

Devroop Dhar, India CEO & Co-founder, Primus Partners

Published in Economic Times

March 10, 2026 | 12:26 PM IST

How this Pune-based startup is using drones to make confined-space industrial inspections safer



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Article Content:

Synopsis

For Niharika Kolte Alekar, carving a niche in confined spaces became a gamechanger in an industry more privy to using drone technology outdoors or in external environments.

A chance discovery made Niharika Kolte Alekar, Founder of Volar Alta, a Pune-based firm specializing in drone-based inspection services, leave her plush investment banking job and explore the huge market for industrial inspections using drone technology just a month before Covid-19.

Alekar recalls that even though the thrust was on Industry 4.0, some of the most critical aspects of manufacturing were still being done manually on pen and paper, highlighting a huge gap in technical integration. "I stumbled upon drones by default. Also, not having the technical background at this point helped, as I wondered if different kinds of sensors could be mounted on the drone and used for different industrial use cases. So, I studied the market and researched the opportunity that it is likely to disrupt in the next few years," she says.

That formed the genesis on which the idea was shaped, and in February 2020, Alekar decided to quit her job as she saw a significant possibility. "Drones have traditionally been associated more with outdoors, defence, marketing or real estate, but they were not that widespread for industrial use when I was looking at it in 2019. We work in the process industry segment which includes cement, chemical, steel, oil and gas, power, ports and public infrastructure, she contends.

Currently, Volar Alta is working with over 15 large enterprises and has inspected more than 1,000 assets so far.

Carving a niche

Alekar recalls that in the beginning, they focused on renewable energy as a sector that required external

inspections. However, they hit a roadblock soon after when drone rules and regulations were announced. "It was a death blow to the entire industry regarding amendments, and then the liberalised set of regulations got released in 2021. Suddenly 150 drone start-ups sprung up out of nowhere and spoiled the market for everybody. For instance, we used to operate at a triple-digit number per megawatt in the renewable energy segment, which got disrupted, as people started doing it at Rs 300-400 per megawatt. So, I had to step out of that market and found a different niche, which was confined spaces," she adds.

And Volar Alta has adhered to that niche ever since. Along the way, customer education was given top priority to explain to clients how their technology would help improve safety, save costs, and reduce downtime.

In that context, Alekar brings attention to the case of a chimney that stands 110 metres tall; the traditional method would require labour to be deployed for actual visual inspections. "The labour will need to climb up on the scaffolding or hang on to ropes and conduct different types of inspections. It takes 17.5 days on average for a 110-metre-tall chimney, but the same inspection with drones can be done in less than 80 minutes. In essence, we delivered a massive ROI, as this translated to 100% safety, 96% downtime reduction, and about 80-86% cost savings," she contends.

Volar Alta is bootstrapped, but it has received a few grants from international institutions. "We secured grant funding of over Rs 1 crore from the British High Commission, Alstom, Accenture, and IIM Bangalore. Additionally, we also got a government innovation grant of about Rs 15 lakh, all of which we deployed in building our own software platform," she says.

Alekar claims that the company is currently seeing a robust 100% Y-O-Y growth. Though she refrains from disclosing the profit numbers, she says that the company is on a steady growth trajectory. And she believes that they are comfortably positioned for the market, owing to their deliberate focus on confined spaces.

In terms of its diverse team, Volar Alta has domain experts and a development team on board in addition to the front-end and back-end developers.

AI-based industrial inspections

Talking about the AI-driven industrial inspections market for India, Devroop Dhar, Co-founder and Board Member, Primus Partners, says the demand is large in India since a lot of our infrastructure, such as power generation facilities, refineries, transmission lines, railways, bridges, and ports, is still dependent, to a large extent, on manual inspection.

"This is a time-consuming and sometimes dangerous process, depending on the person doing the inspection. The change happening is in the size of the assets India possesses today. With the growth happening in highways, renewable energy parks, telecom towers, pipelines and urban infrastructure, manual inspection is no longer feasible. This is where AI-based inspection comes into the picture. Instead of doing inspections periodically, companies can now do continuous inspections and predict when a problem will arise," he says.

However, Dhar adds that the hardest part for start-ups in this domain is not the technology but the adoption by enterprises. "Industrial firms are risk-averse because failure is costly. An industrial firm will not easily change its inspection workflow unless it has been proven reliable over the years. This means that start-ups have to deal with long sales cycles, high regulatory requirements, and the need to validate their solutions in the field before closing deals. Therefore, although the potential in the market is great, startups must be willing to be more patient, work with large industrial firms and have the capability to support operations on the ground," he says.

It is a philosophy that Alekar has been following diligently. "It is all learning on the ground and a lot of

hard work. It is very important for us to just keep our heads down and focus on building the right AI models to ensure accuracy keeps improving. In the industry that we are operating in, it can result in crores of losses or some other issues in the plant, so we just cannot take that risk as a company," she says, adding that they are in a good position with massive opportunities that India is presenting currently. "This is not just in terms of creating data sets but the sheer volume that the country has to offer, which will ensure that we reach the top very soon," she adds emphatically.