Meet Bharat Semi, startup behind Indo-US partnership

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Meet Vrinda Kapoor, Vinayak Dalmia, and Mukul Sarkar, the founders of Bharat Semi, who dreamt of creating world-class products in India that would rival global standards. Their journey began at IIT Delhi's image sensor lab, where they first met and conceived 3rdiTech in 2019.

3rdiTech had its breakthrough moment when it was awarded the Army Design Bureau's Award of Excellence for its low-light imaging sensors. After this success, the company went on to get work from the US defence and the UK defence departments, and the team started to focus on building India's first homegrown integrated device manufacturer.

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In 2023, the founders also launched Bharat Semi. "Bharat Semi and 3rdiTech are the two sides of a coin. We are focused on compound semiconductors, which are also getting critical technology but they are not of the same size and scale as those of silicon semiconductors," said Kapoor to *Business Standard* on a call.

India and the US on Sunday announced plans to set up a new semiconductor fabrication plant named "Shakti", which will be among the first multi-material fabs globally, dedicated to enhancing national security. The project will be enabled by support from the India Semiconductor Mission and will be part of a strategic technology partnership among Bharat Semi, 3rdiTech, and the US Space Force.

Kapoor, co-founder and CEO, described the collaboration as a "watershed moment" for India and the US, marking the first-ever transfer of such closely guarded technologies to an Indian entity. "This positions India among an elite group of nations capable of both designing and manufacturing advanced semiconductor chips," she added. Despite the excitement, some details remain unclear, such as the plant's location, the financial investments involved, and its expected production capacity. However, Kapoor revealed that the facility would begin with an initial production capacity of 50,000 units per year. "India currently imports around $1 billion worth of these semiconductors for national security purposes. This facility will not only reduce our reliance on foreign imports but also become a national asset, serving both India and the Indo-Pacific region," she said.

The firm has secured strategic investors, though the founders opted not to disclose their identities.

Kapoor emphasised, "Semiconductors require a sophisticated supply chain, from raw materials to design to manufacturing."

Beyond the defence sector, Kapoor highlighted the broad applications of 3rdiTech's technology, which will extend to industries such as telecommunications and green energy. "We'll meet strategic requirements for next-generation telecom infrastructure and the green energy sector. Our chips will also play a vital role in reducing power consumption in data centers, a critical issue both economically and environmentally," she explained.

Further diving into the details of the agreement, Kapoor explained that the US Space Force along with Bharat Semi will provide 3rdiTech with advanced technical support and training to help scale up the operations of the fabrication plant.

She concluded by acknowledging the government's role, stating, "Prime Minister Modi deserves credit for three key policies—iDEX for Atmanirbhar Bharat in defense, iCET for invigorating critical technology cooperation with the US, and the semiconductor policy, which is transforming India into a global chip maker."