

India's first private launchpad readies for takeoff



ROCKET SCIENCE

2017: Agnikul Cosmos formally incorporated as a company in Chennai

2018: Agnikul gets incubated at IIT Madras and becomes a part of the Airbus Accelerator

2021: Successfully fires single piece 3D printed engine — Agnilet and achieved steady state. It also raises **\$11 million** Series A round

2022: IN-SPACe (Isro's arm to handhold startups) gets inaugurated and Agnikul signs a deal with IN-SPACe. Agnikul also gets India's first private Launchpad and Mission Control Room at Sriharikota

2023: Commences vehicle interface checks at Agnikul Launchpad at Satish Dhawan Space Centre

2024: Gets ready for its launch in FY24

PHOTO: AGNIKUL WEBSITE

SHINE JACOB

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At Satish Dhawan Space Centre in Sriharikota — a place that marked the majority of golden moments in the Indian space sector — another history is set to be made. Preparations are in the final stages by the Chennai-headquartered space-tech startup Agnikul Cosmos for the maiden launch of India's first-ever private launchpad and the second rocket launch by a private sector player.

Srinath Ravichandran, co-founder and chief executive officer of Agnikul, told *Business Standard* that if final steps are cleared, its launch vehicle Agnibaan will take off from Sriharikota during the current financial year itself. Agnibaan is a two-stage launch vehicle with the capability to carry up to 100 kilo gram payload to

an extent of around 700 km to the lower earth orbit. Another speciality of Agnikul launch will be that it will be the world's first single-piece 3-D printed engine, fully designed and manufactured in India. The vehicle has the capability for a plug-and-play engine configuration that is configurable to match the mission's needs.

"We are in a phase where all the paperwork is completed. Only the last steps are left. Testing has already been completed, most of the works have already moved to Sriharikota. We are very close to it. The launch is very likely to happen during the current financial year," Ravichandran said.

It was in November 2022 that a private company, Skyroot Aerospace, successfully developed and operated launch vehicle Vikram-S, on a sub-orbital flight from SDSC SHAR, becoming the first player to do so.

"Skyroot launch proved that it is possible for a private launch in India. We want to build on that and prove that we now have the technological capacity to go to orbit as well. The name of the vehicle is also a sub-orbital technology demonstrator, because we want to showcase the entire technology required to go to orbit," Ravichandran added.

Unlike Skyroot, Agnikul will not be coming up with a sounding rocket. It will be a controlled vehicle, similar to an orbital class vehicle, where it lifts off vertically and tries to follow a pre-programmed trajectory. "It will be similar to the PSLV launch — vertical lift off followed by going over the ocean and then accelerating upward, tilting down, and following a similar profile. For us it is all about validating autopilot, and of course launch pad, and the engine," he added.