

As India's space sector strengthens, a look at Srimathy Kesan's Space Kidz India

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Space Kidz India: The space sector in India is buzzing as the country has successfully carried out several space missions, including Chandrayaan-3 and Aditya-L1. The Indian Space Research Organisation (ISRO) is actively working on progressing India's position in the global landscape on space research and missions. However, ISRO is also giving a boost to space startups in the country to support private sector growth in this segment as well.

One such company is Space Kidz India. Brainchild of Dr Srimathy Kesan, Space Kidz India is an aerospace startup pioneering in design, fabrication and launch of small satellites, spacecrafts and ground systems. "Our goal is to provide economical and sustainable access to space to cater the needs of education, research and the industry. With over seven years of experience, we have launched more than 19 NSLV's (BalloonSats), four Suborbital Payloads, and four Orbital Satellites," Kesan told Republic.

Space Kidz India sent its Satish Dhawan Sat, carrying a copy of the Shrimad Bhagavad Gita and a picture of Prime Minister Narendra Modi aboard ISRO's PSLV-C51 in February 2021.

Kesan's startup takes school and college children to NASA, ESA, GCTC Russia space camps to help them understand the basics of building satellites. "We are the first organisation in the world to have launched satellites through high school and college students," she said.

Space Kidz India's journey

Hers is a bootstrapped company, which started in 2010 as a scientific experiential learning organisation, during which Kesan was given the Ambassador status to NASA, ESA, and GCTC Russia space camps. This was what Kesan was focusing on until 2015. "Whatever money I could mop up that was invested entirely in the research and development of building satellites. Our first balloon satellite was launched in 2015, and then we launched the Sky Sat from Texas," she said.



In 2017, for a competition, Space Kidz India made the world's first-ever 3D printed satellite, which was also the lightest one, and it was launched by NASA. This gained widespread attention, and in 2018, Hexaware partnered with the company to support it as part of its CSR, which helped Kesan in the launch of three satellites.

The space startup ecosystem

According to Kesan, the Indian space industry is at a very exciting stage. "There is going to be an inflow of foreign investments in the space sector now. The collaborative mission between India and Japan to the Moon Lupex is going to be yet another milestone for lunar collaborative missions," she asserted.

The landscape for space startups in India has been evolving rapidly over the past few years, and it has led to startups being presented with both exciting opportunities and unique challenges. "Centre's increased focus on space research and exploration, as well as its encouragement of private sector participation, has significantly

boosted the space startup ecosystem. Initiatives like ISRO's New Space India Limited and the establishment of the Indian National Space Promotion and Authorisation Centre (IN-SPACe) have streamlined regulatory processes and provided a more conducive environment for startups to operate," she said.

Furthermore, access to technical expertise and facilities has also improved. ISRO's decision to open up its facilities and share its knowledge has also been instrumental in helping startups develop their technologies more efficiently and cost-effectively.

However, funding remains a crucial aspect. "While investment in the Indian space startup sector has been growing steadily, raising capital for ambitious projects can still be challenging. Investors are showing increasing interest, but they often seek well-defined business models and clear paths to commercialisation," she explained.

Next steps

According to Kesan, the space industry includes the generation of scientific knowledge, the diffusion of innovation, and creation of markets.

Currently, Space Kidz designs and manufactures student Cubesats, designs and launches Balloonsats, launchpad facility for launching balloon satellites, and science awareness camps or astro camps. Moreover, it also has a training wing called SKI LABZ, which is working on creating new curriculum and learning programmes for students across the globe.

"Extending our service further to the next phase of bringing space closer to everybody, we are working on a concept called the Space Rickshaw. Space Rickshaw is a new Space-as-A-Service platform from Space Kidz India, which aims to provide rapid access to space

at economical pricing to make access to space as quick and easy as booking a shared auto," she explained.