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Defence indigenisation needs private sector participation

Bengaluru: The opportunity for defence indigenisation in India offers 'low hanging fruits', but needs to incentivise private sector participation.

In an interactive session organised by the Engineering India Foundation and ProSIM R&D on Saturday, participants including Tamilmani, Director General of Aero, and Shamasundar, MD, ProSIM R&D, discussed the various opportunities that India proposes in defence indigenisation.

"Streamlined mechanisms, where the private sector players are guaranteed of the returns on their investment in development of technology has to be ensured," said Shamasundar. He further said that India needs an agency like DARPA (Defense Advanced Research Projects Agency), which is responsible for the development of emerging technologies for use by the military in the US.

Appropriate partnerships, Tamilmani said, will help accomplish defence indigenisation. From the government's point of view, an investment of Rs 10,000 crore, over the next 10 years will be sufficient to create essential testing infrastructure in the aeronautical cluster, said Tamilmani.

While the need has been realised, and initial steps have been taken, it will take a while for the ecosystem to respond, he said. "The investment of Rs 350 crore in a 5,000 acre facility in Chitradurga, is one of the steps in the direction. The facility will be operational in 6 months," he added.

India Finalizes \$3B Blueprint for UAV Fleets

Indian defense forces have finalized a blueprint to procure more than 5,000 UAVs over the next 10 years for about US \$3 billion, and tenders will be restricted to domestic companies that can tie up with foreign firms, said a Ministry of Defence source.

Lack of industrial expertise, combined with delays and cost overruns, have stymied past efforts to develop and produce indigenous UAVs for tactical requirements. These efforts also were limited to state-owned companies. "In the future, the private sector will be involved in a big way to meet all future requirements of UAVs," said an MoD official. In the next three to five years, the Indian Army proposes to equip UAVs down to the battalion level, while the Air Force plans to have fully operational squadrons of surveillance UAVs and unmanned combat aerial vehicles (UCAV). The plan includes the induction of many man-portable mini and micro UAVs for short-range surveillance, and nuclear, biological, chemical detection in the battlefield. The Indian Army, Air Force and Navy propose to buy tactical UAVs, high-altitude long-endurance (HALE) UAVs, vertical take-off and landing (VTOL) UAVs, and medium-altitude, long-endurance (MALE) UAVs.

A Navy official said the demand for MALE and tactical UAVs could rise.

Homegrown Programs Underway

The Defence Research and Development Organisation (DRDO) is developing a variety of UAVs for the services, including:

Air Force: Three Rustom UCAVs and one ground station at a cost of \$60 million; two stealth UCAVs called autonomous unmanned research aircraft (AURA) and one ground station for \$75 million; 30 Nirbhay UAVs and unspecified numbers of Lakshya-II remotely piloted high speed target drones at a cost of \$531,687 per unit.

Navy: Three Rustom UCAVs and one ground station for \$60 million with 12 more to come; 10 MALE Rustoms at a cost of \$225 million; four Pawan mini UAVs for \$33.2 million; 50 air- and ship-launched Nirbhay UAVs; three rotary UAVs at a cost of \$232 million; unspecified numbers of Netra micro UAVs for \$50,000 per unit; and Gagan tactical UAVs at a cost of \$55 million with help from Israel.

Army: Three Rustom UCAVs and one ground station at a cost of \$60 million and 12 more in the future; 10 Rustom-2 UCAVs for \$342.3 million; 12 Nishant UAVs at a cost of \$5 million each; and three hybrid mini-UAVs and one ground station for \$350,000.

DRDO is also supplying about 25 Netra micro UAVs to Indian paramilitary forces at a cost of \$50,000 per unit. An MoD source said that in the next two years, fresh tenders will be floated for a variety of UAVs, and that a concept study has been started on development of a bomber UAV and a fighter UAV.

Major programs that have been finalized for the Army include induction of 500 mini and macro UAVs and an unspecified number of HALE UAVs; for the Air Force are an unspecified number of UCAVs, 95 micro unmanned aerial systems and an unspecified number of small VTOL and mini unmanned aerial systems; for the Navy are 95 micro unmanned aerial systems and unspecified numbers of HALE UAVs costing around \$200 million. In addition, DRDO also has an independent unmanned surveillance air vehicle on the drawing board, which is similar to the X-45 and X-47 developed in the US and is also scouting for a partner to develop a solar-powered HALE UAV. Currently Indian defense forces are operating Israeli-made Searcher Mark I, Searcher Mark II, Heron and Herop UAVs and the Indian-made Nishant UAV.