

Singapore's deep-tech startups snare lion's share of funding as VC interest returns



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The phrase “deep tech” is loosely used to describe technology that is sophisticated, novel and tough to replicate. ILLUSTRATION: ADOBESTOCK

Deep Tech



DEEP-tech startups in Singapore have managed to attract the lion's share of startup funding this year, as investors gain confidence in this once-niche space.

Enterprise Singapore said Singapore accounted for about three-quarters of the total deep-tech deal volume in South-east Asia in the first nine months of 2023, with healthtech and greentech attracting the most deals.

Aditya Mathur, managing director of early-stage deep-tech venture capital (VC) fund Elev8.vc, said that although the absolute amount of funding in the past year has fallen, the percentage of investments in deep tech has increased.

This year, Elev8 expects it will be able to close double the number of deals it has in recent years.

The phrase “deep tech” is loosely used to describe technology that is sophisticated, novel and tough to replicate.

Elev8’s portfolio, for example, includes startups involved in rocket-propulsion technology, medical diagnostics and next-generation materials.

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Besides being tough to replicate, these technologies are often also tough to explain – which mean startups may have trouble winning over investors.

Dr Avishek Kumar, whose company VFlowTech offers industrial-grade rechargeable battery systems, said the scene was very different when he started out in 2018.

Investment was elusive for almost two-and-a-half years because “people felt that deep tech takes time”, he said.

Deep tech does take years of research before finally getting something that can be proven on a lab scale, followed by commercialisation, said Bryan Oh, chief executive and co-founder of NEU Battery Materials, a startup that recycles lithium-ion batteries for reusable lithium.

Today, Mathur said he is seeing interest from investors who have traditionally been interested in consumer tech.

Dr Lim Jui, CEO of SGIInnovate, believes interest levels in deep tech have been boosted by the pandemic, as investors have a better understanding of its value – both in financial terms and in terms of potential impact.

“I think people understand that in the next crisis, whatever it is, part of the solution is going to come from deep science,” he said.

This availability of funding is making Singapore a fertile ground for deep-tech startups coming out of local universities and research institutes, as well as for foreign startups, many of which are also attracted by Singapore’s neutrality amid heightened geopolitical risks, Dr Lim added.

The money is not evenly distributed, though.

Joel Ang, principal at VC firm Wavemaker Partners, has noticed more interest in early-stage and post-seed rounds.

Startups that move just past this stage, however, may struggle.

There is a “weird gap” between Series A and B, said Louis Murayama, managing director and CEO of deep-tech VC firm Real Tech.

At the commercialisation stage, when there are higher capital requirements, many companies start stagnating.

Also, even though they have developed a taste for deep tech, many investors struggle with the finer details.

Osman Ahmed, chief operating officer and director of Curium, a startup developing artificial intelligence calibration for autonomous systems, noted that investors are more comfortable with non-deep tech questions, such as those about customer acquisition costs.

“(Our) priority is creating something that is patentable,” he said. “That requires a different type of investor: one who understands deep technical standards, sees value from a longer-term play and has the patience to allow the business to create that defensible moat for the tech to be implemented.”

Without the right kind of investor, however, deep-tech founders may struggle to maximise the potential of their startups.

Said Real Tech’s Murayama: “Your core value often times isn’t communicated by your profit-and-loss or financial statements, but by the know-how and technology you have.”

Dr Ignacio Asial, CEO and founder of DotBio, a startup that is working on antibody therapies for cancer, would like more healthcare VCs in Singapore to support startups like his with growth-stage investments.

Can Singapore rise to that challenge? Deep-tech investing is not for the faint of heart. The costs and risks are high.

Dr Ali Hasnain, CEO and co-founder of Curium, noted that deep tech tends to need a longer runway and highly-skilled workers. This means higher employment costs, and higher funding needs.

Startups may also discover, at the commercialisation stage, that they are behind the curve, said Michel Birnbaum, CEO and co-founder of Mindsigns Health, a clinical-stage cloud-based platform that monitors brain and mental health.

“You don’t know that somebody on the other side of the world is working on something similar, maybe more advanced,” he said. “All of a sudden, when it comes out, that’s it, you’re done – all those years of research and funding goes out the window because somebody has beat you to the prize.”

Is the risk worth the reward? Wavemaker’s Ang thinks so.

“Deep tech is worth backing because we are solving real and meaningful problems that will create huge value,” he said. “Investor confidence will improve as more wins get clocked in the market.”