

The Indian Space Research Organisation (ISRO) has made a strategic decision to transfer its Small Satellite Launch Vehicle (SSLV) to the private sector. With the objective of offering on-demand satellite launch services for payloads weighing up to 500 kg into low-Earth orbit, the SSLV has undergone successful development flights.

A Mini-Rocket for Low-Earth Orbit:

The SSLV is a mini-rocket specifically designed to launch satellites weighing up to 500 kg into low-Earth orbit. This compact launch vehicle aims to provide agile and on-demand launch services for nano and micro-satellites. By offering dedicated launch capabilities, the SSLV eliminates the need for satellite developers to wait for availability on larger rockets, thereby increasing flexibility and efficiency in the deployment of small satellites.

Complete Transfer to the Private Sector:

ISRO has made the strategic decision to transfer the SSLV program entirely to the private sector, including both manufacturing and operations. This move opens up opportunities for private industry players to actively participate in the development and operation of SSLV launch services. Through a bidding process, eligible private entities will have the chance to take ownership of the SSLV program and contribute to the growth of India's space sector.

Successful Development Flights:

The SSLV program experienced initial setbacks, with its maiden flight in August of last year encountering a vibration disruption during the second-stage separation. However, ISRO swiftly addressed the issue and undertook corrective measures. As a result, the SSLV achieved a successful launch in February. During this flight, the SSLV placed three satellites, including ISRO's EOS-07, Antaris' Janus-1, and Space Kidz's AzaadiSAT-2, into a 450-kilometer circular orbit. This accomplishment demonstrates the SSLV's capabilities and the potential it holds for small satellite launches.

Promoting India's Domestic Space Industry:

The decision to transfer the SSLV to the private sector aligns with ISRO's larger vision of promoting the growth and competitiveness of India's domestic space industry. Commercial satellite launch services have the potential to contribute significantly to the country's space sector. According to estimates by the Indian Space Association and EY India, the commercial satellite launch services market could contribute \$13 billion to India's domestic space industry by 2025. The SSLV, with its on-demand launch capabilities for small satellites, is expected to play a crucial role in achieving this growth.

ISRO's History of Collaboration:

ISRO has previously collaborated with private entities for the development of its other launch vehicles. Contracts were awarded to Hindustan Aeronautics Limited and Larsen & Toubro for the development of five polar satellite launch vehicles

(PSLVs). This collaborative approach has proven successful in leveraging the expertise of private players while fostering innovation and competitiveness in India's space industry.

About the Small Satellite Launch Vehicle (SSLV):

The SSLV is a three-stage launch vehicle consisting of three solid propulsion stages and a liquid propulsion-based Velocity Trimming Module (VTM) as its terminal stage. It has a diameter of 2 meters and a length of 34 meters, with a lift-off weight of approximately 120 tonnes. The SSLV is designed to launch satellites weighing up to 500 kg into a 500 km planar orbit. Its compact size and dedicated launch capabilities make it an ideal choice for small satellite missions.