc, the ₹4.7 trillion figure augurs well.

"The more important indicator would be if you see the investment commitments that the corporates have made. In 2022-23, the investment commitment was to the tune of ₹35 trillion. And the year prior to that, 2021-22, it was to the tune of ₹22 trillion. And this year, in the first half of the financial year, it is to the tune of ₹20 trillion. When I look at this data, this augurs very well in terms of the likelihood of investments getting reflected in banks' loan books. But it gets spread over a period of time," he said.

NPS...

"Unlike employee provident fund (EPF), NPS is one of the very few 'proper' pension products available in the market. Due to the lack of awareness, people majorly deploy it to earn tax rebates available under various sections of the

