

OVER THE MOON

As the Chandrayaan-2 Orbiter readies to land, India Inc prepares to take off

SHINE JACOB

Chennai, 22 August

“Welcome, buddy!”

This is how the Chandrayaan-2 Orbiter greeted the Chandrayaan-3 Lander Module on Monday, as the two communicated for the first time. This, an industry expert points out, symbolises the emergence of a modern Isro — short for the Indian Space Research Organisation, India’s space agency — conversant with today’s lingo.

Today’s Isro is also comfortable in the midst of private sector companies. Several private sector firms are an integral part of Chandrayaan-3, India’s third moon mission (see: *ONBOARD CHANDRAYAAN-3*). On Tuesday, executives from some of these companies were at Isro’s headquarters in Bengaluru, providing last-minute assistance.

Isro Chairman S Somnath revealed during the launch that 85 per cent of the LVM-3 rocket came from the private sector.

At the end of 2021, according to the latest available official figures, there were 368 space-tech companies in India, compared to 5,582 in the United States and 615 in the United Kingdom. Start-ups, which mushroomed in this area only recently — from 21 in 2020 to 146 now — were not involved in the Chandrayaan mission.

“There were also participants providing sub-components and materials. Of course, in future space missions, startups will also be part of this private player space ecosystem and the Lunar economy,” says A K Bhatt, director general, Indian Space Association (ISpA).

Among the major missions lined up are Aditya-L1, India’s first mission to study the Sun, and the first phase of the human spaceflight programme, Gaganyaan.

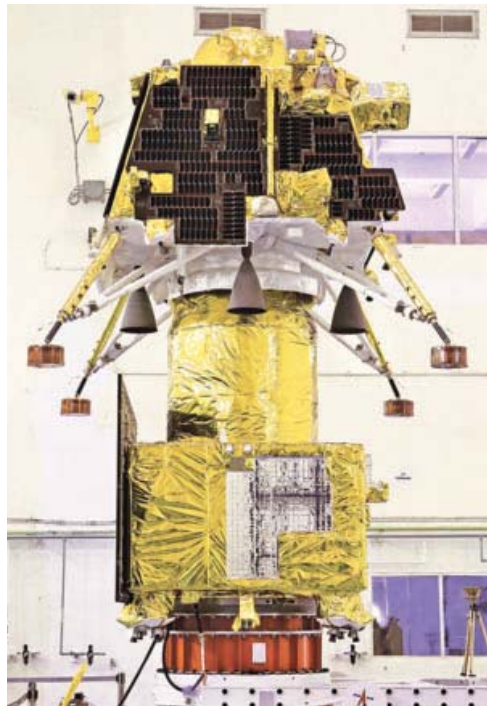
“It is still early stages for the private sector Indian space industry to operate across the value chain, as most have grown by being suppliers to Isro. We need to understand that achieving self-reliance in certain areas, such as end-to-end payload manufacturing, will take time,” says Sreeram Ananthasayanam, partner, Deloitte India.

When *Business Standard* called N Narayana-moorthy, chairman and managing director of Kerala-based Keltron, he had his fingers crossed. A team of 20 from Keltron is working hand-in-hand with the Isro team in Bengaluru to monitor the power modules it has supplied for the moon mission.

“The success of Chandrayaan-3 is going to bring in more confidence to the supplier industry,” he said.

Indeed, the private sector has a lot riding on the moon mission.

Take the case of the engineering, procurement, and construction major, Larsen & Toubro (L&T). It is involved in every aspect of the mission, from manufacturing subsystems to mission tracking. There are other big names in the list of private sector companies aboard the third moon mission, such as Bharat Heavy Electricals (BHEL), the Godrej group, Hindustan Aeronautics (HAL), and others.



It should not surprise anyone if this tribe multiplies.

The space policy released by India in April aims to attract more private sector players, allowing Isro to encourage new-generation entities to participate in space exploration and human presence in outer space, fostering collaboration with domestic and international stakeholders.

However, Ananthasayanam of Deloitte says the sector may require additional tax incentives for a longer duration. “As space is primarily a ‘made to order’ sector, the viability of long-term manufacturing necessitates a domestic ancillary or adjacent industry. Therefore, the design and implementation of any government incentives, such as tax breaks and PLIs, may demand a holistic, value-chain approach,” he says.

PLIs, or production-linked incentives, are a government programme to promote manufacturing in the country.

According to a report by EY and ISpA, India currently has only 2.6 per cent of the global space business. However, with more private players, including startups, entering the field, this share is expected to increase sharply (see graphic).

The rise of startups is already visible.

Pixxel, based in Bengaluru, became the first Indian startup last year to launch a hyperspectral imaging satellite. Alphabet, Google’s parent company, is investing \$36 million in Pixxel — the first major investment in this sector to come in the wake of the Indian Space Policy 2023.

DhruvaSpace, based in Hyderabad, has already