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Meeting India's defence needs

Guj startups take small but sure steps

From thermoregulatory winter clothing to machine-learning, AI-based holographic solutions, state-based startups develop vital applications

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The Russian invasion of Ukraine is perhaps the first full-fledged war between two states in recent times, bringing back in focus a country's independence when it comes to its defence requirements as sundry as winter clothing, arms and ammunition to AI-enabled guidance systems fitted in missiles and drones.

The Made in India and Atma Nirbhar Bharat programmes of the Centre has made defence one of its focus areas. Talking at the Defence Ministry's post-budget webinar, PM Narendra Modi had highlighted how only indigenous arms and technology, which no one else possesses or has seen, can spring a surprise on enemy forces.

There are several startups in Ahmedabad that are working in the defence sector using latest technology. These startups are part of the select few that will get to pitch their ideas before a consortium of investors including GVFL, Java Capital, GCCI, CII, TiE Global, MLP, etc. *Mirror* profiles three of them.

Tetrel Innovations LLP

It was founded in November 2020 by Khushboo Patel (34) and Neel Panchal (31). While Patel did MDes (Apparel Design) from NID Gandhinagar, Neel Panchal completed PGDM (Business Entrepreneurship) from EDI, Ahmedabad.

The company has raised Rs 28 lakh from the state government



Thermoregulatory jacket (above left); Vartronics' remote collaboration device (right); Tetrel Innovations LLP co-founder Khushboo Patel (inset)

under the Startup Gujarat scheme.

Tetrel is working on thermoregulatory winter jacket for Indian soldiers deployed in the North and the North East at high altitudes. The challenge is that multiple layers of winter jackets add weight while restricting body movement. The jackets will use graphene to generate and retain heat using artificial intelligence. Tetrel was incubated at PDPU-IIC in Gandhinagar and IHUB.

Futurotec Solutions LLP

The firm was founded by Suketu Modi (42), Mayur Patel (42) and Gaurav Dave (48) in April 2019 in the field of holographic solutions for defence and aerospace.

Some of the products it has created include 3D holographic table, wall, room, stage and gaming arcade. Talking about their line of work, Modi said, "We would like to develop advanced visualisation technology like development of 3D sand model for better planning and decision making at the field level."

Vartronics Techlabs LLP

Founded in 2017-18 by Stephen Serrao (42) and Ketan Kothari (45), it works in the field of immersive data visualisation platform for aerospace and defence applications. It uses machine learning for predictive modelling for strategic decisions.

Explaining about the startup, Stephen Serrao said, "We primarily focus on Extended Reality (XR) and Cognitive Computing to help industries adapt to strategy and technology, rethink their products and services, and redefine their relationships with customers, employees and partners." It has applications not only in the defence sector but also oil, manufacturing, disaster management, healthcare, entertainment etc.

Vartronics was incubated at Defence Design & Technology Incubator of India (DDIII), Karnavati University.

It was the winner at Ideathon 2019 Defence/Homeland Security Category at Vibrant Startup and Technology Summit 2019.

