

## Business of arsenals

### Huge budgets are being laid out to modernise ageing defence establishments, and start-ups are lining up to secure their place in the armoury

**Peerzada Abrar**

CAPTAIN N Ramesh was 23, when, as a trainee pilot in the Indian Air Force, he had to bail out from a Cheetah helicopter after it crashed in the snow-laden mountains of Himachal Pradesh. His co-pilot on that ill-fated flight succumbed to injuries. Mr Ramesh was rescued alive after three days. It took a full year for him to recoup, after suffering from severe hypothermia and frost bites. Two decades later, the veteran fighter pilot is undergoing similar emergency situations in a simulated environment designed to hone survival skills.

He is now part of an elite group of pilots, who are being trained at the newly-launched Helicopter Academy to Train by Simulation of Flying (HATSOFF), a start-up venture set up by a soldier-turned-entrepreneur — retired IAF wing commander Chandra Dat Upadhyay.

HATSOFF was set up early this year with an initial investment of \$63 million — raised by way of debt from ICICI Bank; equity investment from Hindustan Aeronautics Limited (HAL); and flight simulator maker and aviation training company CAE.

Mr Upadhyay is part of a new breed of entrepreneurs who are betting on growth in the Indian aerospace and defence sector, as the country's defence establishment lays out megabucks to modernise its forces. These start-ups are building simulators for combat training and operating unmanned air vehicles and robots, in a bid to gain a slice of the \$100-billion budget that has been allocated for defence modernisation by 2022.

“Global firms such as EADS, United Technologies, Honeywell, Turbomecanica, Rolls Royce and Snecma are also increasing their collaboration with local private firms, unlike in the past when such work was outsourced only to public sector firms,” said Ratan Shrivastava, director of aerospace and defence practice at consulting firm Frost and Sullivan, in New Delhi.

Start-up companies also have an opportunity to bid for outsourced projects from top defence laboratories such as The Defence Research and Development Organisation.

“We work with more than 300 emerging companies who are part of many of our projects such as Light combat aircraft, radars, unmanned aircrafts,” said Dr Prahlada, DRDO chief controller, research and development.

One of the fastest growing opportunities for start-ups is the development of Unmanned Aerial Vehicles (UAVs) for surveillance and counterinsurgency missions.

“We aim to reach a revenue target of 5-6 crore in the next five years,” said Puneet Puri, founder Radianx Robotics. Before venturing into defence business,

Mr Puri used to run FlyingFilms.com — a non-stealth start-up, which uses UAV-mounted cameras for aerial photography and videography.

Also poised to join the UAV bandwagon is Aurora Integrated Systems, started by seven IIT Kanpur graduates after they received seed funding from the Tata Group. “These UAVs are like the Drones and Shadow UAVs used by the US Army,” said Nimish Sharma, co-founder and managing director of Aurora Integrated System.

Mumbai-based Ideaforge, incubated at IITBombay, is also betting on the UAV space. Its bird-sized UAV can take off vertically like a helicopter. “We see a \$1-2 billion opportunity in UAV segment in India”, said Ankit Mehta, founder of IdeaForge. The firm is in collaboration with DRDO. They are preparing to pitch their small, bird-like UAV, called Netra, to the Army and homeland security agencies.

Another opportunity for start-ups is video surveillance and security, which is growing at 20-30% annually. As per an Assocham report, the security industry would reach 50,000 crore by 2011. Building visual sensing systems, which sense, analyse and control complex environments, is what Serial Innovations (SITPL) is doing for the Indian defence establishment.

Set up by Arvind Lakshmikumar, who has relocating from the USA to launch his own venture, the Bangalore-based start-up raised angel funding of 2-3 crore in August this year. With revenues of around 10 crore per year, the firm flaunts a list of clients, including the DRDO, Mahindra Satyam as well as the Defence Advanced Research Projects Agency (DARPA).

Such brisk growth has attracted the attention of risk capital investors. Funds, such as Reliance Venture, are expecting to fuel deals between \$1-15 million in this sector. The sweet-spot for investment is in the range of \$7-11 million.

Another equity investor Rakesh Jhunjhunwala has put in 13 crore in Hyderabad-based emerging firm Zen Technologies, which manufactures land-based military training simulators. This includes simulators for hand grenades, anti-tank guided missiles, tanks, artillery and small arms. “We are now planning to provide simulation training for using helicopters and aircrafts to IAF, Navy and Army personnel,” said Ashok Atluri, cofounder and managing director of Zen Technologies. VC firm GVFL also has recently picked up 40% stake in start-up company FairTech Engineering Services for an undisclosed amount.

Despite the boom, start-ups even with robust IP portfolios find it difficult to bag orders, in competition with large industrial groups such as Boeing, HAL, BEL, Tata and L&T.

“We don’t have an ecosystem like that in US and Israel, where government-run organisations fund the start-ups and provide incentives. The irony is that start-ups have to bid for tenders along with defence majors. They even have to pay the money from their own pockets to bid for such defence contracts,” said Pranay Gupta, joint CEO of Centre for Innovation, Incubation and Entrepreneurship, IIM-Ahmedabad.

Industry experts say this gap should be filled to boost more start-up activity in the defence and aerospace sectors.

“In the US, you have support for thousands of emerging firms. Without that happening in India, it will be difficult for OEMs to work along with the Indian defence system,” said Vivek Lall, vice-president and country head, Boeing Defence Space & Security.

For now, with the lure of huge budgets laid out to modernise ageing defence establishments globally, start-ups will continue to line up for a slice of the action.



