



TDB signs agreement with ideaForge for ₹151 crore RDI support to develop YETI heavy-lift autonomous aerial logistics vehicle

Indigenous VTOL platform designed to transport payloads of up to 200 kg, with a targeted range of 200 km, to advance towards TRL-9

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Strengthening India's capabilities in autonomous aerial systems and next-generation logistics, the Technology Development Board (TDB), Department of Science & Technology (DST), Government of India, has signed an agreement with ideaForge Technology Limited, Mumbai, Maharashtra for financial support of ₹151 crore under the Research Development and Innovation (RDI) Fund.

The project, with a total project cost of ₹302 crore, focuses on the development of YETI, a heavy-lift, long-range autonomous aerial logistics vehicle, with the objective of advancing the technology from Technology Readiness Level (TRL)-4 to TRL-9. The financial support will be provided through debt financing.

Designed for demanding operating environments, YETI is an autonomous vertical take-off and landing, fixed-wing hybrid unmanned aerial vehicle (VTOL-FW UAV) intended to transport heavy payloads over long distances. Its proposed capabilities are aimed at addressing logistics requirements in areas where conventional transportation can be difficult, time-consuming or operationally constrained. The platform is designed to carry payloads of up to 200 kg, with a targeted range of up to 200 km and an operating altitude of up to 6,500 metres above mean sea level. Its weather-resistant design is intended to support operations in challenging environments, including high-altitude regions, deserts and marine conditions.

A key feature of YETI is its ability to take off and land vertically while retaining a fixed-wing configuration for longer-range operations. The vehicle is designed to operate from relatively small, unprepared landing areas measuring approximately 15 metres × 15 metres, enabling deployment in locations with limited ground infrastructure. The platform incorporates distributed and redundant propulsion and power architecture to improve fault tolerance. Its proposed capabilities also include GNSS-denied navigation, a

communication link of up to 200 km, swarm operations and containerised transportation for rapid deployment. The design is intended to enable the vehicle to be transported and set up quickly, supporting logistics missions across geographically challenging locations.

The development of heavy-lift autonomous aerial platforms has growing relevance for applications requiring the movement of essential supplies across difficult terrain. By combining vertical take-off and landing with long-range flight capability and substantial payload capacity, YETI is being developed to address a distinct segment of the unmanned aviation and aerial logistics market.

The RDI-supported programme will facilitate further technology development, engineering, integration, testing and validation required to progress the platform towards TRL-9, subject to the applicable technical, safety and regulatory requirements. The project falls under the Deep Technology sector, with Intelligent Systems and Robotics as the sub-sector. It reflects the growing importance of indigenous autonomous systems that integrate aerospace engineering, propulsion, navigation, communications and intelligent control.

Shri Rajesh Kumar Pathak, Secretary, TDB, said, *“The development of advanced autonomous systems is opening new possibilities for addressing complex operational and logistical challenges. Indigenous heavy-lift aerial platforms can play an important role in improving access to remote and difficult-to-reach locations. Through the RDI Fund, TDB is supporting technology-intensive projects that require sustained investment to progress from advanced development towards deployment. The agreement with ideaForge reflects our commitment to strengthening India's capabilities in autonomous systems, robotics and next-generation aerospace technologies.”*

Speaking on this development, CEO and Co-founder of ideaForge Technology Ltd., said, *“YETI represents a generational leap in what India can design, build, and operate autonomously. Our armed forces and our logistics networks face the daily reality of reaching where roads end, and weather doesn't cooperate. YETI is our answer to that challenge, which is engineered not just to fly, but to deliver, reliably and repeatably, in the conditions that define the toughest operational environments. The government's confidence in ideaForge through the RDI framework is a reaffirmation that Indian deeptech players are now ready to carry the weight of national capability-building.”*



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