

DIVING IN DEEP

NEKESA WERE DIVES INTO THE TRANSFORMATIVE POTENTIAL OF DEEP TECH, AND SHARES HER IDEAS ON HOW TO SCALE THE IMPACT OF DEEP TECHNOLOGY SO THAT THE BENEFITS ARE FELT BY ALL

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NEKESA WERE IS THE DIRECTOR OF STRATEGY AT AFRILABS, A PAN-AFRICAN NETWORK OF 225 HUBS ACROSS 47 COUNTRIES.

With more than 15 years of experience in leadership, human resource management, operations and communications, she leads the planning and execution of the network's strategy to consistently elevate innovators across the continent.

Nekesa has worked at the heart of the tech and innovation ecosystem in Africa for more than a decade, including eight years with iHub, Kenya's leading innovation hub.

What is deep technology?

There are several definitions, but I like the one from TechWorks that says deep tech is technology based on tangible engineering innovation or scientific advances and discoveries. It says that deep tech is often set apart by its profound and enabling power, the differentiation it can create, and its potential to catalyse change. Solutions that are built on deep tech are often impactful and have the potential to transform our lives long term, if we invest in a thriving ecosystem to support it.

What does an effective innovation ecosystem look like?

I'd like to explore three pillars that I feel hold these innovation ecosystems in place

and allow them to thrive. The three pillars are time, money, and collaboration. Let's look at time. Take as an example a traditional technology software start-up that can typically get a product or service off the ground and into the hands of users with a minimal viable product and some audience capture techniques aided by social media platforms. Compare that to a deep tech start-up that will take a lot more time to build its first product. We also need money to build a thriving deep tech ecosystem, so we need to be ready to invest heavily. But the resilient nature of deep tech means that when we get it right, there'll be higher returns as well.

How does deep technology benefit us in Africa?

Think about the impact of farmers who can have peace of mind and more sound investments because they're able to make more informed decisions using data on animal and crop disease. Think about the impact that has on food security across the globe. Think about the ability to provide accurate, early and accessible diagnoses of respiratory infections. Think about what this means for life expectancy and the health of communities across the globe. Think about the lives saved by enabling people to access genuine medicine, regardless of where they are around the world. Think about these solutions and the contribution they make to sustainable development goals on

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A Deep Dive into Deep Tech

- Seven key deep-tech sectors are biotechnology, artificial intelligence, photonics/electronics, drones/robotics, advanced materials, blockchain, and quantum computing.
- Between 2015 and 2018, disclosed private-sector investment in these sectors grew by an average of 22% per year, equalling nearly \$60 billion in total investments. Corporate venture capital is also playing an increasingly active role.
- African innovators have a lot of work to do to attract investors. Indian start-ups raised \$10.6 billion in 2019, which represents about \$8 per person. In the US, start-ups raised \$136.5 billion, which is about \$400 per person. The entire continent of Africa raised \$2.02 billion, which is only \$2 per person.
- Data from Briter Bridges shows there were 69 disclosed deals in 2019, ranging between \$50 000 and \$1 million, totalling \$21.7 million of investment in Africa. Most of this went to fintech, e-commerce, and healthcare. There were 98 disclosed deals of more than \$1 million, totalling \$1.25 billion in 2019. Most of this went to fintech, energy, and healthcare.

THINK ABOUT THE LIVES SAVED BY ENABLING PEOPLE TO ACCESS GENUINE MEDICINE, REGARDLESS OF WHERE THEY ARE AROUND THE WORLD

health and well-being, and the African Union's targets to eliminate hunger and food insecurity by 2025. But most of all, think about how these solutions have the potential to enable Africans to live with dignity.

How much interest is there for deep tech?

The data shows us that there's an increasing interest in investing in deep tech globally (see sidebar). Unsurprisingly, most of the funding is going to countries with mature innovation ecosystems, and Africa is playing catch-up. In fact, despite the rise in venture capital funding, Africa still receives less than 1% of the global share. But the good news is that these

numbers are rising. Even in 2020, with the global economy slowing down, African companies are still making deals. The majority are in fintech, e-commerce, and health, which have been the backbone of solutions to manage the pandemic. This tells us that investors will always be looking to invest for impact. That's why we now need more investors to invest in time, as well as impact, to see the opportunity and that deep tech is a sure bet, if we get it right. **T**

