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Africa: The Big Deal

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Enrich in Africa · ENRICH in Africa has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101004709. · Digital Collective Africa · French South African Tech Labs Cape Town · iHub · eFront a part of BlackRock · Startupbootcamp AfriTech

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Acknowledgments

A very special thank you to those that contributed to this report

Maxime Bayen - (Catalyst Fund)

Dario Giuliani (Briter Bridges)

Zach George (Launch Africa)

Catherine Young

Salma Bagdadi (Smart Capital)

Ashim Egunjobi (Octerra Capital)

Anthony Kamini (Enza Capital)

Philip Kiracofe (SBC)

Eimear Costigan (WESGRO)

Kamo Motung (Launch Africa)

Aparupa Chakravarti (Botho Emerging Market Groups)

Zeineb Chabchoub (GIZ)

Carine Vavasseur (DER)

Aly El Shalakany (Cairo Angels)

Chris Whyte (African Circular Economy)

Ramian Diaz (Satgana)

Faith Blakemore (Enrich in Africa)

Khaled Ben Jilani (AfricInvest)

Mike Mompi (Enza Capital)

Matsi Modise (Furaha Afrika Holdings)

Kaylee Bielfeld (Methys)

Cerin Maduray (WWF)

Foreword

Launched in Cape Town, South Africa in 2017, AfricArena supports the creation of market access and investment opportunities for its ever-increasing community of tech startup founders, angels, incubators and accelerators, corporates and Venture Capital (VC) investors. AfricArena produces research content, hosts both digital and in-person events, and operates a digital platform all of which provides over $3m worth of opportunities/exposure to African tech founders.

The AfricArena Tour

Throughout the year, the AfricArena Tour hosts digital and face to face events in the US, Europe, Asia and across Africa, fostering the availability of capital to African tech founders by showcasing the best Seed, Series A and Series B startups in Africa.

The AfricArena Summit

At the end of every year, the AfricArena Grand Summit sees tech startup founders, corporates and investors gathering in Cape Town; the home of the African tech community, to share ideas, take part in pitches, hear and thought-leaders share their insights, and participate in several collaborative side events such as the AfricArena Founders Boostcamp and AfricArena VC Unconference.

Innovation and ecosystem challenges

All year round, AfricArena and its corporate and institutional partners run +/- 20 open innovation and ecosystem challenges to identify high-potential startups at various maturity levels. Over the past four years companies, having been selected through the tour events to pitch at the AfricArena Summit, have subsequently raised over $220m in funding (see appendix).

Research

Through its Research and Editorial team AfricArena provides knowledge and insights via its weekly content including articles, podcasts and research papers, all of which are available on the AfricArena Wired mobile applications iOS and Android and AfricArena.com

Purpose of this report

This AfricArena State of Tech in Africa report, issued annually, aims at providing all interested parties with insights and knowledge about the trends seen in the African tech sector. Its goal is not to add another set of analytics, but rather to add value by telling some of the key stories behind the numbers, and making sense of the underlying trends. We hope this is a valuable read for anyone interested in the developments and potential of the African tech ecosystem.

We constantly strive to learn and improve, so please do not hesitate to engage with us!

Thomas Hart | *Dan Mabbyalas*
Nathaniel Witbooi | *Christophe Viarnaud*
Ropah Musvaire | *Crosby Hunda*

Executive Summary

What are the innovations and investment trends that defined the tech African ecosystem in 2022 and what does it look like going into 2023? Operating at the intersection of tech startups, major corporations & investors, AfricArena draws on the insights from experts, researchers, venture capital investors and ecosystem partners on trends that define the state of tech in Africa for 2022. The report delves into the state of tech innovation in Africa, the most dynamic sectors, the main challenges & opportunities for the startup founders, how corporations utilize open innovation approaches, the investment landscape, and much more.

Africa as a startup investment destination continues to grow despite the global economic crisis and venture capital investors keeping their funds close causing a slowdown in investments to startups around the world. Funding for the African tech sector and startups with in the sector, "grew +8% to $6.5 billion, through 764 rounds, with debt funding doubling in the year (+102% to $1.5 billion in 71 rounds) to compensate for a slight decline in equity rounds (-6% to $4.9 billion in 693 rounds)", according to Partech (2023). This hybrid framework of accessing funding by African startups using both venture capital and debt funding is what has kept the tech market growing within Africa during a period of economic and VC investment slowdown. In addition, African startups set deal records with startups like InstaDeep securing a record breaking acquisition of $685 million.

However, although Africa did grow in funding secured by African startups in 2022, it did not escape some bumps along the way. During the first quarter of the year we saw a slowdown of investment in the African market due to the impact of the Ukrainian and Russian war and the instability of the global economy at the time. But the African market bounced back in the second quarter of the year with record deals. These record deals gave rise to the growth of the tech sector in Africa when again investment slowed in the 3rd and 4th quarter with only deals above $5 million dollars being secured. Maxine from The Big Deal report states there was a 30% drop year on year in 2022 compared to last year (2021) on the smaller deals. Smaller deals consist of less than $5 million dollars. While there was an increase of deals above $5 million compared to last year with a 14% increase.

This slowdown of investment into African startups trying to secure funding below $5 million will continue into the first and second quarters of 2023, but from data reported by market analysis like Partech and The Big Deal, there will be a gradual increase of deals being made going into the fourth quarter of the year and into 2024. Thus, for the start of 2023, venture capital investors are in a state of dry powder where they will hold onto their funds, grow them and then venture into the African market in the last half of this year and in 2024. This analysis of data and the outcome of analysis on African marketing going into 2023 will be discussed in the first and sixth sections of this report. In section one, we provide an in-depth chat with Maxine Bayners on his Big Deal Report of Africa for 2022 and give analysis on some of the key findings of his report. In the last chapter of our report, section 6, we provide an in-depth analysis of Partech's State of Tech in Africa and

Executive Summary

compare this report with The Big Deal report on predictions for 2023 and the future of the tech sector and investments within Africa.

Source: Briter Bridges, 2023

In 2022, the top 5 Investors in Africa was led by Launch Africa securing (50+ deals in 16 African markets), Y Combinator (38+ deals in 7 African markets), LoftInc (29+ deals in 8 African markets), and Flat6Labs (18+ deals in 2 African markets), and Techstars (18+ deals in 4 African Markets). Like the last decade, FinTech dominated the deals with an average of +-39% in 2022 and +-4% decrease from last year. However, 2022 was also a good year for startups in the emerging sectors of climate-tech, health-tech, clean-tech, deep-tech, bio-tech, agri-tech and e-logistics, with clean-tech taking roughly 25 - 38% of deals in 2022. The success of these deals and the growth in the many of the different tech sectors in Africa can be attributed to the building of bridges between successful and innovative startups and venture capital firms in Africa and abroad that meet and engage at tech events, summits and conferences across the African continent. One such event is the VC Unconference that is hosted by AfricArena. The VC Unconference, is a deconstructed conference that brings together investors from across the African continent, the UK, Europe Asia in an unfiltered exchange of innovative ideas and collaboration that will enhance the process of investing on the African continent and the development of tech ecosystems. This event and the outputs of the exchange of ideas, theme and action between different sector investors, public enterprises and private partners is discussed in section 2 of the report in detail and with outcomes to be implemented going forward into 2023.

The success of growth in investments for the ever developing African tech market during a turbulent period in the global economy and a slow down in venture capitals, can be attributed to a number of factors. Recently a number of African countries, including the Big 4 (Nigeria, Egypt, Kenya and South Africa), have followed on from the successes of Tunisia's Startup Act that provided policy and legislation that opened the markets for startups and venture capital investors and allowed for supportive resources to be directed at growing innovative Tunisian startups. Since the induction of the Startup Act in 2018, Tunisia has grown rapidly as a startup investment destination for VC investors from $5 million dollars in 2017 to $23 million in 2022, making it one of the top ten tech startup ecosystems in Africa. Senegal has followed suit by implementing their Startup Act in 2020, while 3 of the Big 4, Nigeria, Kenya and Egypt are busy drafting their development of policy and legislation to launch their own Startup Acts into implementation. Only South Africa lags behind due to their government's slowed engagement of policy put forward by a range of tech think tanks, venture capital firms, incubators, startups, businesses and ecosystem institutions under the umbrella of the Digital Collective. Is this

Executive Summary

lack of response on implementing supportive policies for startups, venture capital investors and tech markets affecting South Africa as one of the more favorable tech ecosystems in Africa and is South Africa at risk of falling out of the Big 4 ecosystems? This will all be discussed and analyzed in sections 3 and 4 of the report.

With the impacts of climate change making the world stage since the 2016 Paris Agreement and the ever increasing focus on lowering carbon emissions at the annual COP Summits, climate-tech has emerged as a popular tech sector in which venture capital firms and investors are investing on a global scale. Although climate-tech startups in North America, Europe, Asia and the Middle East dominate the investments deals globally, Africa is being viewed as an emerging market in the sector with VC investors investing $1 billion dollars into African Climate Tech startups in 2022. The Big Deal reports that there was an increase of 25% for African Climate Tech startups securing funding deals since 2021, while Partech put that percentage even higher at 37%. Both reports stated that 2022 was a big year for the tech sector against the domination of the Fin-tech, logistics and retail tech sectors with the climate-tech emerging as a rising star in deals being made, startups launching their products with large uptake from consumers and the impact the sector makes in creating a cleaner, greener and low carbon continent. However, why the differences in increased deals from 2021? Is this because of loosely and interchangeably defined terms for technologies that have a positive impact on the environment and lowering our carbon emissions where The Big Deal has just focused on clean-tech while Partech views climate-tech as the dominant umbrella definition for a number of green, climate and clean based technologies? In addition to these questions, why has climate-tech become such a popular sector with both startups and investors across Africa? All of these questions are discussed in section 5 of this report.

We conclude the report with analysis into the future of venture capital investments and startups in Africa for 2023 and provide an overall view of the State of Tech In Africa for 2022.

SECTION 1

2022 - What happened with the numbers?

REPORT	PARTECH DEBT FUNDING INCLUDED	BIG DEAL JUST DEALS BY AFRICAN FOUNDERS + JUST EQUITY DEALS	BRITER BRIDGES NON DISCLOSED DEALS INCLUED
Amounts Raised			
TOTAL FUNDING IN $	6.5 B	4.8 B+	5.4 B
JUST EQUITY DEALS	4.9 B	4.8 B+	4.8 B
TOTAL DEALS	764	750+	975+
DEALS	764	750+	790+
Per Countries			
NIGERIA #1	1.2 B	1.2 B	1.2 B+
KENYA #2	758 M	1.1 B	1.2 B+
EGYPT #3	787 M	820 M	600 M+
SA #4	830 M	550 M	600 M+
GHANA #5	202 M	N/A	150 M+
Stages			
SEED	1.4 M	N/A	4 M+
SERIES A	8.4 M	N/A	10 M+
SERIES B	18.8 M	N/A	38 M+
GROWTH	49.9 M	N/A	50 M+
Sector - Top 3			
FINTECH	39%	37%	38%
CLEAN-TECH	18%	25%	15%
LOGISTICS	6%	13%	12%

1.1

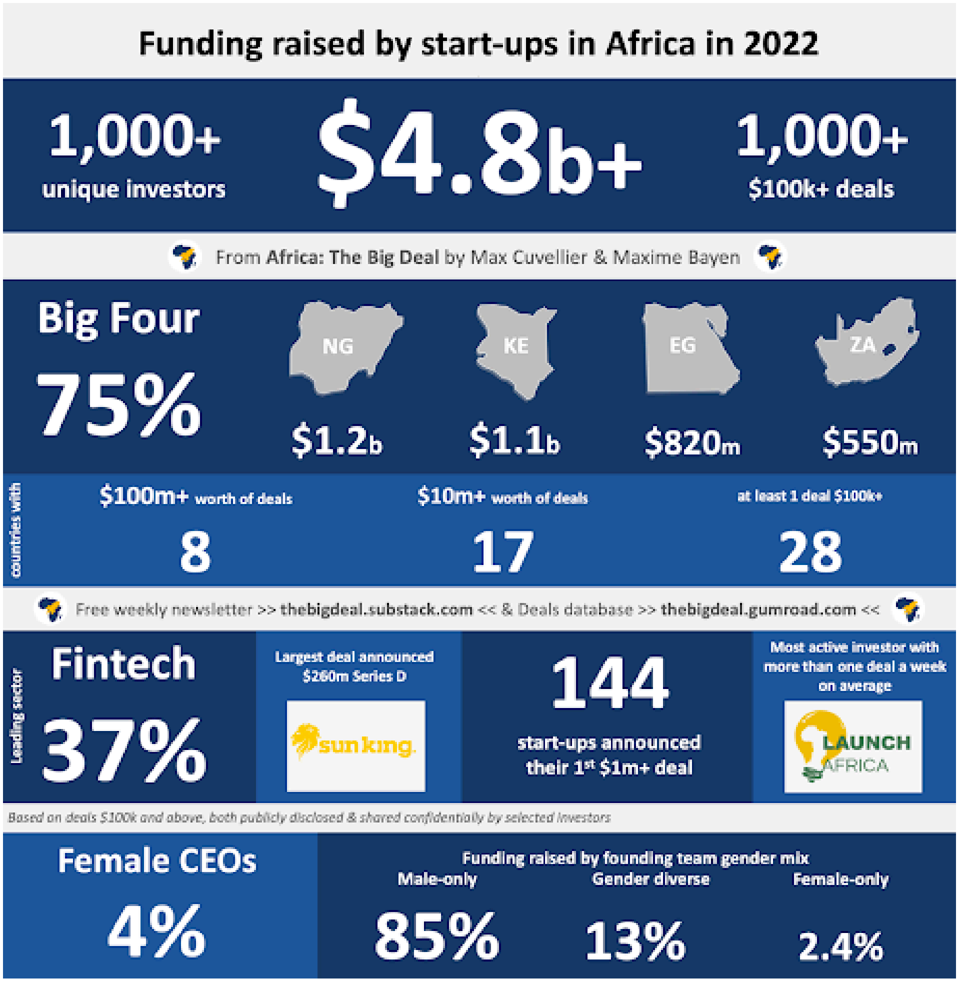
The numbers with Maxime Bayen

Maxime Bayen is a proud husband and father of 3 children. He is currently leading venture building and startups sourcing for Catalyst Fund. In his free time he also co-lead Africa: The Big Deal.

He is passionate about the role of entrepreneurship and tech in economic development, has been working within the African startups ecosystem for almost a decade and a Happy investor and advisor in several startups across the continent.

He's obsessed with innovations allowing populations in Africa to adapt to the negative effects of climate change.

Follow Maxime on social media @MaxBayen and join The Big deal community Here: with a special 20% discount on your subscription.



State of Tech In Africa | Keynote by Maxime Bayen

Q: Differentiating between the various reports - The Big Deal, Partech & Briter Bridges?

When analyzing the reports, the definitions differ significantly from one database or platform to another which means that when analyzing data, you need to be careful. For instance, if you utilize Crunchbase, then Brighter Bridges in comparison to The Big Deal, you will most likely notice three different figures on deals made, investments and startups. The question to ask, then, is why are these numbers so different?

According to Maxime Bayen, the reason why these numbers do not correlate is because a lot of the tech investment data capturing platforms do not focus solely on the capturing of deals in Africa, but are more focused on global deals especially in Europe, the Americas and Asia. In addition, a lot of deal and investment data platforms have different frameworks of data capture where, for example, data would capture a co-founder of a startup in the US as South African and that they are operating in Africa as an African startup. However, for the Big Deal, we cannot capture them as a startup within South Africa or Africa because they never launched in the country but outside the country and Africa. And this is where it's tricky because yes, most of the startups in the continent are registered in the US.

One of the criteria for the Big Deal is to look at where the team is based.? If less than half of the team is based outside of Africa there's definitely something that needs to be checked. It's crucial to be careful when analyzing the numbers according to the purpose of your report and The Big deal is mainly focused on Africa.

Thus, with the Big Deal, we regularly check all deals that have been made or announced on all publicly available platforms around the world. For example, we regularly check on Crunchbase deals thoroughly throughout the year. If a deal is made on Crunchbase and it's not in our platform, there will be a reason for it, same with Brighter.

The second source of difference is the undisclosed deals that we need to be careful with. We have Partech who typically reports on quite a few, especially the ones that are big in numbers. These large undisclosed deals can make a large difference in the data being reported.

Then the last point of difference is when you take a look at the smaller undisclosed deals. These deals are around a hundred thousand dollars and $50,000. Usually most platforms only include them because it takes time and work and this is how we end up often with more deals than others, but not necessarily. That is where differences can come from.

Q: Why is Africa defined by global trends? Because, I mean, we've seen a global trend of the VC market downturn, and in your opinion, how long do you think this will last? If it will ever stop?

Maxime states it's difficult to know the weightage of each reason, but for sure they play a role.

The first reason is that given the privileged $5 billion, it's quite small in comparison to other tech ecosystems. It's way smaller than India, Latam and South East Asia. It's way smaller than any comparable ecosystem with the same population size in the world. When the numbers are already low, you know, they cannot go a lot lower.

The second thing is definitely linked to the types of solutions, the types of startups we put out there, and the types of problems that they're solving. Africa is focusing on solving problems that relate to needs, rather than wants. These problems are not going away. When people decide to spend less, the first solutions that consumers unsubscribe from are the ones that do not correlate with basic necessities for living. Solutions that are always scaling like access to food, access to energy, access to housing, access to healthcare, access to education, primary needs will always be a vocal point for consumers. These are less impacted by a crisis, like an economic crisis situation because in an economic crisis, people see consumption and cut things that they estimate to be less linked to their primary needs. If you can't pay your rent, you're not gonna buy a Netflix solution, right?

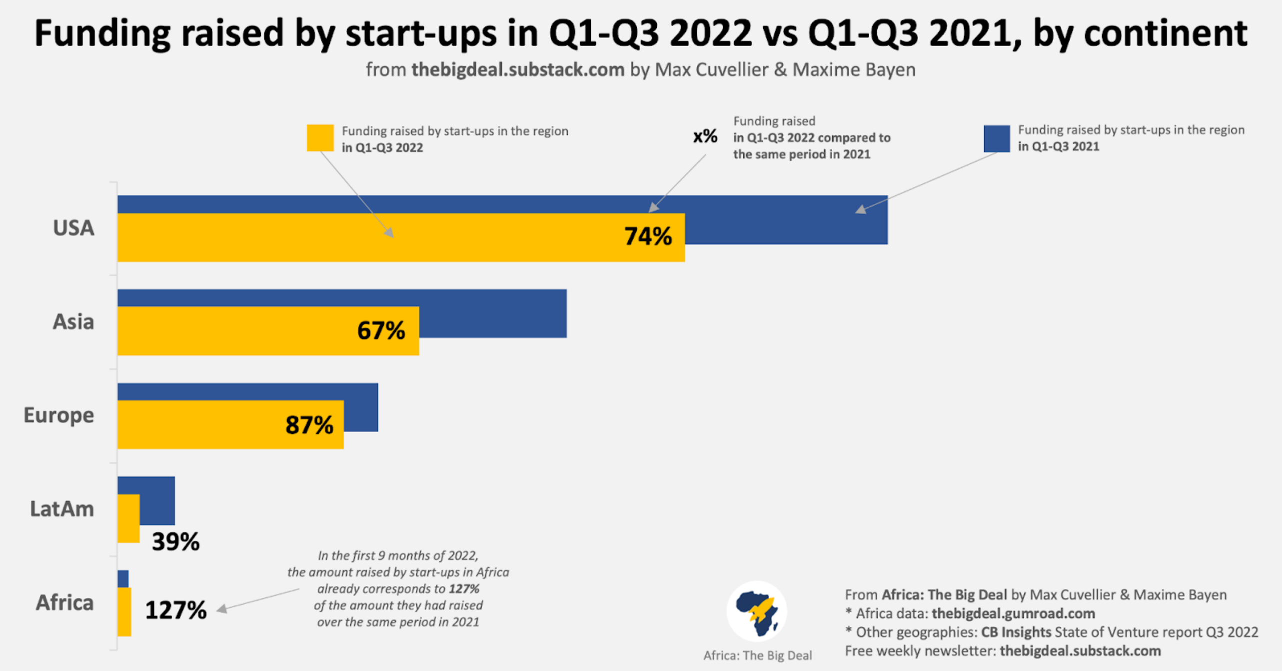
That's how you know, there's sort of a pyramid story here. And, if you look at the startups in Africa, most of them are, in the vast majority, tackling primary needs. Therefore, you know, startups don't necessarily see a slower traction because of the economic slowdown or at least to a lesser extent.

The third one I would say is linked to the fact that investors when investing in Africa and startups in Africa have always been, sort of extra, diligent when it comes to due diligence. Basically paying more attention to unique economics, asking for more documentation, investing in later stage startups than they would do elsewhere. Globally, it's very rare to see a startup raising money when they are pre-product, pre-revenue in Africa. And when you see it, it's like super.

Panel Discussion | Market downturn and implications on Venture funding in the ecosystem

Maxime Bayen met a serial entrepreneur and start-up founder in Egypt that just raised pre-product, pre-venue, And the only reason he was able to do that is because of the massive exit in his previous startup, and it's really a super rare occasion.

Looking at the kind of money startups are raising, for the traction they have and you know, pound fund for pound to compare, Africa to Silicon Valley. The traction that you need to have in Africa to raise a million dollars compared to the traction you need to have in Silicon Valley. This is illustrated in the funding raised by startups, by continent graph.



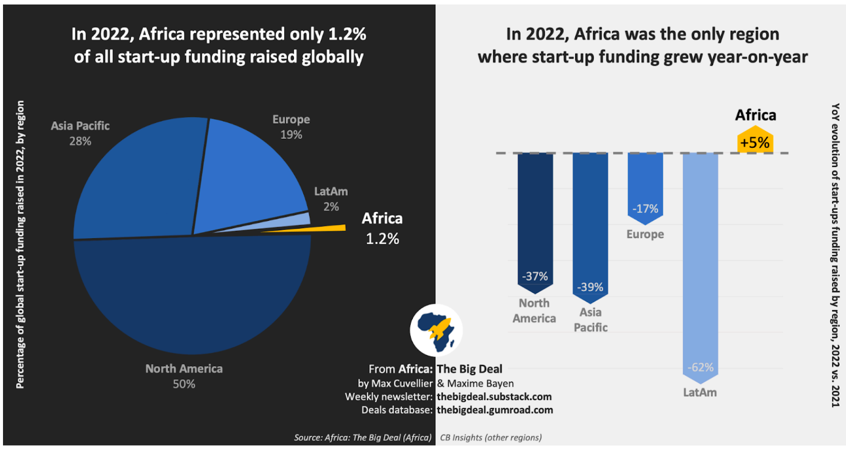
Source: The Big Deal, 2023

Reflecting on last year and the years before, it's much higher. So of course when things slow down, there's not a lot of things that investors are changing in Africa because they were already scrutinizing. Maybe they're doing it a bit more, but again, the impact is more marginal.

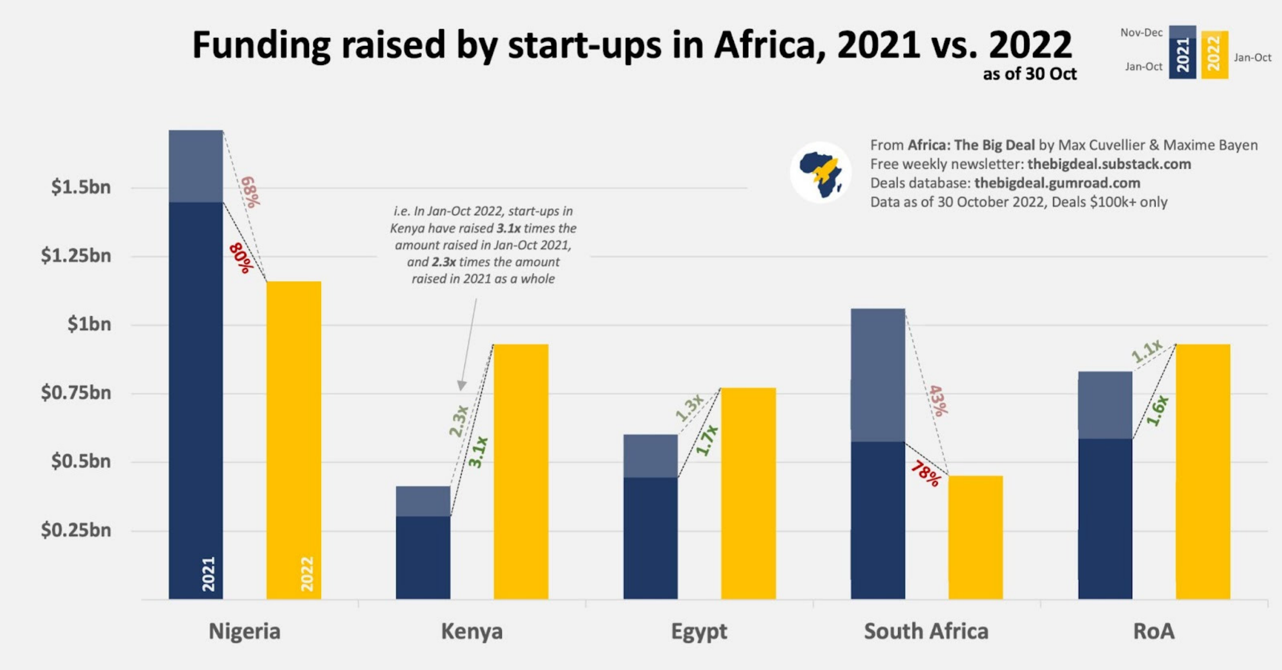
The first thing is the fact that at the end of the day, a lot of the large bonds in Africa are backed by DFI and these kinds of LPs are, let's say more, sticking to their commitment then others. So the money is still there and it will still flow.

Compared to other types of LPs, private LPs are experiencing a slowdown, because of the overall crisis. The question is, will it last next year? I don't know. Basically see what next year will look like. It's not fair to look at the entire 2022.

We need to look at what happened in the second half. And if you look at the second half, it's been much smaller, much slower than the second half of last year. Even looking at the last quarter,October, November, December, that's probably what we will see more of next. There will definitely be a slow down, at least the next six months or 2023 will definitely not look like the first six months of 2022 or the first six months of 2021. It's very likely that it will be lower, a lot lower as the question is difficult to say and what we are seeing is that in terms of the number of deals, things continue to happen.



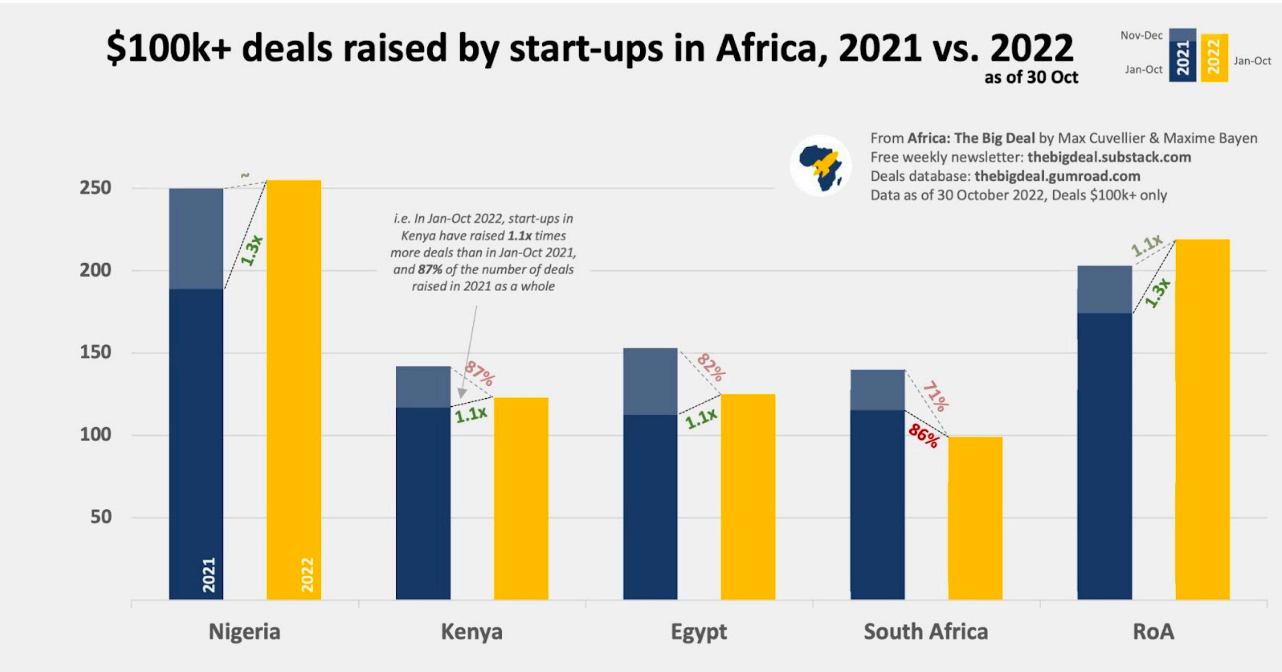
Source: The Big Deal, 2023



Source: The Big Deal, 2023

There’s not less deals now than there were in December last year. The volumes are still there. Investors are still signing checks, but the monthly deals are smaller than what we see in comparison to the very large mega deals (Deals of a hundred million or more). These, we see way less of.

There’s something like a 30% drop year on year in 2022 compared to last year on the smaller deals. But here, by smaller, we are talking of figures of a million dollars in, above round, so it’s not that small. But in this section, a million dollars in the above, there’s actually an increase of deals this year compared to last year, 14% more.



Source: The Big Deal, 2023

These will continue for sure, as the money is there, funds are closed and they are deploying, but you will have a slow down in the very large deals, the mega deals that usually are led only by international investors.

Maybe the second half of the year would be good, therefore, but that's very difficult to say.

We have seen a lot of funds follow similar trends in deploying capital. You could do a macro estimate saying X hundred millions of funds have closed Y amount of deals in 2022. And that gives you an idea of the next three years, the amount of capital that will have to be deployed, assuming most funds have a three year deployment period.

This could be an approach, Because it could be one of the reasons why we haven't slowed down so much, due to some funds that still have closed in 20 21, 20 20, 20 22, they have to deploy.

Q: Part of the global crisis is the fact that all of those companies were overvalued. Do you think the same is true for companies on the continent? And in that case, will valuations be very different?

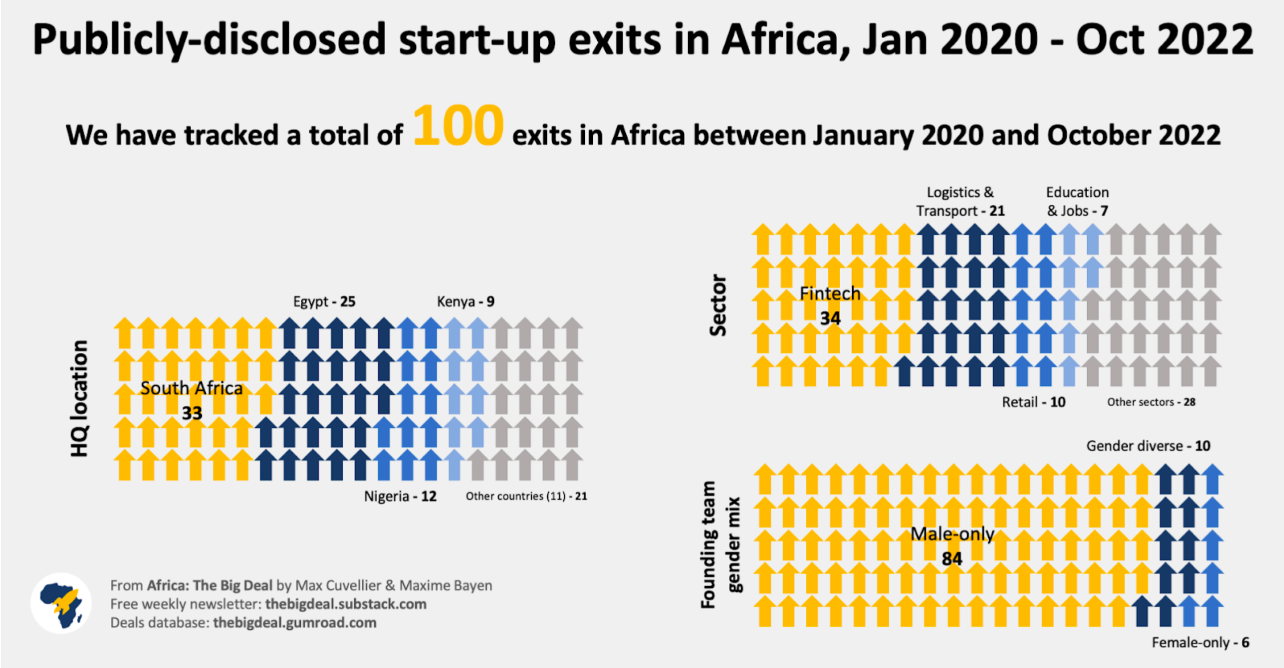
The challenge here is that what we are seeing right now is investors are clearly at the upper end. We've clearly moved from a market that was startup driven. In 2021 startups had the choice to a market where it was way more investment tilted. And so that gave power to the investors right away where they could take advantage of the market and know that the market was in their favor going into 2022 and 2023.

You see investors asking for really ridiculous stuff in terms of valuation support, seeds etc. Asking for massive valuation cuts that have no rationale. There isn't necessarily way less funding, but investors are playing the "there's a global capital shortage, So accept my terms" card. That's a little bit frustrating, for the startups to scale efficiently.

There's a simple way to estimate the valuation of the startup. That is to look at the yield sizes. You can then do the math and say a startup gives typically between 15 and 25% Yield upon the investment. So you can calculate valuations based on that you can see Series B are lower than Series C and series A are also lower than average from last year.

Q: Southern Africa had the biggest exit in 2022, how is that going to impact the future investment in the country and how does that impact the rankings of the big four and the future of the growing economy?

We've seen that South Africa is not totally distant fourth, but it's quite behind Egypt. It's not super far, but it's dropped a lot this year, but if you look at the trend for the last five years, South Africa used to have a commanding lead.



Source: The Big Deal, 2023

In 2018, South Africa slowly started losing the leadership as the top destination of investment into tech startups to Nigeria, Egypt, and Kenya taking over. This was followed by ups and downs between the big 3 and South Africa, but from what the big deal has seen in the data now, it's quite a story here that South Africa is basically not going to catch up with the likes of Cairo or Lagos, and it's in crisis.

Panel Discussion | 2021 Exits grow in MENA 39 vs North Africa 2 | How can North Africa accelerate

Even at the ground level, we can see the loss in dominance with founders of startups in South Africa, however, as Nathaniel you were pointing, there's been more exits in South Africa than anywhere else. So in terms of liquidity events, there's been definitely more in South Africa than elsewhere.

Panel Discussion | How to achieve scale in Africa Mergers & Acquisitions VS organic Growth

Thus, the data existing should be taken with a bit of a pinch of salt in the sense that we know these liquidity events have happened. We don't know how good they were for the investors and the startups. Usually when there's no amount disclosed, it's not necessarily a good sign. In most cases, they just don't disclose the deals because they don't really have to, there's no need as there would not be any further round to raise. Not necessarily all of them are bad, but, there's a number of them that are some kind of distressed acquisitions, but South Africa is showing more possibilities for exits for investors.

When looking at countries regionally, South Africa and Egypt are more interesting than Nigeria, for instance. Egypt's got more IPOs than SA does? But the comparison between Egypt and SA is something interesting to consider. It's possibly more like three on one side, two on the other. Three versus two. This is not an IPO ecosystem yet, but it's just acquisitions. What's interesting though is that we will see a lot more mergers and acquisitions in 2023. There's definitely going to be more in the coming months especially in Nigeria within the Fintech sector.

But the question is, is it regional? Is it across the region? So is it more local startups, buying out startups within their own region? No, it's local, because it's not for expansion purposes or there is a happy expansion purpose that has always been there. And this will continue in an organic way.

Q: When you take a look at Africa's top investors, and you compare it to the data that was released in 2021, has the position changed?

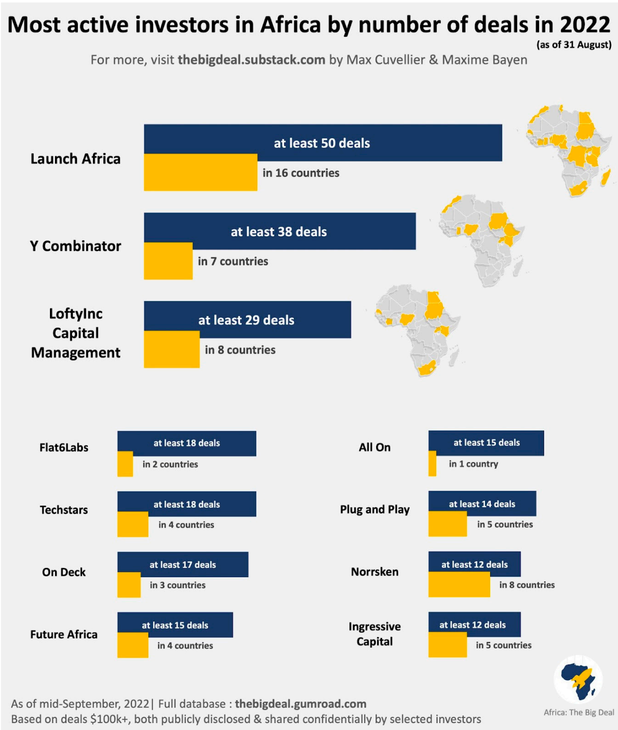
Launch Africa did over 130 deals, I think, and they did actually pretty much the same number last year and this year. 64 last year. They are already at 60 this year. So it's very comparable. It will slow down next year for them. Lots of money for now. So you will have a new ranking for 2022.

In terms of other active investors, they will continue to be pretty super active. YC has slowed down in terms of investment in Africa & Globally, but there will still be a new IC batch soon and they will be started from Africa and there for sure.

Techstars have ramped up a lot where we are seeing a lot of investment into tech startups by Techstars. For Future Africa, we know they will stop doing investment for now, there might not be this list anymore.

500 global is doubling down on Africa, especially in Egypt. So we'll see more deals coming from that front. North Africa is definitely growing as well. The catalyst Bond that I work with will definitely appear somewhere. We're planning to do 10 startups every six months.

There will be some changes in the top most active investors. And of course, you know, when talking about active investors, we need to be careful here because you should be in the top 20 or so. They're all doing mainly pre seed or seed.



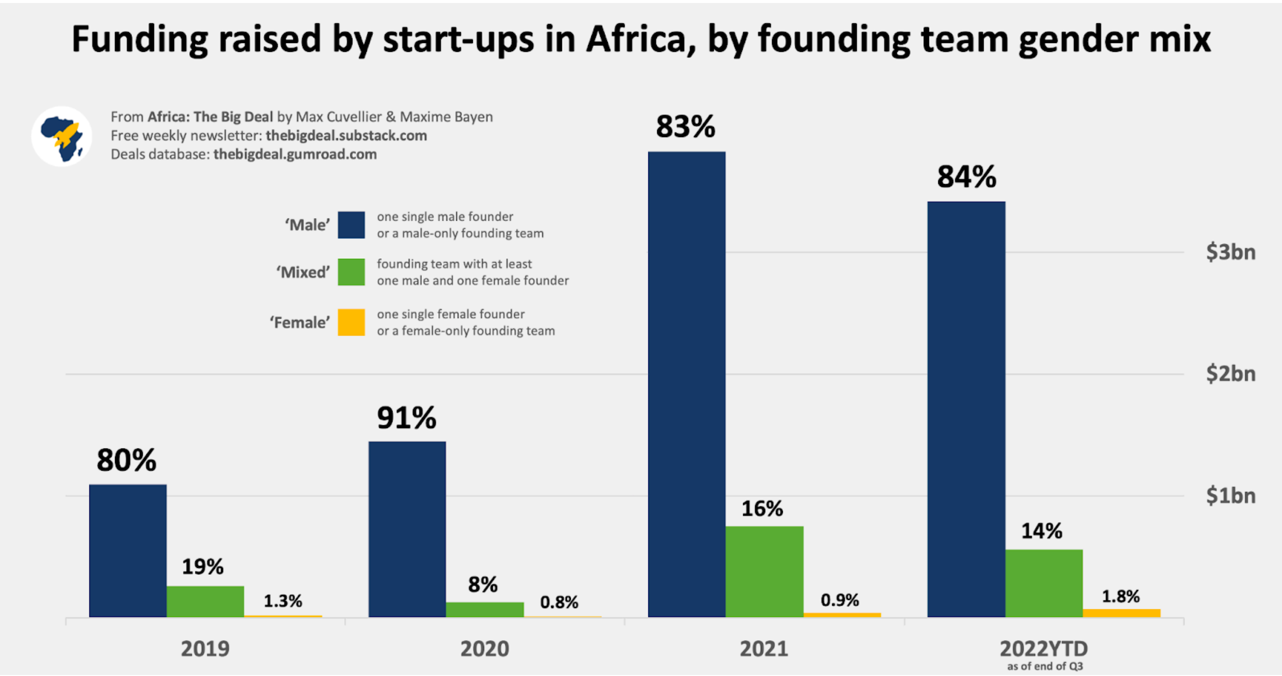
Source: The Big Deal, 2023

Q: Is it ever gonna change the male versus female founders' endeavor?

If we just hope for the gender imbalance to change, it wont, if we just keep saying conference after conference that it is important, we hope things will change, people will change, this will not change. The main role of change is believed to be the role of investors to change this issue, they're not playing their active part to initiate change.

Too many investors are still hiding behind the, what we call, picking the best, kind of narrative, regardless of the gender, of the fundraisers etc. This is not enough to change things, if we really want things to change.

LPs and investors need to have a stronger gender lens when investing, and make it a mandate. At Catalyst Fund they have a mandate of backing 30% of female lead portfolio or co-led startups and that's not easy, especially when focusing in climate tech and Fin-tech ect. It's hard, but if investors really care about the gender gap, this is where it starts. Until investors actually make it part of the Investment narrative and their investment business, this will not change. And this applies to local versus foreign funds.



Source: The Big Deal, 2023

If you don't put actual mandate criteria on this, then of course. It's less work. You know, it's less work to invest in the guy who has started the startup in Kenya and you went to the same school in Stanford. And so, you know, it's all about reducing your risk.

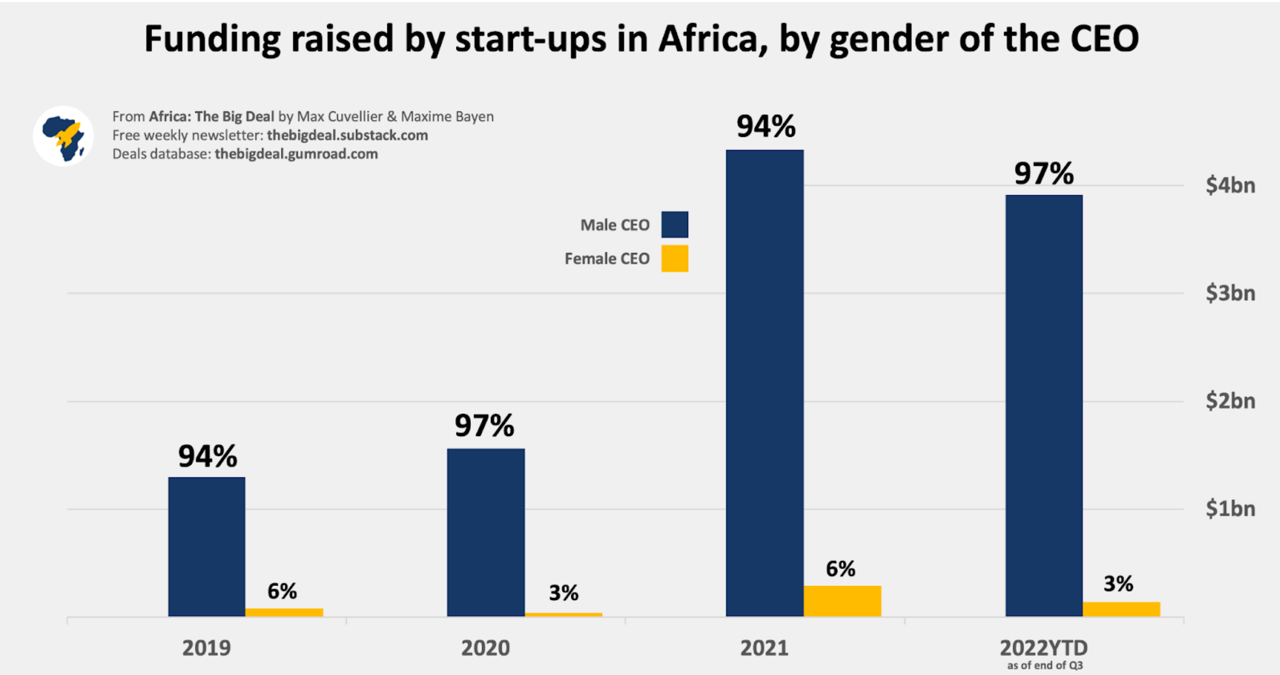
You reduce your risk. You trust that guy, you know him personally. Why would you back the local Kenyan female that you've never spoken with and that factor is huge. This also goes into more efforts to put LPs by investors in having more female, more local farm managers. The team is super important.

More women are getting into tech and raising more funds across Africa for their startups. Catherine Young from Grindstone Ventures/Thinkroom (2022/23), has this to say about female tech entrepreneurs, founders and investors;

"We know that 37% of global GDP is currently generated by females across the world. We also know that the war in Russia is going to hit us. But the reality is that female entrepreneurship really has an impact on economies globally.

There's a United Nations gender response tracker, they do it annually. Only 10% of all policy measures put in place globally are gender sensitive. How interesting is that? The second one, startups with female founders fill their teams two and a half times more with women according to the Kaufman Founda Foundation than those who don't.

Another common factor and condition from a MasterCard study. MasterCard does a study every year and the 2021 study for female founders globally. Of course the states, New Zealand and Canada are Still among the top three. Other African countries like Angola and Ghana are in the top 35 or 45, but the reality is some of our African countries are not even in the top 50.



Source: The Big Deal, 2023

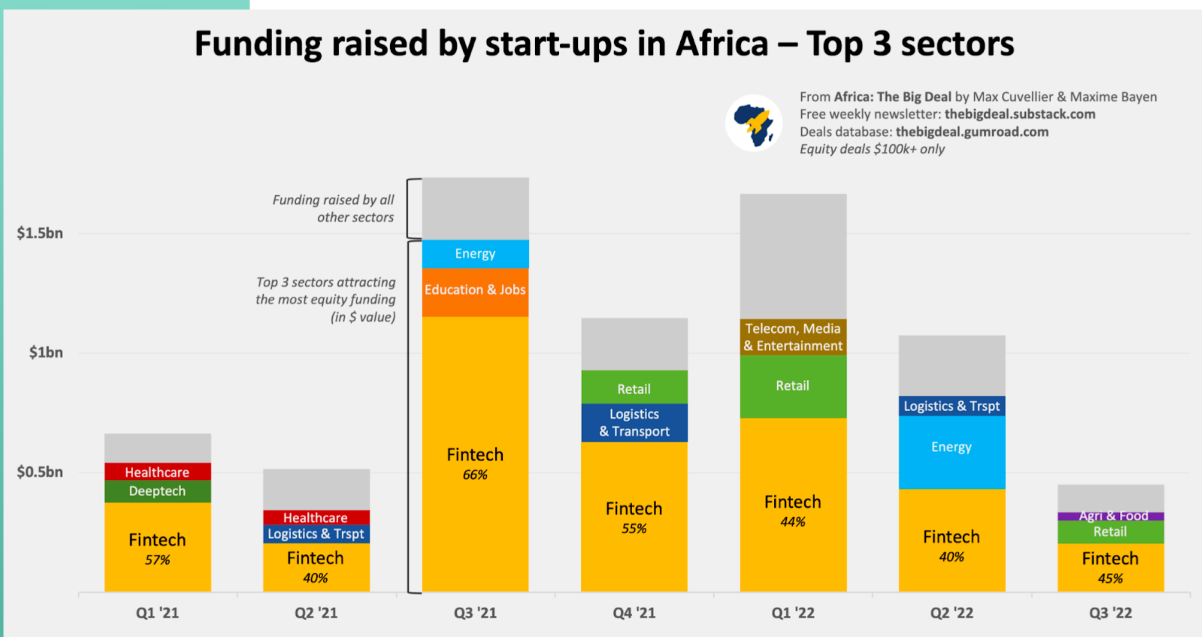
Common factors for those countries who do well from the MasterCard study have this in common: a high rate of female enrollment in tertiary education. Easy and fair access to finance for women specifically, and strong government support in small businesses. So this has an impact on those countries who do better with female entrepreneurship.

Panel discussion | Future Women in Tech | West Africa

And the last statistic is especially for us as VCs, in the room where investment goes into female founded business. The returns are more than two times that of a standard business, just male and a little bit better if it's male and female mix. So it makes financial sense to get the balance of our portfolios.

1.2 Sector, Geographical Analysis

Fintech and other sectors



Source: The Big Deal, 2023

Over the past decade fin-tech has dominated with an average of +-50% of the investment deals on the African continent. With the rise of sector specific funds in emerging fields like, Climate, Health, clean, deep, biotech and E-logisitcs. We are starting to see a climb in other sectors like Cleantech taking roughly 25% of deals in 2022.

Q: The future of FinTech and how is FinTech compared to all of the other emerging markets that are taking quite a bit of the funding funnel for the annual turnover?

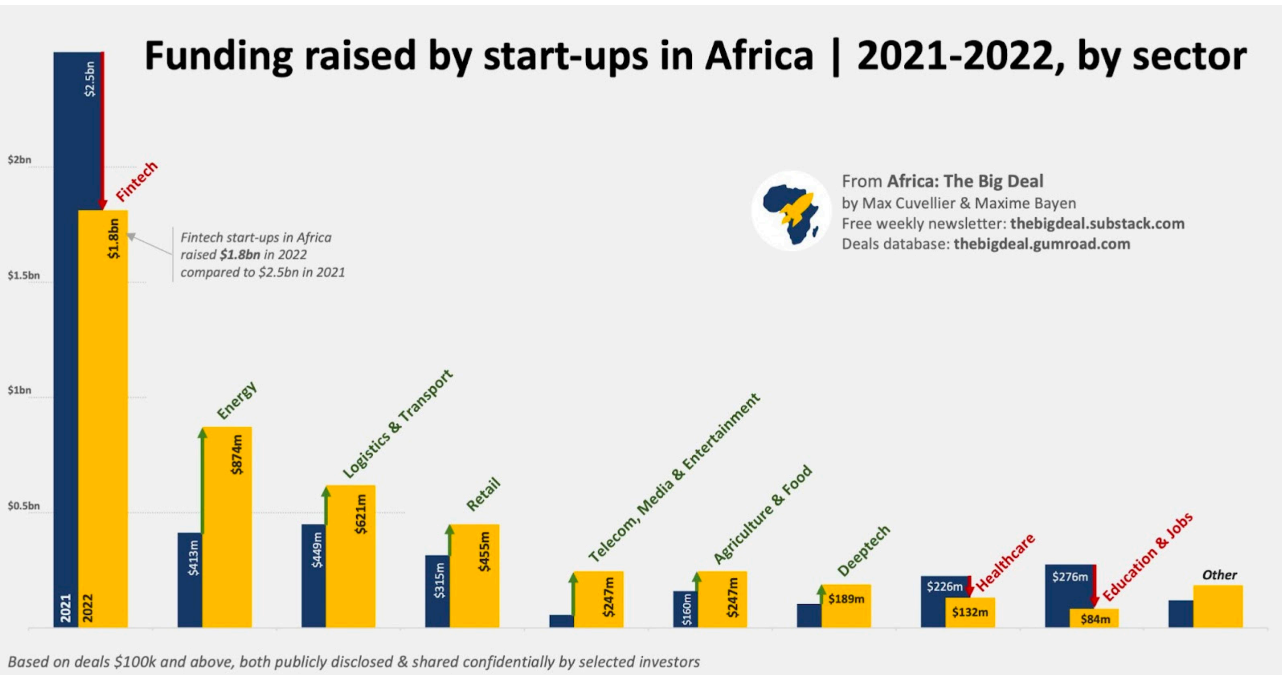
Pure play in Fin-tech is slowing down and before backing another remittance company, another payments company, another wallet or mobile money company, finding companies with hybrid sectors solving multiple focused issues is in demand.

There is definitely something happening there. What we see for sure growing is Related sectors, like energy, access to energy, access to water, waste management, carbon credits related models as well as Food supply chain, cold supply chain and cold chain overall.

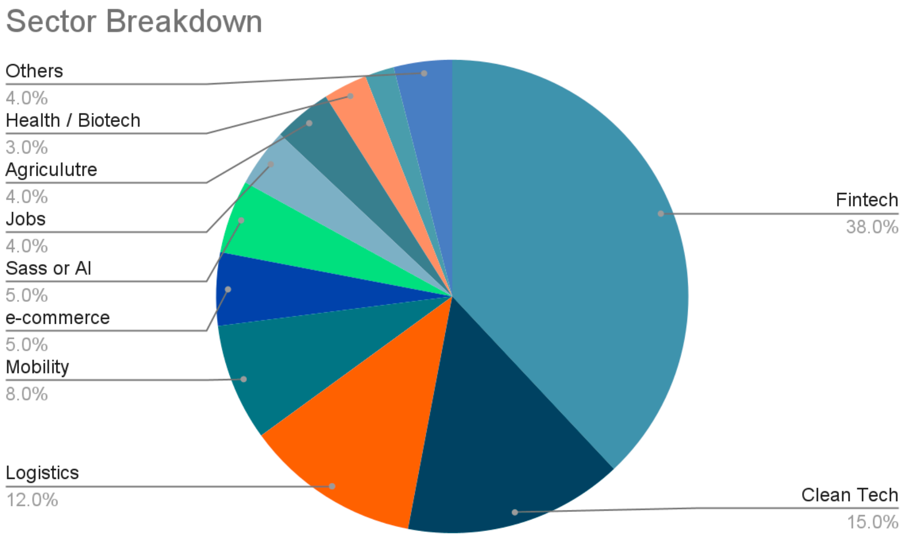
Definitely big logistics. Now really installed the third sector after tech energy. Now you have logistics and transport being really a big thing and then overall retail as well. E-commerce, broadly speaking, but a certain type of eCommerce, right? Not necessarily more of the juniors, but more of the, you know, the Maxa Bay ect.

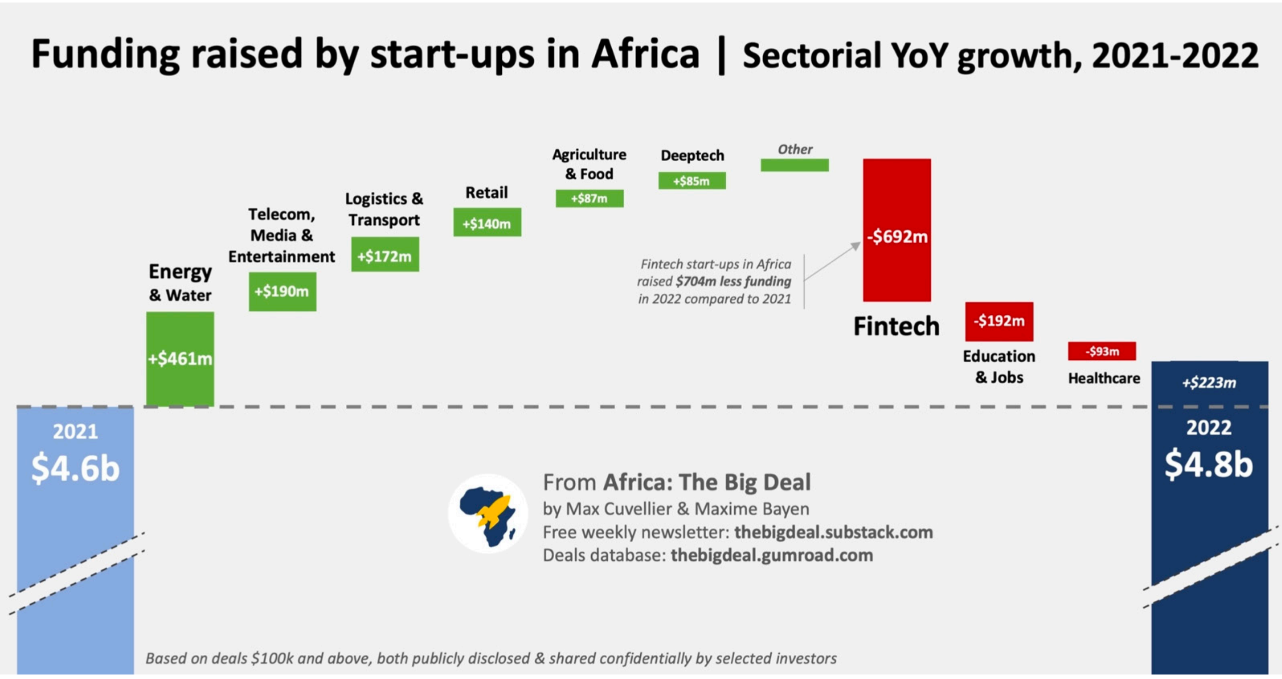
Fireside Chat | Dissecting Industries, Investors & Entrepreneurs in Africa

The climate tech scene for sure will grow. All into one sector because not all agriculture startups are necessarily climate and not all energy startups are climate. So it's a bit tricky, but I would say it's about 25% in 2022, the total investment that went to overall climate or environment- type of stuff, whether it's solar energy, whether it's waste management, whether it's access to. Whether it's resilient agriculture, carbon edits. That's roughly 25% perfect. Not far from FinTech.



According to Briter Bridges the Sector breakdown can be broken down into the following market shares:



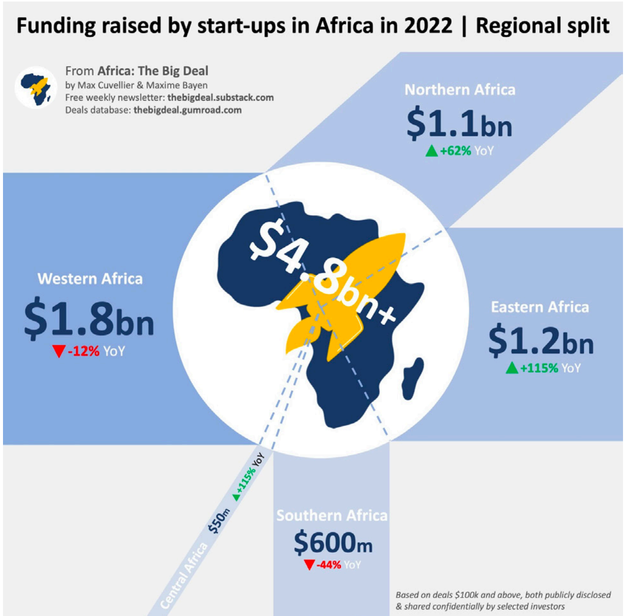


"The Catalyst Fund is very focused on climate tech, but it all depends also how you label things. It's true that FinTech has dropped, in terms of proportion. In terms of proportion of total funding for the year 2022, we are at 38% that went to FinTech versus 4% last year. There's definitely a big drop."

- Maxime Bayen The Big Deal and Leading Venture building and Startup sourcing at The Catalyst Fund

There is definitely a decline in fin-tech focused companies, but it's due to other sectors having an embedded Fin-tech solution that might not be labeled as a purely fin-tech solution. A startup in Agriculture that does lending to farmers, typically would be labeled as an agri-tech because they also do access to markets and so on.

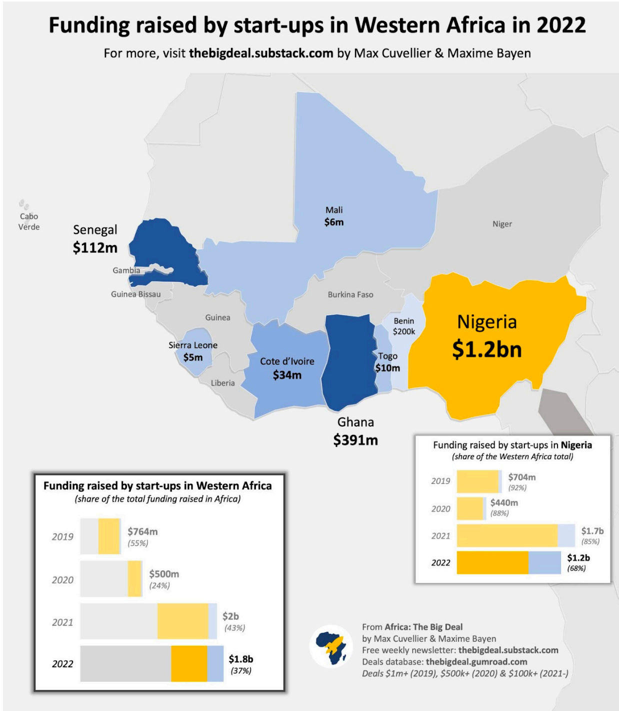
Geographical overview



Last year Nigeria and East Africa were the two biggest tech ecosystems in terms of growth of start-ups and investment. Followed by Egypt and South Africa which switched places with Kenya from 2022. This preponderance of the Big Four countries as the regions of investments into startups since 2022 is illustrated in the graph provided by the Big Deal Report.

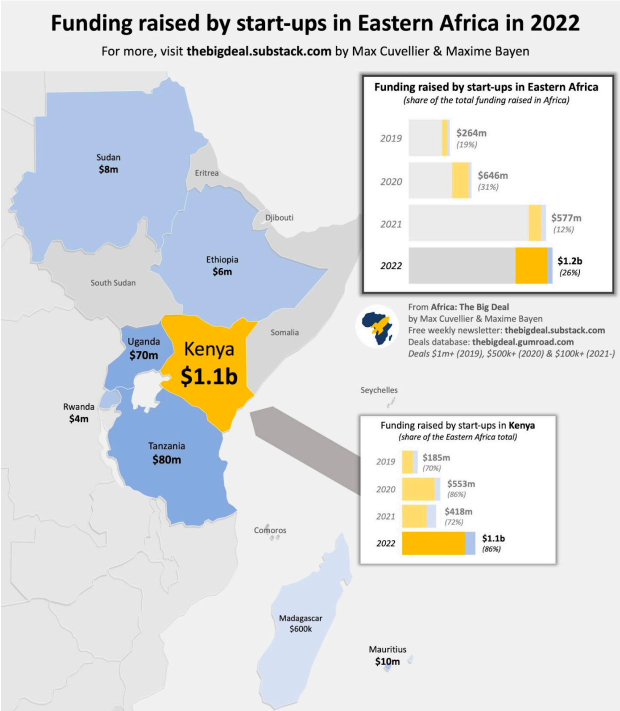
Panel Discussion | The future of VC in West Africa vs the rest of Africa

In 2022, Nigeria retained the first spot ($1.8 billion) Kenya was second ($1.2 Billion), Egypt came third ($1.1 Billion) and South Africa on the decline landed fourth ($600 million).



In 2022, Nigeria retained its top position as the destination of African VC investment with $1.8 billion. This is an increase of over $400 million compared to 2021 but the country remains a strong powerhouse in industry.

In comparison, South Africa lost in investments compared to 2021 with over $300 million. Egypt and Kenya increased in investment which made for a switch in places where Egypt ranked 3ird with $1.1 Billion, and Kenya 2nd with $1.2 Billion.



Panel Discussion | Investment trends: How To Accelerate The African Tech Ecosystem

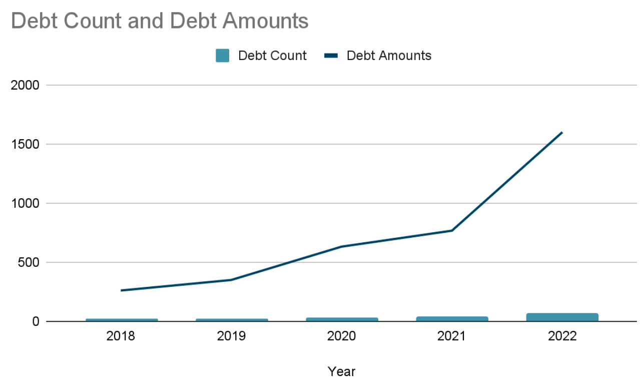
1.3 The rise of a new asset class: debt funding

Africa is home to an increasing number of growth companies in need of capital. Before these businesses start tapping into sources of finance to expand operations, they must evaluate the type of funding that suits their particular needs. There are several capital options for fundraisers, which include traditional sources such as conventional debt from local banks, investment from Private Equity (PE) firms and soft loans from development finance institutions (DFIs). But the structural mismatch between the supply and demand for capital has been a recurring theme in the African investment ecosystem, despite the different channels for raising funds. From the perspective of AVCA "The African Private Equity and Venture Capital Association" this funding option gap has led to the emergence of private debt as a preferred investment type. As the total value of available capital increases and the investment ecosystem deepens, access to credit will be critical to boosting the performance of African companies and the overall macroeconomic environment.

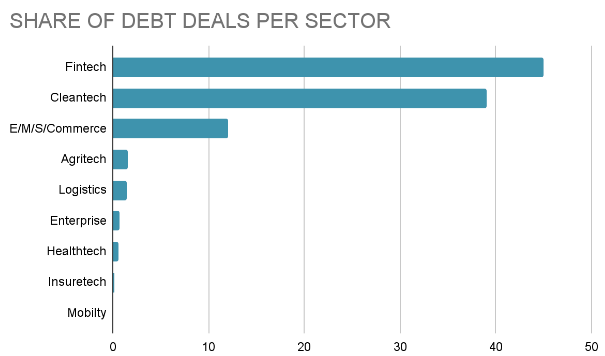
Debt comes in different tiers, with some of the primary types in Africa being:

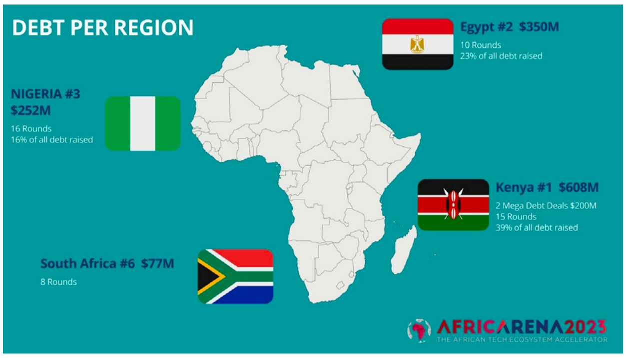
- Trade finance: short-term credit to facilitate international trade or commerce.
- Mezzanine finance: hybrid finance where debt can be converted into equity.
- Bridge finance: short-term working capital or temporary finance before an equity fundraise.
- Corporate debt: short or long term loans taken on a company's balance sheet.

According to Partech there was an increase of +65% YOY debt deals that covered 71 deals on the African continent, accumulating $1.55B (+106% YOY) Total Debt funding in comparison to 2018 that saw 22 deals. Kenya is leading the rise of the asset class as it makes up 39% of all debt funding on the African continent.



With the current economic downturn, equity investments are more expensive in the long run for startups to scale sustainably without cannibalizing their startups over the long run. Debt financing has become a strong alternative to equity investment for startups on the African continent in 2022 as it represents 24% of the entire $6.5B dollars reported by Partech.





With the economic downturn and analyzing the data above, there is a possibility that we will see more VC do hybrid (Equity + Debt Deals) for startups to mitigate the expensive long term effects equity deals have on founders despite VC's who have a mandate to deploy Capital in 2023.

Panel Discussion | 2022 Wrap-Up on Investment Trends in Africa

Key takeaways

- A decline in FinTech and the rise of Climate Tech.
- Kenya and Egypt surpasses South Africa and Nigeria remains number 1 despite decline in FinTech investments.
- Exits grow in SA taking the number 1 spot on the continent.
- The rise of debt financing. VC's might have to approach investment with a hybrid (Equity + Debt) model due to global economic downturn and long-term expense equity financing.
- Ghana over taking Senegal in the 5th most invested continent in 2022 with +- $202M

VC Unconference Outcomes and the future of Venture Capital Investing in Africa

2.1 Unconference Overview

What is the Unconference?

The VC Unconference, is a deconstructed conference that brings together investors from across the African continent, the UK, Europe Asia. It is a unique opportunity for an unfiltered exchange of innovative ideas and collaboration within the ecosystem - all aimed at easing and enhancing the process of investing on the African continent. It has been running for four years and for the first time in 2022 AfricArena hosted a VC Unconference at each of its four major regional tour events in Senegal, Tunisia. Kenya and South Africa, bringing together over 200 investors from across the continent, Europe, UK America, and Asia.

There are no set speakers as everyone is a speaker), no 'program' (only an outcome-driven agenda and a series of structured conversations that are action driven. Over the years various Participants in the Unconference have volunteered to form the Digital Collective Africa initiative which takes and executes the various action items discussed in the unconference events.

The DCA hosts an open-source platform where all output co-created by the members is shared. Members of the DCA work together on projects to limit friction and offer more transparency within the ecosystems.

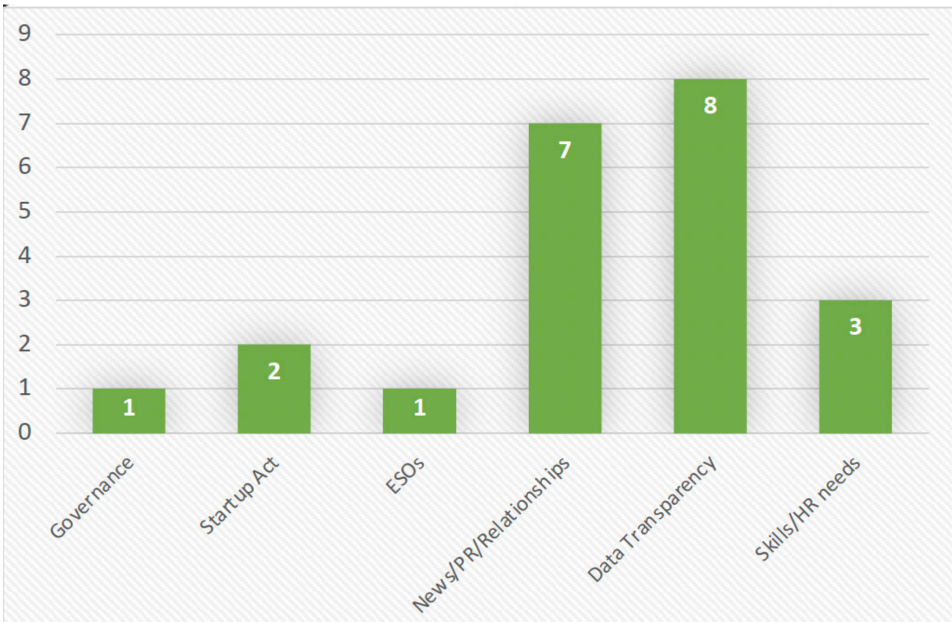
The last year of unconference events can be summarized by four broad themes discussed below, each covering key topics within the investment landscape in Africa.

2.2

Building Bridges of Innovation

Africa is the second-largest and second-most-populous continent in the world made up of fifty-four countries. It is divided into five major regions: Northern Africa, Central Africa, Southern Africa, East Africa, and Western Africa, and within many contexts is often also divided into North and Sub-Saharan Africa. In each of the four regional events hosted by AfricArena in 2022, there was a resounding consensus that there was a need to build bridges of innovation between the five regions and especially so between the North and Sub-Saharan Africa divide.

From an investment perspective, this makes sense on many levels, increased market size, economies of scale, and easier consolidation of companies all of which will likely result in better returns and exit opportunities.



In a survey conducted at the Dakar unconference, data transparency was identified as a key element to drive the bridging of the ecosystem with the building of relationships and PR as a close second. In terms of data transparency focusing on consistent success metrics as well as setting bands for valuations were suggested key action items.

Relationships underpinned by trust within the investment landscape and partnerships between investors, ESO, and corporate were also identified as key drivers to support regional integration.

2.2.1

Barriers to Successfully Building Bridges

Several barriers exist that inhibit the successful building of bridges on the continent. A major theme that was identified across all four unconferences was the disparity between valuations in different regions, making expansion through mergers and acquisitions challenging. An understanding of different markets and at times a willingness of founders to explore other markets also presented a challenge.

Finally, the reality of travel restrictions e.g. a lack of direct flight to various markets, and visa requirements make it challenging for start-ups to expand (visa issues are a critical issue that can be targeted in startup acts).

Is regional integration via start-up expansion all positive?

In East Africa, an investor pointed out the fact that founders often narrated a well-thought-out regional expansion plan and yet more often than not had not invested time to go and explore a neighboring country within their region. This brought the question of whether startups expanding into other markets was all positive.

All fifty-four countries on the continent are vastly different and at times expanding to a new market even within a similar region is almost the equivalent of starting an entirely new business and at the very least a different business model. Language barriers, currency barriers, and differences in regulations all pose significant challenges to expansion. While the allure of targeting large markets like Nigeria is enticing it is not all black and white. Large population size is an attractive investment attribute however other considerations such the purchasing power, legal and political stability, and regulations should also be considered.

KEY ACTIONS

Develop more corporate partnerships to enable faster and easier expansion as corporates control distribution

Increasing the ecosystem partners on the ground for start-ups to make expanding into new markets easier e.g incubator programs provide soft landing programs

Value chain approaches between companies should be encouraged. Instead of one company building an entire value chain, it can partner with a different start-up with the value chain

Increase cross-pollination of deal flow between investors to bring awareness of start-ups in other regions.

Encourage synergies between portfolio companies in different regions facilitated by investors

Achievement of more 'success stories in the regions will increase interest in smaller less developed markets making them more attractive for expansion opportunities

Increase links with major companies to offer maximum backup for startup support (Develop an approach, comms through DCA resource)

2.2.2

Building bridges between Africa and the rest of the world

Africa despite its massive endowment in resources, market size, and talent certainly does not exist in a vacuum. Bridges between Africa and the rest of the world are critical for accessing finance, talent, new markets, and exit opportunities.

Although Africa captured slightly over 1% of total global investment this still represents a significant proportion of both direct and indirect investments on the continent that come through external funds, DFIs and family offices among others.

2.3

What is currently being done

Case Studies:

Africa - Europe: ENRICH in Africa

Conversation with Faith Blakemore

Funded by the European Union (Horizon 2020 program), ENRICH in Africa (EIA) is a project designed to bring together core stakeholders from Africa and Europe to support and strengthen the European and African innovation ecosystem.

According to Faith, Projects like EIA exist as part of the European Union's greater political road mapping, which encourages countries to work together. There is a realization that on a policy level, there is so much that the EU cannot achieve alone and so there is a need for partners like EiA to execute on an operational level in order to deliver the EU's desired impact and outcomes. The EIA project was designed to build a supportive network of incubators and accelerators, piloting services in a "by the community, for the community" ethos, to strengthen internationalization and collaboration in innovation.

Success for ENRICH in Africa would be recognized by a flow of companies, knowledge, and exchange flowing between Africa and Europe, more internalization resulting in more companies setting up offices in both regions, job creation, as well as Economic success, especially for the incubators & accelerators.

The EIA project recently launched the ENRICH in Africa Centre located in Cape Town South Africa, which will continue the work of the project, providing high-level services for incubators and accelerators through the membership program. It will also offer targeted programs for entrepreneurs, such as open innovation challenges and soft-landing opportunities. The Centre is centralized through an online digital platform, providing a digital meeting space for different innovation stakeholders, including incubators, accelerators, innovation facilitators, entrepreneurs, SMEs, and investors.

The project is currently made up of a consortium of the following partner: Steinbeis Europa Zentrum (Germany), Impact Hub (Global), European Business and Innovation Centre Network (EBN, Belgium), Sociedade Portuguesa De Inovação (SPI, Portugal), Agorize (France), Bond'Innov (France), Co-Creation Hub (Nigeria), I-Hub (Kenya), Startupbootcamp AfriTech Accelerator (South Africa), Science Technology and Innovation Policy Research Organisation (STIPRO, Tanzania), Methys (South Africa), BPI France (France)

Click here If you would like to find out more about the EiA network and services.

2.4

Investing in an ever-changing Landscape of booms vs busts

2.4.1 Navigating Valuations

The global startup scene has seen a reckoning of sorts that has been described by some as a 'course correction' of the markets. Startup valuations continue to be contested even on the continent where vast discrepancies in valuations exist within regional blocks. In 2022 Africa was seen to be resilient despite global pressures. Despite this, there was a consensus that valuations on the continent were inflated.

In an interview, Maxime Bayen of the Big deal highlighted a new trend that has emerged among the investor community. Following the global crisis, some investors have realized that the market has shifted and they now have the upper hand in investment deals. As really in some instances have been unjustifiably driving startup valuations down.

For obvious reasons, there is no way to standardize valuations however the following actions have been proposed to help navigate investments the vastly differing valuations

2.4.2

Key DCA Actions

• Create a framework for revenue and EBITDA multiples on what VC fund managers are willing to pay per industry, per stage, and country. Savant to build the model and manage access/create the management process for the working document.

• Framework to touch on:

  • Ticket size

  • Stage of investment

  • Metrics

    - Per stage

    - Per industry

    - Runway period

    - Geography

  • Multiples:

    - Net revenue

    - EBITDA

• Need to recruit other funds to help populate the database. Speak to Dario or Maxime about dovetailing their efforts. The model will be forward-looking, not historic.

2.5

Benchmarking Success:

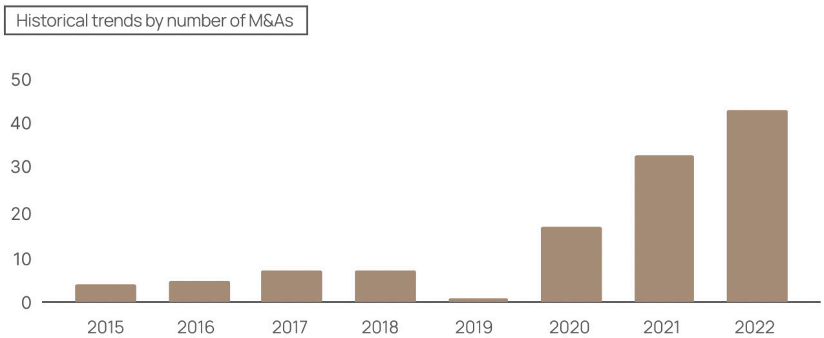
How to Achieve Returns & Exits on the Continent

Build or Buy? Mergers and Acquisitions as a way to achieve scale and better returns.

The success of the venture capital model is built on the premise that ***investors can achieve outsized exits on a few deals***. Unsurprisingly a discussion on returns and exits was a hot topic across all the Unconference events.

Investors identified Mergers and Acquisitions (M&A) as a more likely type of exit on the continent, identifying two categories of M&A. The Exit M&A - Building a business for a partner as well as M&A of consolidation for the Value Chain.

This is consistent with data from Brighter Bridges indicating a steady increase in M&A deals on the continent over the last few years. Fin-tech e-commerce and recently clean tech are leading the charge in M&A activity.



Given that most African Markets are small and fragmented and the companies building within these markets are also small, venture consolidation was identified as a positive exit opportunity.

A few challenges were identified with venture consolidation including valuation mismatches, Founder's egos and differences in ecosystem characteristics.

> ***"Our companies need to become bigger through organic growth but also through value chain acquisitions. Fund managers can play a role in chatting about different portfolio companies to facilitate potential M&As."***

2.6

What about IPOs?

A representative from the London Stock exchange highlighted that despite IPOs have been extremely rare on the continent to date (there currently are a handful of IPOs on the Continent such as Jumia and Fawry), it is therefore still important to reprioritize the IPO market, Perhaps listing on an Exchange such as the Johannesburg stock exchange is not ideal given reporting and governance requirements but perhaps create an African-wide exchange and build our businesses to be listing ready should be a focus.

2.6.1

Key Action Points

• **Creating an enabling environment for thriving companies**

A major contributing factor to the success of a startup and the startup ecosystem as a whole is the environment in which they operate. Topics including Governance, Standardizing documentation, Gender, and Diversity, and The role of Investors was discussed across the Unconfereces resulting in ongoing work groups addressing these.

• **Governance**

The issue of Governance has become an increasingly important topic among investors as the African startup ecosystem matures. Larger investment deals at more mature stages call for more formal structures

Investors across the different events echoed that they had an important role to play in ensuring that they prepared portfolio companies in compliance. Several governance incidents have cropped up during the year leading to the formation of the Governance toolkit work group led by FMO with contributions from Plug n play, AfricArise Ventures, and KudosOne, The toolkit will cover areas around Board Formation and Management Reporting as well as prepare companies to start thinking around ESG issues.

A first draft has been developed with the final version to be published on the DCA website in early 2023.

• **Gender & Diversity**

During the Cape Town Grand, the big deal released startling and disappointing stats indicating a decline in the volume and value of investments in female-led startups. There was a consensus among all investors that a key contributor to this was a lack of female representation across the entire investment value chain starting at a Limited Partner, Investment Committee level and trickling down to GP and Associate levels in investment firms and eventually the female founders themselves. The investors acknowledged that unconscious bias exists, demanding representation across all levels of the investment value chain.

Other reasons for the low investment figures included the perception that investment into female-led startups was a higher risk as opposed to investing in male-led startups which are a 'sure bet' as well as a shortage of 'Viable' female investment opportunities.

2.7 So what now?

Solving this gap is a long-term game and there is a need to develop and train more female talent within the investment space at all levels. Given these dire figures perhaps an affirmative action approach was necessary to at least level the playing field.

In the short term given the existing reality of a male-dominated industry, the role of male champions was stressed. These are males actively advocating for and providing support to female founders and fund managers. Support could include advisory or even at a very basic level feedback on how to become more investor ready.

Highlighting more female success stories is also critical to provide female founders with role models they can relate to and look up to. The role of incubator programs in providing investor readiness was also discussed, however, a counter-argument is that female founders are often over-trained and underfunded.

"Women don't need empowerment or mentors, they need funding."

2.7.1 The Pledge

As a solution, an industry-wide pledge was suggested. Beyond talking about the problem there is a need to be more intentional about solving it, starting with a progressive pledge to invest in and also hire female investment professionals. For example in the first year commit 15-20% of all investment opportunities to female founders. Ideally, these set targets should be a part of a funds mandate and should be gradually increased year on year.

2.7.2

KEY ACTION ITEMS

Conduct Independent research to determine standard criteria for measuring data i.e. how do we arrive at % of gender or race, is it by number or is it by capital deployed), what sectors are led by female founders, equity shares	Mandate that reporting on Gender and diversity should be part of Annual reports (similar to ESG metrics)
Provide training on IC, LP, Advisory level not as a checkpoint, but real impact and change	Actively sharing deal-flow opportunities on female founders with various networks

2.8

Standardising documentation

A unifying thread that runs across the various themes discussed at the Unconference events over the years is the need to standardize documentation and resources used within the African Ecosystem.

This methodology has seen some success in Markets like the US where for example the Y combinator Safe has become an industry standard and is adopted even on the continent.

Standardizing documentation is beneficial to both startups and investors in many ways including savings on Legal fees for startups & founders. Standard templates also assist in the speed-up of processing investment transactions while serving as an educational tool for founders which prepares them as they go into conversations with investors, especially at early-stage.

Most importantly standardizing documentation will help ensure good terms and best practices are applied This can be helping to educate investors to be better aligned and weed out the bad investors giving bad terms to startups.

An active DCA work group exists that focuses on standardizing documentation used on the continent. The group to date has produced and published a term sheet 1.0 which was a project led by Endeavour as well as a due diligence checklist both of which are available on the DCA website.

There are a few projects in the pipeline including a 2.0 version of the term sheet, and valuation bands among others.

2.9

The role of Investors

Being an investor, especially in early-stage startups entails more than just providing financial support. Disruptive events such as covid-19 and the economic downturn highlighted the importance of non-financial support to portfolio companies. Services such as advisory on business continuity and pivot strategies , support in facilitation of acquisitions between companies, setting up of special support funds with involvement at LP level e.g. a covid relief fund were different ways investors gave confidence to businesses.

Some investors held unpopular opinions stating It was a little bit healthy for some businesses to fail during downturns, as a kind of survival of the fittest. It stress tested business models that were relying on surviving on cash and were not really sustainable vs finding sustainable ways of surviving to pace themselves in terms of growth.

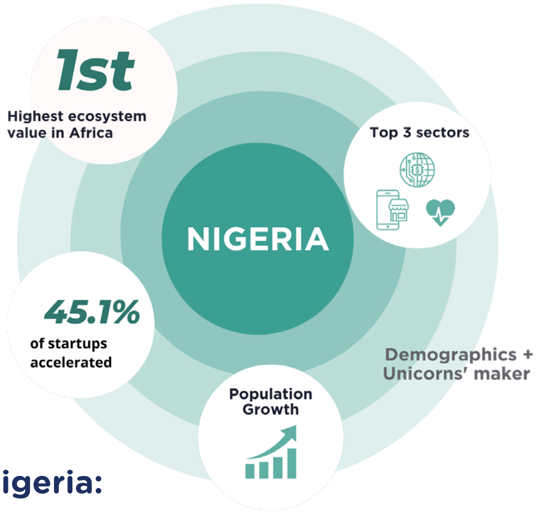
Overview of six ecosystems 2022

The "Big 4"

3.1

We can identify six major African tech ecosystems in Africa. The first is the "Big 4", which are Nigeria, South Africa, Egypt, Kenya, and we could also include Senegal and Tunisia – the first two countries to enact a Start-up Act in Africa - as leading regions for African startup growth.

As the African startup ecosystem's value is concentrated in these six regions. The goal of this chapter is to take a closer look at these ecosystems to understand their differences and similarities, as well as to gain an overview of the African ecosystem.



Nigeria:

Nigeria is one of the longer-established startup ecosystems on the continent, with leading lights such as Interswitch founded as long ago as 2002 and some of the startups tracked here active in the 2000s. Nigeria will have the highest ecosystem value in Africa again in 2022, thanks to a very unique combination of factors which includes a large customer market with 70% of the population classified as "youth", a very strong culture of entrepreneurship, leading to the ability to create stable unicorns (Interswitch, Flutterwave, Andela, OPay, Jumia), a high degree of local accelerators and incubators, and a low regulation and high governmental support which allows innovative founders to thrive.

In fact, the recipe of success of the Nigerian ecosystem lies in a very interesting young generation that is rising and challenging the status quo. "Even if you look at the SME sector, it's very thriving, it's very buzzing and very strong. Entrepreneurship and resilience have always been part of Nigeria's culture. Probably if you ask most Nigerians, they'll tell you that they have some side hustle. Whether students or full-time employees, the constant search for great solutions is what characterized our population." says Ashim Egunjobi, VC Investor and managing partner at Octerra Capital, an early stage fund investing primarily in tech and tech enabled solutions across the continent. In addition, out of 480 surveyed startups that they were tracking, and this was about mid 2022, half of all these startups had actually taken part in one way or the other in an incubator and accelerator, which shows that the ecosystem is being actively accelerated by a combination of private and public hubs. To top it off, His Excellency , the President of Nigeria, signed in 2022 into law the Nigerian Startup Bill, which seeks to tackle three main challenges for Nigerian startups: lack of an enabling environment, unclear regulatory framework and inadequate local content support. The Bill gives access to an exclusive list of public and private-led local funding opportunities including a 10 billion fund from the federal government, making it easier for this thriving Nigerian startup ecosystem to accelerate innovation.

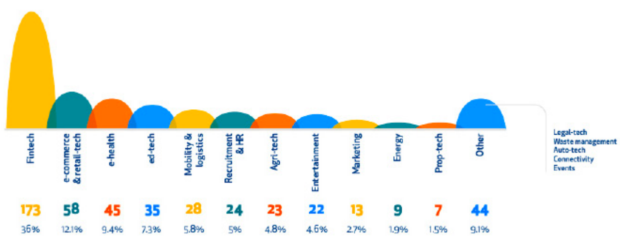
Nigeria is the most popular investment destination on the continent. Between 2015 and 2022, 383 tech startups raised a combined US$2,068,709,445 - a higher total than any other country. As of August 2022, 107 Nigerian startups have raised funding - accounting for around one third of the continent's funded startups so far this year. The country's running total for 2022 stands at US$747,908,000 - closing in on the annual record total from last year, of US$793,790,000.

In Nigeria, FinTech remains the top sector both in terms of number of deals and funding amount, taking advantage of the country's under-provision of banking services. According to Ashim Egunjobi;

"Reports have it at about 36% to 40% of the population is unbanked. If you consider in addition the underbanked i.e. people with limited or almost no access to credit, limited access to certain banking services, you understand that financial services and financial inclusion is almost like the bedrock of the econ-

omy. Once you have access to financial services, you may have access to at least building a credit history. You have access to making savings, you may have access to investing, and then at some point you have access to credit. What credit does for you, it gives you growth. Hence why the fintech sector still continues to be one of the sectors where we see a lot of activity, where we see a lot of new mod- els, and where we see a lot of focus from a lot of the startup founders."

This year alone, FinTech startups (excluding fin- tech adjacencies and enablers) account for more than 60 per cent of the total funding amount raised by startups in Nigeria. One of the biggest trends that 2022 saw happening in Nigeria was the rise of embedding financing solutions into the platforms in the different sectors Nigerian startups are building.

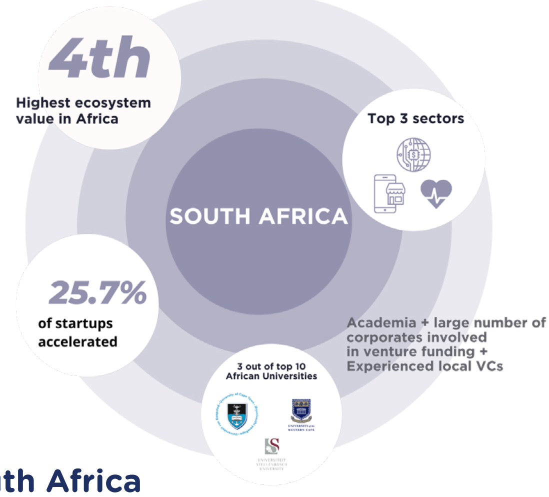


Nigerian tech startups by sub-sector (Source: Disrupt Africa)

Coming in second behind fin-tech in terms of startup activity is the e-commerce and re- tail-tech space, with 58 startups accounting for 12.1 per cent of the Nigerian total. Nigeria has a special reputa- tion when it comes to e-commerce, being the base for African pioneers Jumia and Konga, yet with extremely high levels of churn in the sector, and un- reliable levels of funding, it has lost out to fin-tech in the popularity stakes with aspiring entrepreneurs.

E-health is the third most populated sector within Nigeria's startup landscape, with 45 startups mak- ing up 9.4 per cent of the total. As in other markets, Nigerian e-health start- ups have been boosted in the last couple of years by the shift towards contact-free and digital solutions occasioned by COVID-19, with consumers and medical institutions suddenly interested in virtual services as never before.

Nigerian startup activity is predominantly centred in Lagos, and this is especially true for fintech, with 161 of the fintech startups tracked here - 93 per cent of the total - based in the country's commercial capital. This is higher than the average generally, which stands at 88.4 per cent.



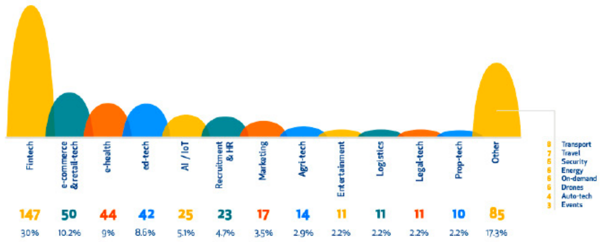
South Africa

The South African tech startup ecosystem is probably the most established on the continent, with ventures launching as far back as the 1990s and Bandwidth Barn, often pronounced "Africa's first tech incubator". That said, the peak year for launches of currently active ventures was in 2016, with startups being founded at a generally slower rate each year since 2018. This mature ecosystem is one of the leading ecosystems in Africa, with the country recording the second-highest number of start-ups after Nigeria. Cape Town, which is often portrayed as the "startup capital" of South Africa, and indeed sometimes of the whole continent, has seen its activities being less dominant than expected in 2022. The “Mother City” does indeed account for the largest number of startups with approximately 45.9% of the ventures. However, with 41.6 % of the total startups in the country, Johannesburg can rightfully claim to be a leading startup city in its own right.

South Africa has many assets which explain his presence and stability among the big 4. The country is considered to have the most advanced economy on the continent. Up until 2022, it was the largest economy based on the GDP, but from a standpoint, it is the most structurally consistent. South Africa also has the best banking systems in the world, with the addition of a reliable rule of law and for the most part, obviously its high internet penetration, developed VC network and a large number of start-up accelerator programs. “There is a very significant amount of corporate activity and executives that are able to engage with startups corporates that have a mandate to reach out” adds Philip Kiracofe, CEO of StartupBootcamp Afritech, a global brand of accelerators which goal is to scout, skill and scale the most disruptive African startups solving uniquely African challenges. In addition, the attractiveness of the 11th best city in the world (source: Times Live) and startup epicenter of South Africa, Cape Town. Being praised as a city with good food, culture, mountains and nightlife where you “can do it all”. It is hailed as especially perfect for outdoorsy types, thanks to its wealth of beaches and hiking trails. With 93% of locals describing the city as beautiful, it also ranks as the second-highest scoring for beauty in the world, it is a top destination for international entrepreneurs and VCs to live in or invest in. “We hear this time and again from our entrepreneurs that part of the magic ingredient in Cape Town is the natural beauty around them. It’s the proximity of beaches, mountains, hiking trails, surfing spots and etc that are able to feed into, I think, their ability to be creative, innovative and resilient and kind of run successful companies.” says Eimear Costigan, investment portfolio manager at Wesgro, the investment promotion agency for Cape Town and the Western Cape. Mixed with this factor, the availability of talents continues to grow bigger in the country, with the top universities of the continent located in the two main cities where startups are concentrated (University of Cape Town, Stellenbosch University).

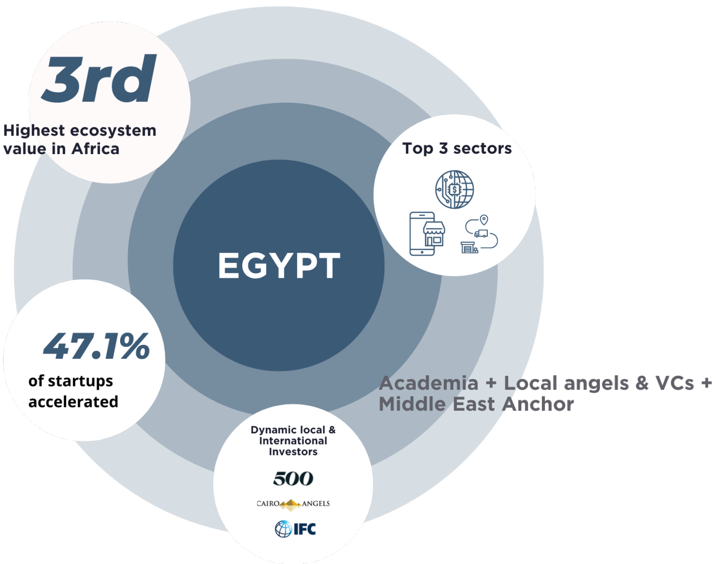
“Our availability of talent has really, I think, come on the radar in a greater way in the last couple of years. We’ve had (South Africa) quite significant interest from global companies and European companies particularly looking to base tech hubs here. And it’s all about the availability of talent. They are struggling in some of the places that they have been looking in the last number of years, to fill critical positions because of scarcer tech talent in some of those areas and the cost of talent in others, and the South African market is a solution to these issues they are facing” emphasizes Eimear Costigan. All these factors combined together represent a great opportunity for the ecosystem.

FinTech is a major driver of activity within the South African startup space, with 30% of active companies. There are almost three times as many FinTech startups in South Africa than there are in any other individual vertical. E-commerce and retail tech (10.2%), e-health (9%) and edtech (8.6%) are also prominent spaces, but there is an extremely diverse range of activity, as may be expected from an ecosystem as established as this one.



South African tech startups by sector (Source: Disrupt Africa)

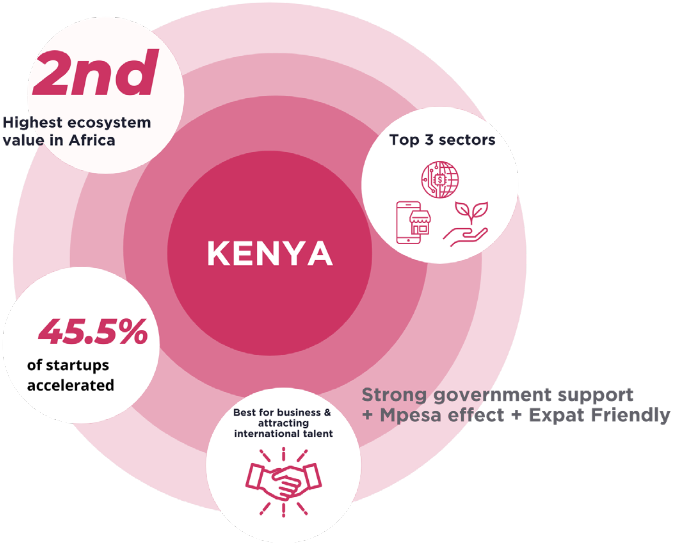
Startups have built products and services in areas as diverse as AI, recruitment, marketing, agri-tech, logistics, legal tech, prop tech, transport and security. Perhaps one trend that has been seen and will continue to grow is more moving from startups towards B2B and B2G. "Your survival mechanism needs to generate more revenue and extend your runway through your self preservation or through self generation. That is what South African startups have managed to develop" emphasizes Philip Kiracofe (Startupbootcamp Afritech).



Egypt

Egypt, once again this year, is the largest ecosystem in North Africa and amongst the top four ecosystems in Africa. The Egyptian ecosystem serves as a link between the African and Middle Eastern markets with at the centre Cairo, the third most populous city in Africa and sixth in the world. The sheer size of Egypt and Cairo make it attractive for startups and investors. In fact, Cairo is home to most of the country's top-funded startups including MNT-Halan, Fawry, Swvl, MaxAB, Trella, and Vezeeta. Alexandria also boasts a vibrant start- up ecosystem including recently funded grocery platform Tawfeer Market and agri-tech company ZR3i.COM. The Egyptian market also has great and strong academia (Cairo University, Alexandria University, Mansoura University) as well as a dynamic scene of local hubs and investors, which attracts international investors not only from the Middle East but also from the United States. The support landscape in Egypt in 2022 counted more than 70 hubs, many of which are incubators or accelerators. More than one third of Egyptian startups have participated in an accelerator programme, with AUC Venture Lab, Flat6Labs, Falak Startups, Athar and TIEC being the most active startup support organizations. In addition, Egypt counts 120+ active local and international investors (majority of investors in Egypt are international, including Silicon Badia, BECO Capital, Global Ventures, Launch Africa Ventures, amongst others, but also strong local funding ecosystem with active local VC firms such as Sawari Ventures and Algebra Ventures).

There are at least 500 active digital and technology-driven startups in Egypt with E-commerce, logistics, and fintech being amongst the top sectors in terms of both the total number of startups and funding allocation. One of the trends this year is the active governmental specific interest in supporting Fintechs. In fact, more recently, a regulatory framework for Fintech was introduced. The Central Bank of Egypt (CBE) allocated $64M for a Fintech Innovation Fund, an investment vehicle aiming to support FinTech startups. The Egyptian market holds a lot of promise.



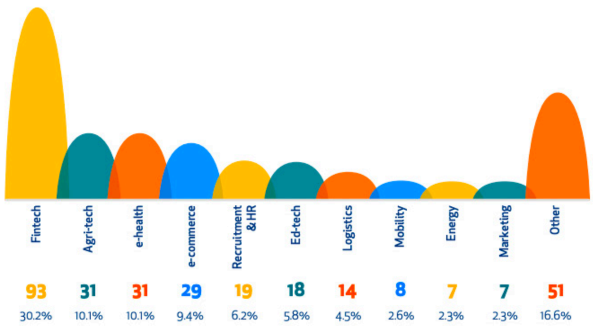
Kenya

Kenya, the economic capital of East Africa, is one of Africa's formative startup ecosystems which has developed a thriving startup scene and established itself as a tech hub in recent years as a result of its high internet penetration, a growing number of international investors, a tech-savvy population, a rich network of co-working spaces, incubator programs and community hubs as well as mobile money innovation. Kenya had the second highest ecosystem value in Africa.

The success of the Kenyan ecosystem in 2022 lies on various factors: the ease of doing business relative to some African countries, the very strong government support and the impressive increase of funding for startups, topped by strong ecosystem support. For Aparupa Chakravarti, director at Botho Emerging Markets Group, a strategy, consulting and investment advisory firm focused on emerging markets, is evident that the operating environment is such that it has been able to attract foreign companies, foreign investors and people from all over the world into its borders. "That is really important because the more credible players we have, the more international players start setting up shop in a country. For example, in April, Google announced its first African development center in Nairobi. Same month, Visa opened its first African innovation studio in Kenya. It's one thing after the other, you have a few of these and all of a sudden it's like a flurry of activities. It's a form of positive reinforcement".

According to Aparupa Chakravarti, the government through favorable policies has helped the ecosystem to rise. There are many examples that can illustrate this factor. For instance, towards the end of 2022, the president made the announcement to introduce coding at the primary school level, which made Kenya to become the first country in Africa to do so. It sent a big signal of how important the tech industry is to the country. Another illustration is that around June 2022, the Kenyan parliament tried to pass what was at the time a very controversial ICT Practitioners Bill, a law proposal that seeks to regulate anyone who employs technologies to collect, process, store or transfer information for a fee, which would have had some severe restrictions on ICT practitioners in the country. Again, the government protected tech companies and went against the signature of this law, an indication of how progressive the government is towards the tech industry.In addition, in January 2023, the Kenya Innovation Agency announced that they are going to start established a startup fund, which is intended to derisk startups and then hopefully crowd more funding and more financing down the line. Kenya is also full of accelerators, incubators, and all sorts of institutions that are targeted very much towards helping startups grow. "These are not just concentrated within Nairobi. I am seeing these things popping up in other parts of the country, which is fantastic because you don't want everything to be disproportionately centered in the capital." adds Aparupa Chakravarti.

As one of the many results, Kenya is the fourth leading startup ecosystem on the continent when it comes to funding, with 242 individual Kenyan startups having secured investment between January 2015 and mid November 2022. Those startups secured a combined US$1,281,918,200 between them, a figure bettered in that time only by Nigeria. As of mid November, 63 Kenyan startups had raised funding in 2022, with the country's running total for the year standing at US$506,686,000. This is approaching double the US$291,983,000 raised by Kenyan startups in 2021, and represents a record



Kenyan tech startups by sector (Source: Disrupt Africa)

annual total for the ecosystem.

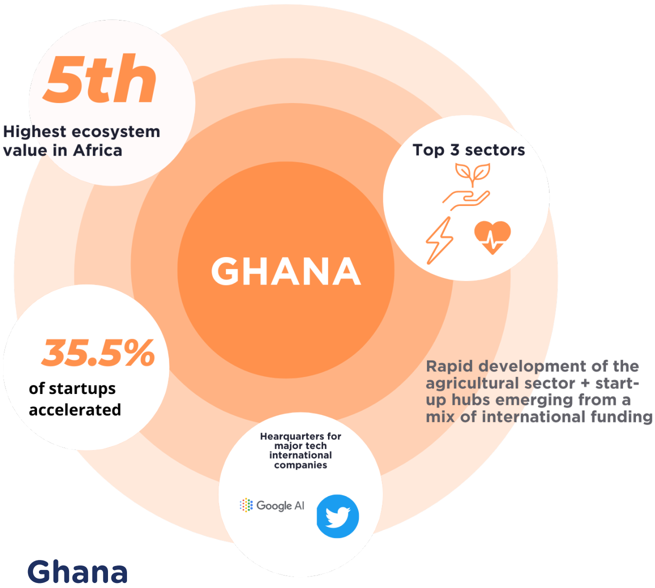
Fin-tech is by far the most populated sector in the Kenyan startup landscape, with 93 startups making up 30.2 per cent of the country's ventures. This figure is three times higher than the next biggest sectors, e-health and agri-tech. As one of the first places to see mobile money take off, Kenya's vibrant Fin-tech ecosystem has continued to leapfrog technology to improve access to financial services. "Fin-tech has increased in prominence over 2022 with some of the emerging trends being in the spend management space, reconciliation space for B to B products, and also in the embedded Fin-tech space" confirms Anthony Kimani, VC investor at Enza Capital, an early stage fund which aims to back founders and teams using technology to solve large and meaningful problems on the African continent. This is enhanced by the mobile banking M-Pesa created in 2007, which has revolutionized banking not only in Kenya but also across Africa and has brought financial inclusion to millions with access to banking services through mobile phones, paving the way for a lot of Fin-tech start- ups.

Coming in second position, the e-health sector was also on the rise in 2022, with Kenya having 31 start-ups accounting for 10.1% of the country's startups. The e-health space across Africa has been given a boost over the past few years as COVID prompted a more widespread turn towards virtual healthcare solutions. Both consumers and healthcare providers are more engaged with the possibilities of tech powered solutions than ever before.

According to the M&M 2022 report, Nigeria, South Africa, Egypt, and Kenya continue to have the most advanced ecosystems, accounting for 75% of the funding raised by African startups. Other African countries, however, have seen several notable developments. Indeed, some less well funded emerging tech ecosystems are now seeing an increase in funding facilities and interest.

3.2

Ghana and Tunisia: 2 emerging ecosystems

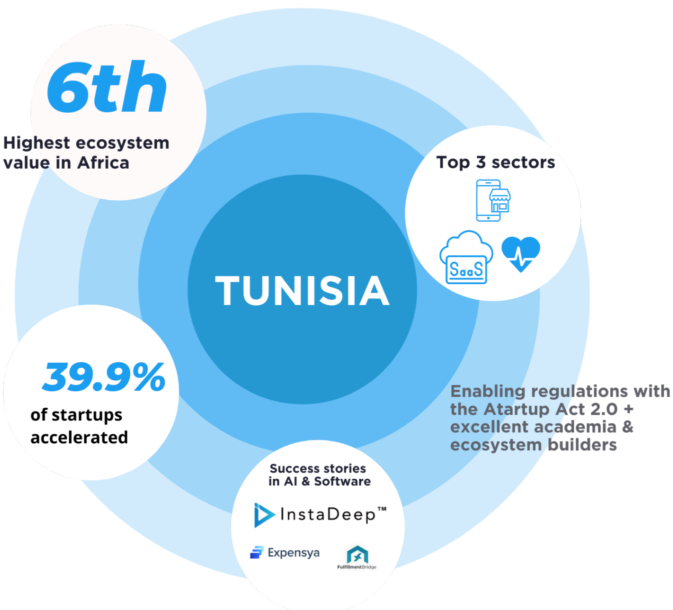


Ghana

With a GDP of $74.26 billion US dollars in 2022, Ghana is the second largest economy in West-Africa and eight largest economy in Africa, positioned as the fifth highest ecosystem value in Africa. Its very strong performance in 2022 with 47 deals overs $100k for a total of nearly $400m (estimating PEG Africa's acquisition by Bboxx at $200m), nearly 8x times more than in 2021, Ghana ranked #5 at continent level in terms of funding raised in 2022. It is an attractive country to do business in due to its continued political stability and liberal business environment. Ghana also has the second highest internet penetration in sub-Saharan Africa, at 53% in 2022 (datareportal), making it particularly appealing to tech companies. The services sector is the largest contributor to Ghana's GDP, representing about 45%. With Ghana's economic strength in the services sector, stability and comparatively high connectivity, it has become a startup hub in Africa. Major international companies such as Google AI and Twitter base their African headquarters in Ghana. The start-up ecosystem in Ghana has been further boosted by the introduction of start-up hubs emerging from a mix of international funding, domestic resources, and the sheer determination and enterprising initiative of Ghanaians. Today, Ghana is home to over 50 entrepreneurship-support institutions, spread over the country in different regions.

Many of the ecosystem institutions are well connected with each other and also with the local communities they operate in. One reason being that the tech ecosystem is mostly shaped by Ghanaians. This ensures a strong local "branding" and "grounding", which positively affects ecosystem growth and content creation as local needs are catered too. In particular tech hubs outside the major cities are cited as one of the main factors counteracting rural-urban migration by providing the digital skills and knowledge base to make a living in the community.

The 10 most funded startups in Ghana have raised a total of $110m of the $117m (94%) that startups in Ghana have raised overall in 29 deals which is an average of $11m per startup. Of the 29 deals, there were 9 seed rounds(31%), 7 debt financing rounds(24%), 4 grants (14%), and 2 Series A, B, and C each. There was also 1 Undisclosed Deal, Pre-series A, and a pre-seed. The top two PEG Africa ($57m) and MPharma ($42m) have raised 89% ($99m) of the total $110m. The most funded sector by a number of startups in the top 10 is agriculture that is represented by 3 startups (Esoko, AgroCenta, and Moringa Connect), but they represent just $5m (4.5%) of the $110m total. The most funded sectors by the amount of money invested are Energy and Resource(2 startups, $58m) and Healthcare and Pharma (2 startups, $44m). Almost all the funding rounds reported here are financed by a different set of investors. The only investor that has invested in more than two startups is CDC Group which participated in PEG Africa's two debt financing rounds of $20m in March 2019 and $4m in November 2020. It also participated in mPharma's $17m Series C in May 2020.



Tunisia

Tunisia was on the rise in 2022. By obtaining 0.55 points in the startup ecosystem index, according to data provided by StartupBlink, Tunisia acquired one of the highest total scores in Africa. In addition, the city of Tunis ranked among the leading cities for startups on the African continent according to the business score, which measures the performance of the business and economic environment. Many factors contributed to the success of the local ecosystem this year, with the undeniable growing pipeline of startups. In fact, Tunisia ended up 2022 with 822 labelized startups. For Salma Baghdadi, Ecosystem director at Smart Capital: "Innovation is in the centre of the Tunisian ecosystem to a level that every engineer who graduated from school is considering entrepreneurship and having his own startup as a main path for their career. It represents an amazing shift in the mindset in the Tunisian ecosystem". With tools enabled by the local government such as the "student entrepreneur" status, students can now start working on their innovative ideas and develop an entrepreneurial mindset earlier than other people on the continent would do. "Tunisia's ecosystem support instruments, adopt a bottom-up approach, in 2016 Startup act started from the community, 2018 the law was voted and 2019 implemented. And, recently, we officially have confirmed the "student-entrepreneur status" says Zeined Chabchoub, startup expert within the digital transformation program of the GIZ, a federal enterprise mandated by the German government to support different countries. Tunisia has established itself as a digital tech hub as a result of the Tunisian Startup Act, an innovative and legal framework launched by the Tunisian government to assist local entrepreneurs who choose to invest in the country. Tunisia was, in fact, the first African nation to enact a Startup Act. The Tunisian Startup Act is a great example of collaboration between civil society, the private sector, and the government. The startup ecosystem in Tunisia has grown significantly through support from the government and these encouraging indicators start to persuade other African countries to follow and implement their versions. In addition, incubation and acceleration have risen in 2022, with local startup support organization, but also we have some regional startup support organization being more active at the very early stage of startups development. One of the major recent milestones of the support ecosystem in Tunisia was the launch of Tunisia's 1st digital innovation hub, The DOT in June 2021. "We have now more than 50 startup support organization working at different stages of the journey of the startups" emphasizes Salma Baghdadi.

The Tunisian tech scene, home to hundreds of digital and technology-driven startups, with large e-commerce and software sectors, has also gained a huge international credibility this year. Some of the top-funded Tunisian startups which include artificial intelligence company Instadeep, was recently fully acquired by BioNTech through a deal worth about £562m (US$685.9m) to help the biotech firm discover drugs. In addition, the accounting software Expensya, with many more early-stage companies, raised funds in recent years.

Despite its deep innovation potential, active start-up community and access to European markets, the Tunisian ecosystem is still in its early stages, with only Flat6labs and the giant AfricInvest as major local funds. This leads to one of the most serious issues confronting Tunisian entrepreneurs looking to expand: the lack of funding. Furthermore, the Tunisian ecosystem continues to face challenges in developing its funding landscape and attracting more foreign investment. At the moment, there is a high demand for additional legal instruments to raise funds (Startup Act 2.0).

3.3

Pan-African and regional dynamics

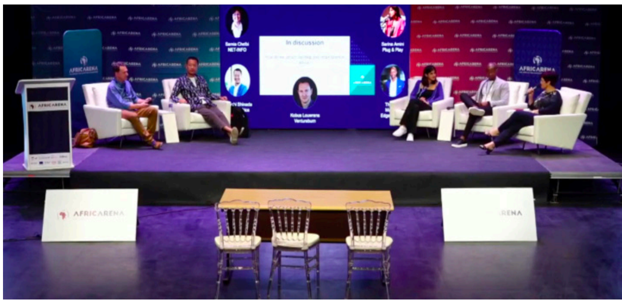
The African Tech ecosystem is progressing rapidly, with Africa being the only region in the world to record positive YoY growth in startup funding in 2022 (+5% YoY). Yet, Africa, representing only 1.2% of all the startup funding raised globally last year, as well as being behind in terms of numbers in many other categories, still has a long way to go to compete on the global market. Several challenges are still a roadblock to the growth of the ecosystem across Africa.

African entrepreneurs have long faced unfavorable regulatory environments, which make it difficult to launch, grow, and scale an innovative business. There is still a lack of proper and consistent regulation across the continent. Startups require a legislative environment that promotes business creation, data sovereignty, and legislation governing these topics. Governments in Africa must do more to improve the regulatory and investment environments for startups not only in their own country but for the entire region because legislation enables start-ups to operate with the certainty provided by a well defined framework for growth. For instance, the ease to do business and the access to international markets is still a challenge for several countries in Africa like Tunisia. "Startups in Tunisia need to validate the market very quickly. For that, they need accommodating regulations to access regional and global markets. There is a need to update our laws and policies to adapt them with the rapid globalization we are seeing. Our policies are still aligned with the old way of doing business. We need to build a new way of doing, Everything needs to be new to ease the way of doing business and help startups to scale globally" states Salma Bagdadi.

For instance, in South Africa, the obtaining of relevant visas to do business locally, compared to an ecosystem like Kenya, is still a major issue. "You have investors going through situations where local companies want to bring in critical skills from overseas to manage a project that is maybe going to employ 200 local employees for example. They would sometimes need one foreign highly skilled person to run it. Through just how the visa regime works, the whole project goes away and the 200 people don't get jobs. The frustration is here, and we could do a lot better in terms of having a more enabling regime that welcomes foreign investment and workforce", states Eimear Costigan.

Governments, by favouring the regulatory and investment environments, help to build and retain talents. "There is an issue at the level of senior tech and engineering talent. They often get recruited in the Global North, and most times paid more or paid in a stronger currency; the local tech ecosystem simply struggles to be competitive towards that. A lot of tech startups would argue that the biggest challenge in 2022 was availability and retention of quality talent that they were looking to train and grow in their companies." states Ashim Egunjobi.

Another issue emerging in the last couple of years is around data storage, management and ownership. Currently, Africa as a continent accounts for less than 1% of data storage capacity. Coupled with that, we are seeing a lot of foreign investments into data centers on the continent. "There's growing foreign ownership of data centers in Africa. Now you can imagine that down the line, the kinds of issues that could create" states Aparupa Chakravarti. For instance, a really interesting counterpoint is a country like Estonia, a tiny Eastern European country. It is digitalized to the point where Estonia has a data embassy in Luxembourg at top security levels. "Even though it's still a data center, it actually under law has the same privileges as a physical embassy would. That's how important data ownership is." adds Aparupa Chakravarti. By developing and adapting Government legislations in regards to data protection, the African tech sector would benefit from it.



Click on the image to view the full video.

Take a listen to a panel discussion on the topic "How do we attract, develop and retain talent in Africa" at the AfricArena North Africa Summit 2022 in Tunis, Tunisia.

Another roadblock to the Pan-African ecosystem dynamics is the lack of access to funding for early stage startups, which is due to a combination of various factors. At a macroeconomic level, 2022 has been a very difficult year for many reasons, between the war in Ukraine and other factors beyond the control of local and international factors of the ecosystem. Several regions like Kenya, South Africa and Nigeria have seen significant inflation, with their local currency being depreciated significantly.

At a Pan-African level, the VC ecosystem or investment space is still really nascent, with a number of micro funds between 3 and 20, and a few major ones going from 30 to 200 million dollars. Generally, if you look at available capital on the continent, it is still pretty constrained. That capital is not sufficient to drive the entire ecosystem, which means that we're still dependent on our international, our global capital and global VC investors to supplement the deals. However, a lot of the global investors are not on the continent. They don't have access to all the information that some of the local investors have access to. Which means that they are basing their investment decisions on what the macroeconomic situation looks like and the state of the political situation. Another factor is also the state of its liquidity situation in the country as well as the regulatory environment. Unfortunately, if you put all of those together without providing context, sometimes it's a difficult story to tell, which is why the context is important. "I think that context less story is probably the biggest barrier to investments on the continent. That people look at Africa on a piece of paper without a true understanding of what the words on the paper really mean? Why did this happen? Have we seen this before? It is really about raising awareness and having access to more tangible data for international investors. VC is already a high risk asset class. You need to make sure to reduce the risk and as much as possible. I think the regulators have a big role to play here and some of them are jumping on it and are trying to create these environments, which is encouraging to see. " states Ashim Egunjobi.

International investors interested in investing on the continent are still very unfamiliar with the market across african regions. For new investors who haven't quite grasped the particularities of what's happening on the ground, it is very difficult for them to invest at a local level, mainly because they usually use yardstick of success that do not apply to a particular region. There is a need between established investors to cooperate with new investors in order to understand the space. In addition, there is a major question around where local investors are choosing to invest their money and why. Perhaps, local investors are not investing as much in tech as they would in other more conventional spaces like real estate, because they do not know the space or are not as familiar with it as the other spaces. It is also possible that from a cultural standpoint, tech is not as important or as significant as other spaces are, and this could be compounded by a lack of awareness about the investment opportunities in tech. "Is it that there isn't any local funding or is there not enough local funding? I think it's there. I think we just need to start to get creative about how we identify it and how we tap into it. I think once we do that, we'll start to see a lot more activity, not just from foreign investors, which I think is fantastic, but also from local investors, including in industries and verticals that may be a little new or unconventional." states Aparupa Chakravarti.

One area that could help with the growth of startup funding is a better cooperation between corporates and startups. In some countries, like South Africa, corporates are already doing this and doing this quite well. How can corporates be more intentional and deliberate about working with startups, especially those that are relevant to the industry verticals? One way is by investing in them, but also by offering them mentorship, support and etc. Any startup is at a point in their journey where hopefully they are going to become a big business. "One of the things that we're trying to encourage them [corporations] to do, especially those that have deep pockets already, is not just look at one off deals, but think about ecosystem plays where you're not just investing in one or two things here and there, but you're over time investing in a pipeline." adds Aparupa Chakravarti. Having better linkages between corporations, both international and local and the local startups team would really help jumpstart this funding growth in early stage startups.

Take a listen to a panel discussion on the topic "Is early stage investment a bottle-neck in the startup Life cycle" at the AfricArena North Africa Summit 2022 in Tunis, Tunisia.

There is a need to connect the ecosystems together and unlock collaborations between key players. For Salma Bagdadi, Zeineb Chabchoub and many other ecosystem players, building bridges to make it easier for local startups to go to other countries to test their solutions is fundamental for the dynamism of the Pan-African ecosystem.

The AfricArena Tour was a great step forward to connect people, knowledge, tools and talents in the African startup scene. So many of these key stakeholders in the Tech space did not work together and even worse, were, sometimes working on similar initiatives and tools. It seems more necessary than ever to continue creating links that make sense between stakeholders based on respective interests in different regions. One of the objectives of hosting the AfricArena Summits is to connect all the African ecosystems that are booming. Africa's technology and startup ecosystems have seen consistent growth in recent years and are seen as playing an increasing role in defining the continent's attractiveness. The funding raised by startups in Africa in 2022 has reached 4.8 billion dollars. This is promising and in the next few years, we expect to see continuous record breaking capital injection into startups on the continent. With a young and passionate population, a truly entrepreneurial spirit, and a solid technical infrastructure, Africa's potential is limitless.

Click on the image to view the full video.

Take a listen to a panel discussion on the topic "Building bridges of Innovation across Africa? The state of Affairs?" at the AfricArena Grand Summit 2022 in Cape Town, South Africa.

Key takeaways

There is a huge need to connect the different African ecosystems and unlock collaboration between key ecosystem players.

- **South Africa:** Developed VC network, high internet penetration, and strong academia.
- **Nigeria:** Large customer market, low regulation and strong anchor with the US.
- **Kenya:** International investors, tech-savvy population, and mobile money innovation.
- **Egypt:** Proximity with the Middle East market, strong academia, and dynamic local investors
- **Tunisia:** Access to European markets, active start-up community.
- **Senegal:** Young, skilled and qualified workforce, and a gateway to the French speaking markets.

SECTION 4

Public Policy: An overview of the Transformation of the Startup Act across Africa

Introduction

Innovation drives the economic development of societies. Looking back over the past few years, startups have proven their ability to bring solutions to some of the biggest challenges of the continent in various sectors such as energy, financial services, healthcare, and mobility. Governments play a key role in creating the fertile ground that encourages entrepreneurial dynamism. By supporting the creation and development of startups through an incentive based legal framework. Also with a set of resources and support dedicated to the creation of entrepreneurial projects, governments provide themselves with the essential components for the economic and social development of their country. And it is this positive synergy enabled by the collaboration between the public and private sector that the Tunisian and Senegalese governments have been able to stimulate by adopting their Startup Act respectively in 2018 and 2019. Today, these two ecosystems, which were not part of the Big 4's, are thriving, as evidenced by the dynamism of their entrepreneurial tissue and the importance of the investments that are made. South Africa, as the economic hub of the African continent, ought to follow the path of these two pioneers.

Thus, governments of Africa are realizing the potential of Startup Acts within their own countries and are adapting the regulations, policies, resources and infrastructure to build their own Startup Acts that will foster supportive ecosystems and market conditions for startups in countries to develop and grow. With the likes of Nigeria, Kenya, the Democratic Republic of Congo, and Namibia also paving the way for the rest of Africa to follow suit in establishing Startup Acts after Senegal and Tunisia. We believe, as a collective of entrepreneurs, investors, incubators, and accelerators, that there is a phenomenal opportunity to set up similar regulations in South Africa to accelerate the digital economy.

What is the Startup Act?

All the stakes of the creation of a startup lie in the innovative approach with which it will provide a service, respond to a need and create value. The first characteristic of its business model is that it is not based on any existing structure. Where a company is organized to optimize and execute an already existing business model, a startup is organized to find one. The legal framework that regulates already established and functioning companies cannot be the same as the one that applies to new emerging structures that explore and experiment, at the risk of annihilating the country's potential for innovation.

This is the whole point of a StartUp Act. The legal framework is designed to facilitate the launch and development of Startups in the country that initiates them. This new legislation deploys an arsenal of measures ranging from financial incentives to the creation of a support ecosystem in order to encourage project holders to move from the ideation phase to the conceptualization phase. It is essentially a component of policy or legislation that aims to make it easier for startups to establish, grow and scale. The mission of a Startup Act usually revolves around unlocking the full potential of entrepreneurial skills of a country's population and providing an environment where innovative high growth startups are not highly constrained because of policy. Startup Acts have the particularity of often being designed through a participatory and frequently innovative process involving the collaboration of public and private stakeholders in the entrepreneurship ecosystem.

Do entrepreneurs really need the Government's help?

According to one of the champions of the Startup Act South Africa, Matsi Modise (Fast Company, 2021):

> ***"It is important for governments to be involved, as it plays an important role in assisting startups with capital funding, growth capital opportunities and scaling up capital. Hence government buy-in of a Startup Act is crucial in scaling up the startup ecosystems. Governments should step in and cut the red tape, make a clear differentiation between big organisations, micro-enterprises, SMEs and startups. For startups to grow, the government should put in place legislative frameworks, political frameworks and laws that allow for the Startup Act to be in place. Without these frameworks and policies in place, local tech startups will look into investment/funding opportunities overseas, in places like Delaware in the USA, where opportunities for startups are plentiful."***

Throughout Africa, the ecosystems that are supposed to support startups launch, develop, grow and scale have found to be lacking in support, resources, finance, infrastructure and private public partnerships for governments and thus impacting the success of African startups.

A lot of African startups state that the problems affecting their ability to trade and grow within their countries and on the continent often stem from the red tape regulations and policies governed by their governments. A lot of countries within Africa have existing policies and regulations of investment, finance and trade that constrain the growth of innovation driven startups and, consequently, their ability to contribute to job creation. Even within the Big 4 Tech Startup ecosystems of Africa - Nigeria, Kenya, Egypt and South Africa, government policies stifle economic development and growth of early stage startups. So growing and scaling within their own countries, on the continent and abroad becomes difficult. South Africa is a good case study of this where as stated by Matsi (Digital Collective 2021), South Africa hasn't made it possible for tech startups to scale their ventures so that they can contribute towards job creation and economic development. There is thus, a high rate of business and startup failure within the country that has a negative impact on job creation, innovation and the betterment of livelihoods.

It is imperative for governments to stimulate the establishment of Startup Acts as they are vital instruments in leveraging new business enterprises or startups and also for reshaping economic activity and employment in many countries in Africa. By removing the constraints that come with operating a startup business, Startup Acts can maximize the value and impact of African startups and entrepreneurs who are a benefit for their countries in job creation and trade.

The Innovators

Tunisia:

In 2018, Tunisia became the first country in Africa to pass a Startup Act. It went from $5 million direct investment into less than 50 startups in 2017 to having over 700 Tunisian companies registered under their startup label and ... in 2022 After being ground zero of the Arab Spring in 2011, the Tunisian government put a lot of work into solving some of the social economic problems in the country like widespread youth employment. Roughly a third of all young Tunisians were unemployed in 2016. They saw a solution in tech startups as pillars of innovation, investment and employment, so in 2017, the government started framing a Startup Act like the ones in the USA and Europe. This helped to take action and allow for a more open market for startups to flourish. Through Startup Tunisia and the Startup Act, the Tunisian government hoped that these measures would be able to encourage young people in the country to take matters into their own hands and become entrepreneurs who build startups into sustainable and profitable businesses. With positive findings and outcomes from the bottom and participatory process of drafting the Act, the Tunisian government wrote their Startup Act into legislation in April 2018.

The framework that the government used revolved around four main key priorities:

- **Act:** Setting the legal framework for national startup growth.
- **Invest:** Creating an active investment ecosystem in Tunisia.
- **Empower:** Connecting and kickstarting Tunisian SSO's (Startup support organizations)
- **State:** Encourage innovation in the public sector.

In terms of the Startup Act under the above framework and key priorities, it contains five key elements:

- Define/label startups in the legal sense.
- Encourage entrepreneurship.
- Facilitate the creation, liquidation and development of companies.
- Expand access to funding.
- Grow access to international markets.

In reference to the above key elements, since the passing of the Startup Act into legislation, it has provided government room to give "labeled" startups access to a plethora of different advantages aimed at reducing the founders' personal risk, facilitating the company's administrative and tax workload, as well as incentively investors. In order to become a "labeled startup", a startup must validate five key requirements:

• **Age:** The company must be less than eight years old.

• **Size:** The company must have less than a hundred employees and must be making less than $5 million in yearly revenue.

• **Independence:** The company must be 2/3 owned by individuals, VC's or other startups.

• **Innovation:** The company must propose an innovative product and business model.

• **Scalability:** The company must prove its potential to scale.

Upon obtaining this label, which acts as the cornerstone for the entire Startup Act, founders get generous advantages and benefits to help them in their journey. These include:

• Living stipend for a year.

• Government help with the IP/Patent registration process.

• Paid leave for up to a year, with a guaranteed spot at the same company if the startup fails.

• Support with potential liquidation of the company.

• Advantages for young graduates to join or create their own startups.

• Corporate and investor tax cuts.

• Foreign currency account.

• Digitalization of many administrative steps.

Since the introduction of startup Tunisia and its Startup Act, Tunisian startups in the country have been able to raise funding from $5m in 2017 to in 2022. Seven hundred startups have been given labeled status by startup Tunisia with a 65% acceptance rate. Tunisia has gone from a country of hardly any interest to one of the top countries in Africa for venture capital investors wanting to invest in innovative and scalable startups such as InstaDeep. Many startups who registered and were given labeled status under startup Tunisia have gone on to become global leaders in their respective fields, including several artificial intelligence (AI) companies that have gone on to achieve international success.

Tunisia is now in the top 10 startup ecosystems in Africa where it is quickly catching up to the Big 4 in funding invested into startups per year. Its latest success has been the acquisition of Instadeep for $684 million by Nasdaq listed German biotech company BioNTech SE. The biggest deal in African history for a tech startup. InstaDeep was awarded a startup label in 2019 and due to the incentives and support provided by the Act, it was able to survive the COVID pandemic where it actually flourished and was propelled into the front-lines of developing novel immunotherapies and vaccines. It was here where the deep tech company made a name for itself and partnered with research labs like BioNTech in creating early warning systems for detecting high-risk COVID variants. Through the Act's open market policies of investment for startups, BioNTech was able to put a deal offer at the end of 2022, thus proving the success of Tunisia's Startup Act, the first of its kind in Africa

For more on the Tunisia's rise as an innovator in establish startup friendly ecosystems and markets in Africa and across the world, one can catch up with Khaled Ben Jilani on the State of Tech in North Africa vs The Rest of The World -

Click on the image to view the full video.

Senegal:

In The Big Deal reports 2021 and 2022, it is highlighted that Nigeria is not alone as a startup investment destination in West Africa. Through its Startup Act and investment into supportive ecosystems for startups, Senegal is now an up and coming startup ecosystem in West Africa and Africa itself. Since launching its Act in 2019, Senegal has welcomed sizable startup investments, posting $243 million since 2019, bolstered by Wave's $200 million Series A in September 2021. The Big Deal notes that Senegal's rise in investments into local startups is the biggest outside of Nigeria and now a stronghold for investments and startups in West Africa and Africa in 2022. This can be attributed to its Digital Senegal 2025 Strategy Act.

The legislation, a landmark for West Africa, contains a number of frameworks that aim to promote innovation, entrepreneurship and investment in the national economy. The Act aims to create a better environment for innovation and entrepreneurship by providing tax breaks and reducing the legal complexities of business regulation for startups and small businesses. In implementing the Act in 2020, the Senegalese government also created a resource center called the Evaluation, Support and Coordination Commission mandated to assist the development of startups within the country by providing an online platform which allows startups to register their business with ease, provide access to information, training and empowerment for startups and promote public and private support and investment into registered startups.

The Act targets startups in Senegal that establish and launch innovation and new technologies that achieve high added value for both the Senegalese and the international markets. According to the ACT, if a startup wants to qualify to benefit from the Act, they must:

a) Be an innovative and disruptive private or public company, which has been legally registered for a period of not more than 8 years, and which has strong growth potential built on a disruptive economic model.

b) It must be created on the Senegalese territory and must at least, be one third owned by persons of Senegalese nationality or persons resident in Senegal or by legal persons having or doing business in Senegal.

b) They must own 50% of a startup business if a Senegalese founder lives abroad.

Once the approved startups are registered to the Act's Commission and platform they can receive the following incentives:

- Approved three year tax exemption for its start-ups and newly created companies as well as other special taxes;

- The granting of guarantees to startups with a view to obtaining credit;

• Direct granting of public or private funding to registered startups;

• Facilitating access to public procurement for startups;

• The implementation of support, facilitation and development measures for startups;

• The implementation of capacity building measures for startups;

• Subsidizing business registration costs;

• Reserving the .sn domain name;

• Ensuring the protection of startup innovations with national organizations and international intellectual property protection;

• Facilitating support from approved incubators for the startup;

• Supporting the startup's research and development activities;

• Covering any other support necessary during the growth stage of the startup.

These incentives have proven highly effective in encouraging local entrepreneurs to build new and innovative technologies and grow their technologies into flourishing startups and businesses.

In relation to the above, it is evident that the Digital Senegal 2025 Strategy Act, its policies and incentives have been largely impactful in growing local tech startups in the country and bringing direct investment, both local and international, into the country focused on scaling up the innovative startups registered to their Commission. There have been visible boosts to the startup scene, business registration period, financial support, youth and women entrepreneurship, and the general legal framework. For example, Dakar now has a better Startup Scene and Finance of 32.28 and 22.46 respectively since 2018 (Enpact, 2022).

For more on the Senegal's rise as the first country in West Africa to launch its Startup Act and pass it into law and how it has had an impact in the state of tech in the country and West Africa, one can catch up with Tidjane Deme on the State of Tech in West Africa

Click on the image to view the full video.

The Followers:

After the successes of Tunisia and Senegal with the implementation of their Startup Act, other African countries have started drafting public policy to support their tech ecosystems in their countries. Since 2021, Nigeria, Kenya, Rwanda, Ghana, Ethiopia, and the Democratic Republic of Congo have held participatory and collaborative engagements on drafting their own Startup Acts with local public and private stakeholders. A few of them were able to announce their passing of their Startup Acts into legislation in the last quarter of 2022.

Nigeria:

With the success of Tunisia Startup Act and its fellow West African neighbour, Senegal, the Nigerian government with various private and public stakeholders started to engage in drafting their own Startup Act to grow their tech ecosystem even with additional support and incentives for startups. Nigeria is Africa's biggest tech ecosystem in Africa with the biggest concentration and mass of startups in Africa.

On the 19th of October 2022, President Muhammadu Buhari of Nigeria, GCFR, signed the Nigeria Startup Act, 2022 ("the Act") into law after it was approved by the National Assembly. The Act provides the legal and institutional framework for the development and operation of startups in Nigeria, positioning the Nigerian startup ecosystem as the leading digital hub in Africa and fostering the development of technology related talent in the country. The Act is divided into ten parts, which address four key areas that technology entrepreneurs contend with: capital, regulations, infrastructure and talent. Importantly, the Act avoids the issue of applicability and coverage by clearly delineating the requirements for registration and licensing or labeling of startups eligible to enjoy the stipulated wide-reaching incentives. In addition, the Act introduces specific provisions aimed at reforming identified onerous legal, regulatory, tax and administrative bottlenecks which have hindered the operations of startups in Nigeria. This should encourage the inflow of investment into the sector, improve the Nigerian business and economic landscape, and serve as a big boost to the Ease of Doing Business campaign of the Federal Government.

Democratic Republic of Congo

The Democratic Republic of Congo (DRC) is the heart of Africa in terms of its abundance of raw resources and land that could make the country a powerhouse within Africa and the world. However, with decades of civil war and political instability, the country trails behind most of the countries in Africa in terms of social and economic development. There is a glimmer of light though, the tech sector within the country which sees itself as the future in being able to fully utilize those resources for the benefit of the country, has been hard at work in drafting a Startup Act since 2020. The idea of the DRC Startup Bill was conceived at the pre-hackathon of Lubumbashi Digital Story in November 2019 and the Kinshasa Policy Hackathon in February 2020. Since then they have been hard at work with a variety of national and international stakeholders in research and drafting the bill to go before parliament and the president. All this hard work was paid off on the 8th of September 2022 when President Felix Tshisekedi signed the Startup Bill into law.

Going into 2023 and now in implementation, the Act is expected to provide a legal and regulatory framework that supports and promotes entrepreneurship and innovation among tech startups in DRC. The Act outlines some key definitions of startups, incubators and what is required by startups to receive incentives from the government. According to the Act, a startup is defined as "an innovative venture with a strong potential for exponential economic growth which has been operating for less than seven years, that is in need of substantial capital investment to operate and scale its business model." For any startup that qualifies under these requirements and are registered by the ... they will receive incentives to growth and raise funds from investors that include tax benefits for startups, incubators, investors and investment groups; intellectual property protection, funding for research and development, and days off work for entrepreneurs who are currently employed, but new founders of a startup.

"This act and other steps by the DRC government will help put the country back on the map of credible Africa tech ecosystems with a visible legal framework, making it easier for investors to come in," Hannah Subayi, co-founder of DRC Impact Angels.

What remains now, is to see if the Act has any impact on the growth of the tech ecosystem in the DRC and the amount startups will be able to raise from VC investors during 2023. Although the act is law, there are still many hurdles to overcome in the DRC in terms of competing with the other tech economies of Africa. For example, the bill is only seen as a guiding framework until specific decrees are clarified and implemented in the ecosystem which has an impact on what and how much incentives there will be for startups to grow and for investors to invest into the country and startups without too much red tape.

However, as startups in the DRC wait for what incentives the government will provide and whether these incentives will come in 2023, the government has been proactive and put in place additional measures to benefit the tech sector and business in the country. They drafted a digital technology and online rights bill to provide more freedom and access online, restructured a number of government agencies that will provide support measures for entrepreneurs such as financial resources and sealed partnership with international economic development institutions such as the World Bank in launching financial incentives such as the Transform Project. This will provide $300 million financial support to create 2500 startups and 28 000 jobs over the next decade.

Kenya

Kenya is considered to be one of the leading tech ecosystems in Africa due its technological advancements in infrastructure and growing numbers of international and local investors in the country. Its rapid rise to being in the Big 4 tech ecosystems in Africa is attributed to the vast amount of tech hubs and incubators it has that provide spaces for startups to develop. However, even with an abundance of tech hubs and incubators, its government sees the establishment of a Startup Act as imperative to grow its tech sector and encourage more investments into local startups.

A Kenyan Startup Act was first proposed in 2019 to provide a framework to encourage entrepreneurship in Kenya as well as to stimulate growth and sustainable development of technology with a goal of attracting Kenyan talent and capital. By 2020, the bill had been drafted up and introduced to parliament by September in the same year. Amendments were made to the bill and it was sent to parliament for a second in September 2021. The Bill seeks to inculcate a culture of innovative thinking and promote entrepreneurship by startups whilst ensuring compliance with the registration and set up requirements set out. It stated that the government needed to provide a linkage for investors, financial institutions, research and development institutions as well as providing an enabling environment for the startups to thrive in Kenya. Incubation centres were seen as the linkages between all stakeholder and thus the bill placed incubation centres at the forefront of overseeing the transfer of technological advancements and innovation as well as promote employment and wealth creation.

The Bill also proposed the establishment of a Kenya National Innovation Agency that would be responsible for the registration of startups and the implementation of incubation policies that would develop startups and create partnerships between local and international business incubators and investors. While it also proposed incentives for startups to subsidize the establishment and registration of startups; facilitate the protection of intellectual property of innovations by startups; provide fiscal and non-fiscal support to startups admitted into incubation programmes. It also provides support to enable development and growth of startups through credit guarantee schemes.

On the 3rd of December 2021, the proposed Kenyan Startup Bill was approved by Parliament to move onto the next stage of process in which the president needs to sign the bill to pass it into law. Unfortunately, 2022 was the year of national elections for Kenya, thus a lot of the focus was put on campaigning and the establishment of a new incoming president. With William Ruto, an entrepreneur himself, now elected president of Kenya, one would hope the government will be able to pass the Kenyan Startup Bill into law in 2023.

For more analysis on Kenya's Startup Act and where it is in the process of being signed into law, one can catch up with the Keynote Speaker, Mike Mompe on the State of Tech in East Africa at AfricArena's East African Summit by Mike Mompi.

Click on the image to view the full video.

The countries in engagement:

South Africa:

The concept of having a Startup Act in South Africa was birthed at the AfricArena Conference in November 2020. The months following the conference saw the formation of the Startup Act Steering Committee, aimed to guide the process toward a Startup Act and SiMODiSA was selected by the ecosystem to be the secretariat of this endeavour. The group guiding the Startup Act development includes AfricArena, Digital Collective Africa, Endeavor South Africa, i4Policy, Loudhailer, the Southern African Venture Capital, and Private Equity Association (SAVCA), Silicon Cape, SiMODiSA, and Wesgro.

The SA Startup Act, according to the Digital Collective, a framework of policies and legislation that seeks to formulate and articulate the foundations from which to grow and support an entrepreneurship ecosystem. So far the Steering Committee has drafted its positioning paper where it provides emphasis on defining startups separately from small to medium enterprises along the following guidelines:

1. Legal definitions for startups, startup ecosystem, and high-growth enterprises.

2. Labeling (to distinguish from other labels such as small enterprises, technology) enterprises, SMEs, entrepreneurial businesses, and many others).

3. Harmonisation of policies and acts that have a direct bearing on startups.

4. Outline specific interventions that are needed to support qualifying startups with the potential to become high growth firms.

Their findings from research between 2020 and 2022, which have been collated into a position paper, suggest that innovation driven startups with a turnover of less than R100 million should be exempted from the limitations of existing policies and the red tape that constrains their growth as well as their ability to contribute to job creation. Doing so will accelerate the socio and economic spillover into the cities of South Africa. This is because "the vast majority of new small and micro business enterprises that exist beyond the first three years of operations do not grow," explains Stephan Lamprecht from VS Nova.

In addition to the above, Alison Collier from Endeavor South Africa (2022), elaborates further on the proposed policy amendments detailed in the draft Act.

> ***"There are four key policy amendments that we propose for qualifying startups that will drive around 80% of the change. These include tax breaks and incentives for investors to ensure SA's tax regime makes us attractive for foreign VC investors relative to the best startup locations globally, automatic BBEEE level 1 status, increasing access to skilled talent by allowing a small number of visas for highly skilled foreign nationals per startup each year. Also an automatic exchange control approval for IP transfer as well as amnesty from current and future exchange control regulatory actions for investments into qualifying startups.***

Findings for positioning paper also proposes that the government with private and public stakeholders should simplify procurement policies with which to scale up the involvement of startups in the national economy. To direct funding of startup businesses through automatic reinvestment of PAYE and VAT; and ease labour and immigration laws to foster the availability of and access to talent.

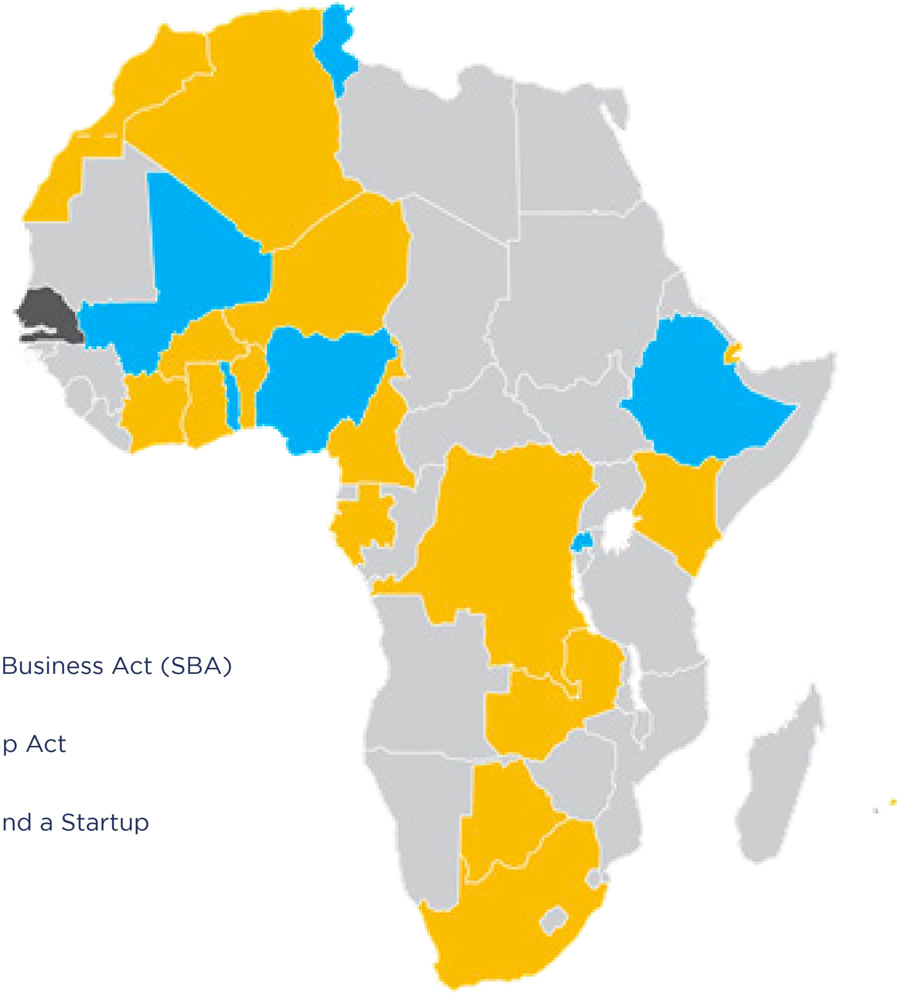
In relation to the above proposal, Matsi Modise (2022) states that by removing the constraints that come with operating a South African startup business, the Act will maximize the value and impact of South Africa's startups and successful entrepreneurs for the benefit of the country and her people.

However, as stated by Tim Harris from the Digital Collective (IT News Africa, 2022), the South African government must act with urgency in implementing these proposals now because South Africa's tech leadership as a tech startup and investment ecosystem on the African continent is under threat, as the world is waking up to the potential in the African market. From 2016, South Africa has slid from being the top ecosystem in Africa along with Nigeria to 4th in total startups and funds raised in 2022. South Africa is now way below Nigeria in terms of growth in startups and funds raised. Egypt is now second in total startups and funds raised and Kenya third. In addition, although South Africa is still within the Big 4 tech ecosystems of Africa, they are getting chased by the likes of Tunisia, Senegal and Ghana for that 4th place all due to the slow response by the South African government in recognizing the need for a Startup Act now.

For more discussions of public policy on assisting tech startups to grow and raise funds in South Africa and Africa, why don't you watch our panel discussion on public policy and public private collaborations in the growing national ecosystem with Matsi Modise at AfricArena Grand Summit in November 2022.

Startup Act and Small Business Act Map of Africa

i4Policy has been working with a number of countries and public and private stakeholders in the tech startup and investment sector on assisting in building supportive tech ecosystems through Startup Acts. In the below map, they provide an overview of the countries in Africa who have proceeded to draft Startup Acts into law and who have also passed Small Business Acts into law.



Countries with a Small Business Act (SBA)

Countries with a Startup Act

Countries with a SBA and a Startup

Source: i4Policy - Entrepreneurship Policy Toolkit

Key takeaways

- The Startup Act has grown in popularity, more and more African countries are stepping forward and taking the necessary steps to implement it, in their respective countries.

- More African states are implementing the Start-up Act, with Nigeria, Kenya and the Democratic Republic of Congo having rolled out their Acts recently.

- The government's buy-in into the Startup Act is still critical to the success of tech startups scaling up.

- Government is crucial in creating policymakers and laws for the Startup Act, and the creation of funding opportunities for startups.

- All African countries are facing similar challeng-es, when it comes to challenges faced by startups across Africa namely - limited access to financing, inconsistent government regulations, cross-border payments, globalisation, weak infrastructure and minimal government assistance.

The Rise of Climate Tech In Africa?

5.1

Introduction

Since the start of the year, there has been a rise of green-tech startups launching their innovations, products and services across the ecosystems of Africa. One of the hottest sub-categories of Green-tech has been Climate-tech with $97 billion raised globally last year by climate Tech startups, businesses and unicorns from interested investors (PwC State of Climate Tech Report, 2022) . Thus, hundreds of new climate and clean tech based startups are emerging across the world developing innovative ways to slash emissions and remove carbon while making a profit and scaling in growth. According to Ramian Diaz, the founder and CEO, "The climate and ecological crisis is the defining issue of our time. As a gigantic challenge ahead of us, it is also a massive business opportunity as we need to reinvent all the sectors of our economies to meet the targets of the Paris Agreement. There has never been a better time to build and invest in climate tech, fostered by an unprecedented flood of talent and capital into the space".

One of continents where there has been an increased growth of climate-tech based startups launching themselves into the market over the last year has been Africa. The climate-tech industry is on the rise in Africa. There has been rapid growth in the number of solutions developed as well as the availability and expansion of financing. In the Briter Bridges, Adapt, Migrate and Grow report in 2022, there are over 500 climate-tech based startups operating across Africa with hardware or digital products that try and solve providing clean energy, low carbon emissions, sustainable farming and better systems of biodiversity conservation and growth.

This is evident in the number of climate-tech startups that have participated in the AfricArena and FSAT Labs' Founder's Bootcamps and pitch challenges at last year's Regional AfricArena Summits and many of them winning their challenges and securing deals with investors. At last year's AfricArena's Grand Summit in Cape Town on the 8th and 10th of November, 3 climate-tech based startups won 3 of the 10 AfricArena pitch challenges. While at the East African AfricArena Summit, panelists discussed why sustainability or climate based tech startups in Africa are a good investment for migrating low term inflation, which can be viewed here - https://www.youtube.com/watch?v=-9_0-FOuT7c.

The emergence of the African climate-tech startups at AfricArena Summit events and the rapid growth and investment into such startups across Africa has given purpose in writing the following chapter. In the below section/chapter, we will unpack the differences between green-tech, climate-tech and clean-tech, the latest investments in climate-tech and clean-tech solutions, the ecosystems present in Africa that have supported these investments and growth and the future of climate-tech in Africa going into 2023.

What is Green Tech, Clean Tech and Climate Tech?

The words Green-tech, Clean-tech and Climate-tech are used very loosely amongst tech venture capitalists, investors, incubators, ecosystem partners, academics and even tech startups themselves to describe innovative scientific and technological businesses - products and services that focus on creating a cleaner, greener and more sustainable world. But what do these words mean in terms of the technological sectors they represent and the differences between the three?

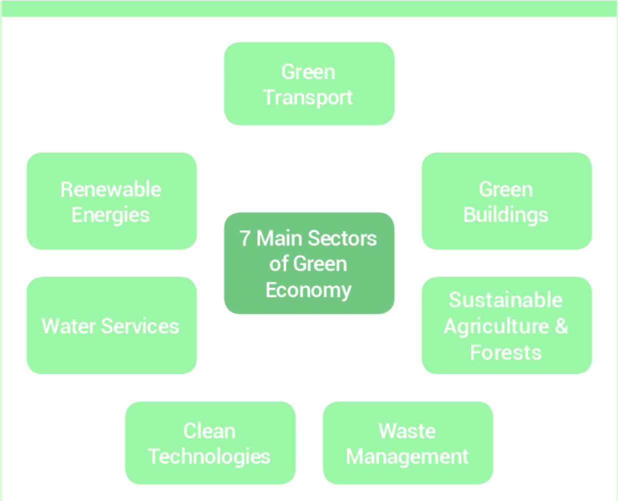
Before climate-tech and clean-tech were used so frequently to categorize certain scientific and technological businesses, the term green-tech was used to describe technological based businesses operating within the Green Economy sector. The green economy is economic growth in employment and income that is driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services (UNEP, 2016). Green-tech or green technology, is the umbrella term that describes the use of technology and scientific innovations within the green economy framework to create products and services that are environmentally friendly, reduce human impacts on the natural environment and migrate climate change caused by the negative impact of carbon emissions.

The main industries of focus for green-tech startups and investors are the following:

- Energy Sector
- Building Sector
- Transport Sector
- Water Management Sector
- Waste Management Sector
- ICTs
- Agriculture
- Forestry

Within these industries, green-tech startups and businesses create solutions, products and services to counter the negative impacts of these industries on the environment, climate and human populations. These solutions, products and services usually fall within the 7 counter industries of the green economy:

- Renewable energy
- Green (low emissions) Transport
- Green (low energy and emissions) Buildings and Construction
- Water Resource Management
- Sustainable Agriculture
- Reforestation
- Waste Management
- Clean ICTs



Source: UNEP (2016b, p. 7)

Under the umbrella of Green-tech, there has been a recent split of reference between certain technologies and hence today you have frequent use of two words, clean-tech and climate-tech to describe an innovative business, product or service. Clean-tech, which rose to popularity in the 2000's amongst investors which specifically refers to technological products or services that improve operational performance while also reducing costs, energy consumption, waste, or negative effects (pollution) on the environment. Climate-tech rose in popularity after the Paris Climate Change agreement and COP26 and refers to technologies and innovations being used to address GHG emissions and migrate climate change. However, these two terms of reference for a variety of green based technologies and scientific innovations are often used interchangeably. Thus, we will briefly outline their differences below.

In theory, clean-tech is technology that minimizes negative impact on the environment with a heavy focus on the energy industry. Clean-tech describes technology or businesses that help reduce environmental damage from existing technologies or improve the environmental quality of polluted natural resources. It addresses soil, water and air pollution caused by "dirty" technologies, such as coal, gas, oil, mining, transportation and manufacturing. Thus, a lot of the technological solutions associated to Clean-tech fall in the these sectors of the green economy:

- Clean energy
- Renewable energy
- Water conservation, recycling and resource management
- Circular waste, recycling and resource management
- Electric transportation

In relation to the above, a clean-tech startup could be a business that provides a technological product or service such as solar power and biogas instead of coal and wood based heat and energy or hydrogen fuel batteries to power heavy duty mining vehicles instead of diesel or biodegradable packaging made from living bacteria from plants instead of plastics.

In comparison, climate-tech incorporates a broad variety of technologies and innovations that contribute to the reduction of emissions being used to address GHG emissions and climate change through migration and adaptation solutions. Mitigation refers to technologies that help to reduce greenhouse gas emissions. Adaptation, on the other hand, refers to technologies that help us to adapt to the changing climate. Climate-tech can be grouped into three broad sectors of impact:

1. Directly mitigate or remove emissions.

2. Help us to adapt to the impacts of climate change.

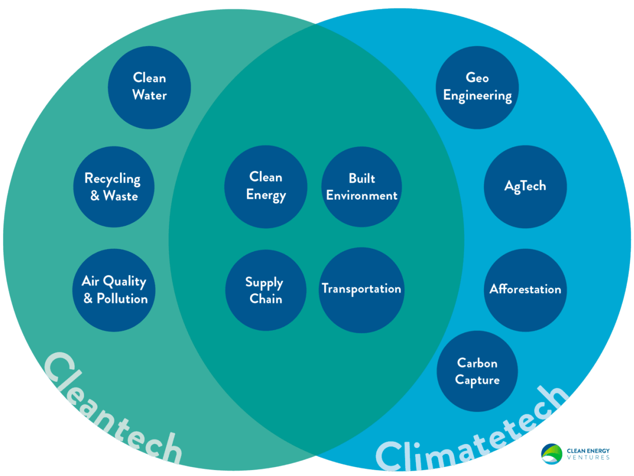
3. Enhance our understanding of the climate.

Thus, products or services are either offering adaptive solutions to become more resilient to climate change, or offering mitigating solutions to address the risks around it. These products or services usually fall with these sectors:

- Agri-technology
- Afforestation
- Carbon capture, trade and reporting
- Geo-engineering
- Bio-technology
- Built environments
- Nature based solutions

However, as stated there are overlaps of technologies and industry sectors between the two terms, thus they are often used loosely and are interchangeable. Here are a few areas of clean-tech and climate-ech that overlap:

- Supply chain
- Transportation
- Environmentally built structures
- Clean energy



Source: Clean Energy Ventures, 2021

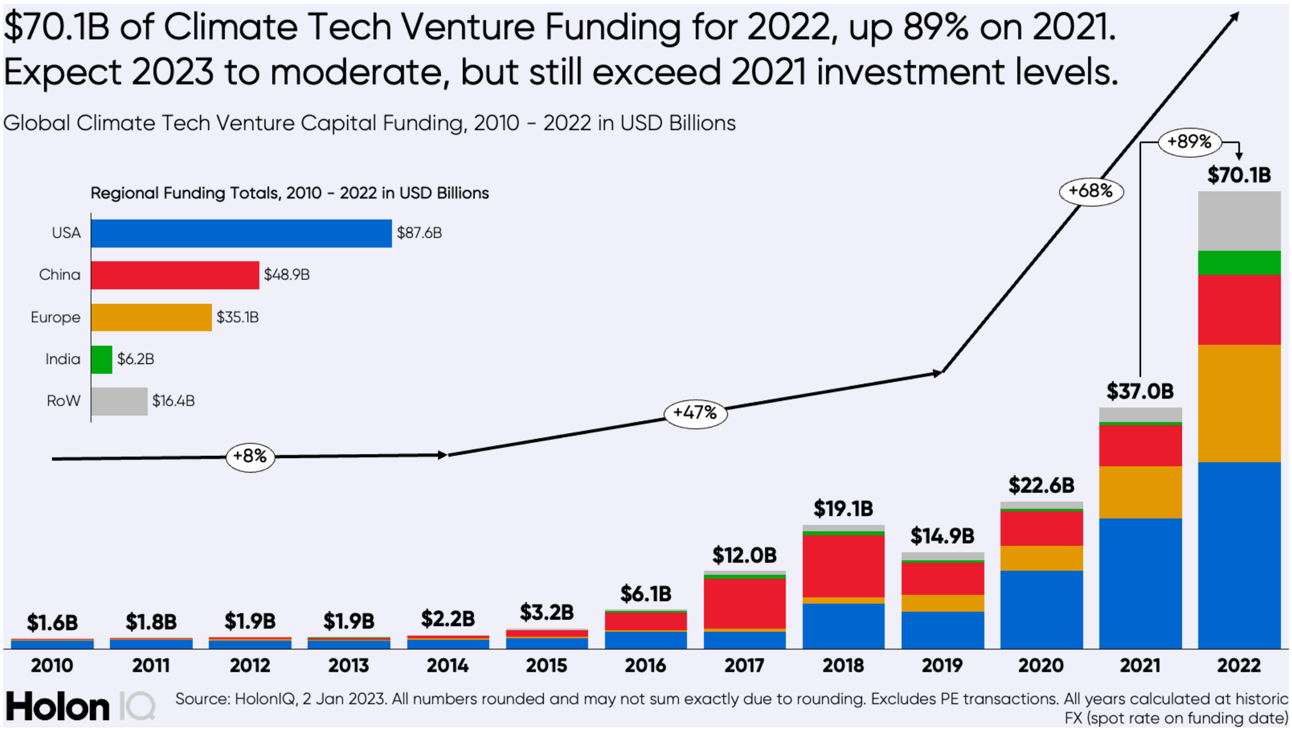
However, one must be careful of trying to create differences between the different terminologies that have been referenced to describe technologies that have an impact or deliverable outcome in establishing a cleaner, greener and sustainable world. For Briter Bridges (2022), the use of the terminologies for the technologies can be categorized in two ways, either based on their role in addressing climate change or based on the sector under which they fall. Technologies are either offering adaptive solutions to become more resilient to climate change, or offering mitigating solutions to address the risks around it. With large global accounting firms like PwC, venture capitalists and research agencies like Briter Bridges referring to the sector as Climate-tech and publishing reports on the State of Climate Tech annually for the last 3 years, we will use the term climate-tech as reference both the industry sectors in clean-tech and climate-tech and the technologies that serve the sectors.

Investing in a cleaner, greener and climate ready World

Since the Paris Agreement and the continued global engagements are COP Summits across the world, interest in climate migration and green economy technologies has grown amongst investors. Comparative State of Climate Tech Reports in 2020 and 2021 by the advisory firm PwC has highlighted the growing attractiveness of the technology sector across the globe as the new venture capital frontier. According to the 2021 report by PwC, investments in climate-tech surged in the first half of 2021, to $ 87.5 billion dollars globally, from a low of $28 billion in the second half of 2020. In the report, they state that US climate-tech firms raised the largest share (US$ 56.6billion), followed by Europe and China

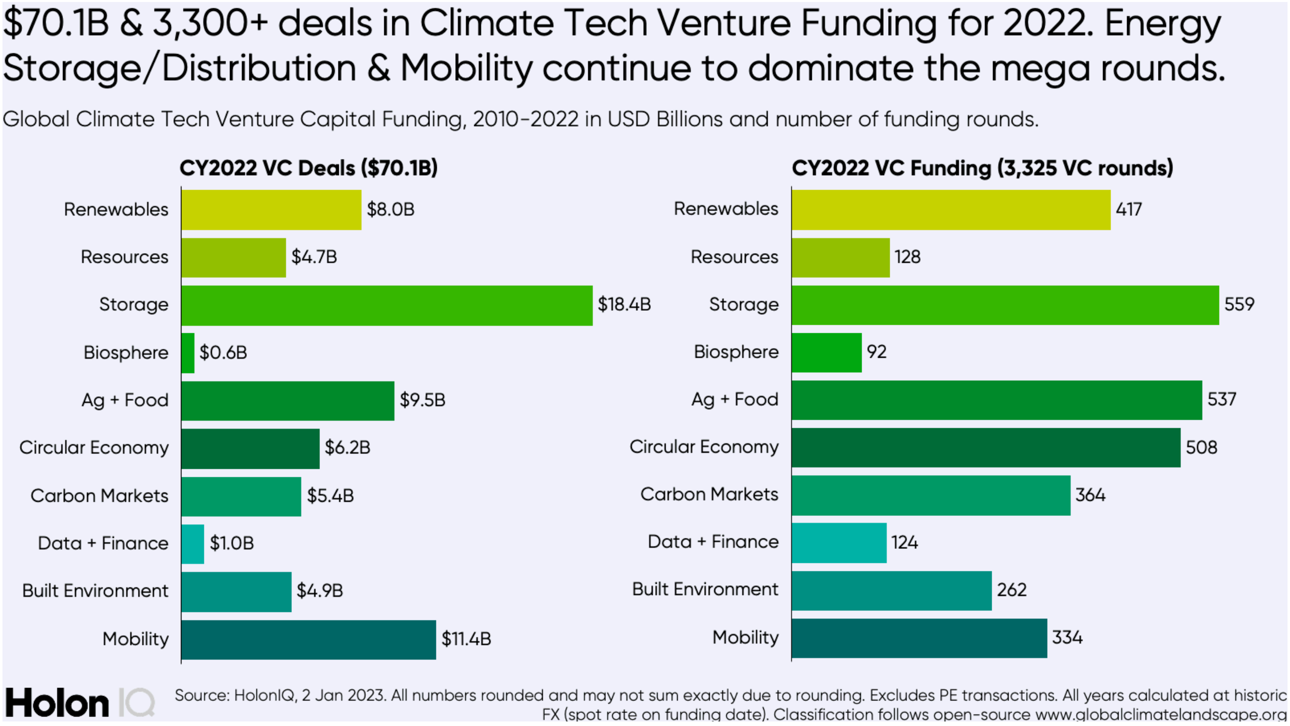
(US$ 18.3 billion and US$ 9 billion respectively) during the year of 2021. This represents a 210% increase from the $28.4 billion dollars invested in the twelve months prior. Most of this capital funding growth targeted climate-tech based businesses that had impacts in cutting carbon emissions through renewable energy and electric vehicles products and services.

In 2022, when world economies were taking strain from the impacts of the war in Ukraine, the rising price of oil and the difficulties of supply chains after the opening of markets back to pre-Covid trade, venture capital investments into the tech sector slowed and decreased as a result of the above. However, according to HolonQI State of Climate-tech (2023), investments into the climate-tech sector defied the downward trend and recorded $70.1 billion dollars in venture capital funding in the second quarter of 2022, a 89% increase compared to 2021. This was thanks to venture capital firms like Y Combinator, Lower carbon Capital, and Tech-stars who helped to raise investments in climate Tech businesses by 47% in the first half of 2022 compared to the same period in 2021(HolonQI, 2023). There were 3,300+ global venture funding rounds that delivered $70.1 billion of climate-tech VC investment in 2022, nearly double 2021's record total (HolonQI). Climate-tech venture capital investment is now 40 times larger than it was a decade ago during the clean-tech boom.



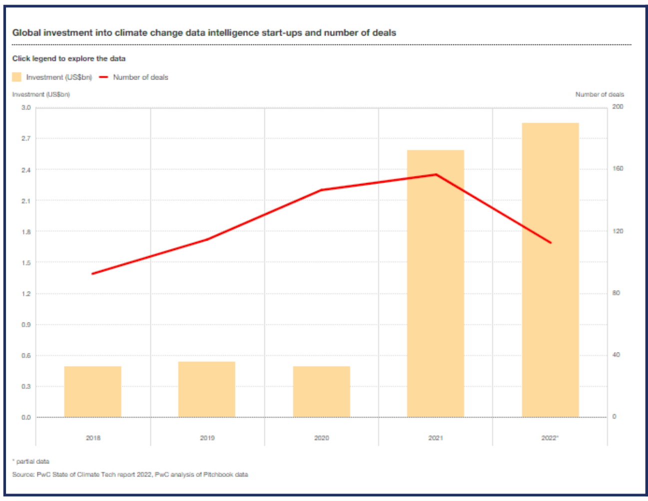
Source: HolonIQ, 2022

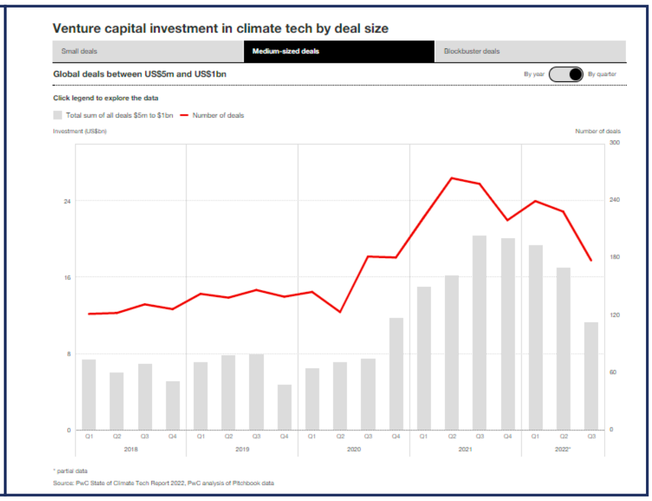
Climate-tech now accounts for 14 cents of every venture capital dollar as stated by the PwC and HolonQI State of Climate Tech Reports. Why is this? This is because the market has become a rapidly maturing asset class, offering investors significant financial returns and the opportunity for outsized environmental and social impact, as the PwC report states. Climate technology has moved well beyond a proof of concept and our analysis finds new investors entering the market each year. Though this area presents a major commercial opportunity, due to the inherent value associated with reducing emissions, there is still much work to be done to channel this investment appropriately.



Source: HolonIQ, 2022

However, this does not mean that there has been an increase of venture capital funding deals with climate-tech based startups across the globe. There has actually been a decrease of deals being signed off with climate-tech based startups due to the pressures of the global economy with risks of a suggested recession on the horizon (PwC State of Climate Report, 2022). Venture capital firms and investors have thus invested into the safety and stability of well established climate-tech businesses in their growth stages of funding and who have become unicorns like Northvolt, TeraWatts, PerraPower, Climeworks and EnergyX. According to HoloniQ's Climate Tech 2022 report, 83 climate-tech based unicorns took 80% of the funding (Holoniq, 2022). In PwC's State of Climate Tech Report for 2022, this decrease in the number of deals but increase in investment is illustrated in the below graphs from their report.





Source: PwC - State of Climate Tech, 2022

Although climate-tech markets have shown encouraging resilience with the background of Russia's invasion of Ukraine, inflation, and a sharp correction in the capital markets, data from the PwC report does highlight that venture capital into the sector has followed some of the less positive trends discussed in this report. As illustrated in the graphs above, the less positive trend globally is the number of and total value of deals under $5 million dollars have been declining since the end of 2021. This points to a weak pipeline of high quality startups progressing from their early funding stages in 2022. Although venture capital spending into climate-tech has been encouraging, funding during the last quarters of 2022 is down by 30% over the same period in 2021, as the SPAC driven peak of $34 billion dollars of deployed capital in Q3 '21 looks to have been a cyclical anomaly. These trends may be due to venture capitalists keeping risks to a minimum in a volatile global economy by investing in well established and sustainable climate-tech companies and enterprises that have already proven their scalability.

Therefore, although there has been an embrace of climate-tech amongst venture capitalists across the world with record investments in 2021 and 2022, there has been a decline in the investment into new climate-tech startups in their early stages of funding and development with few deals, but a lot more capital going in single tickets with proven growth, scalability and impact.

Africa

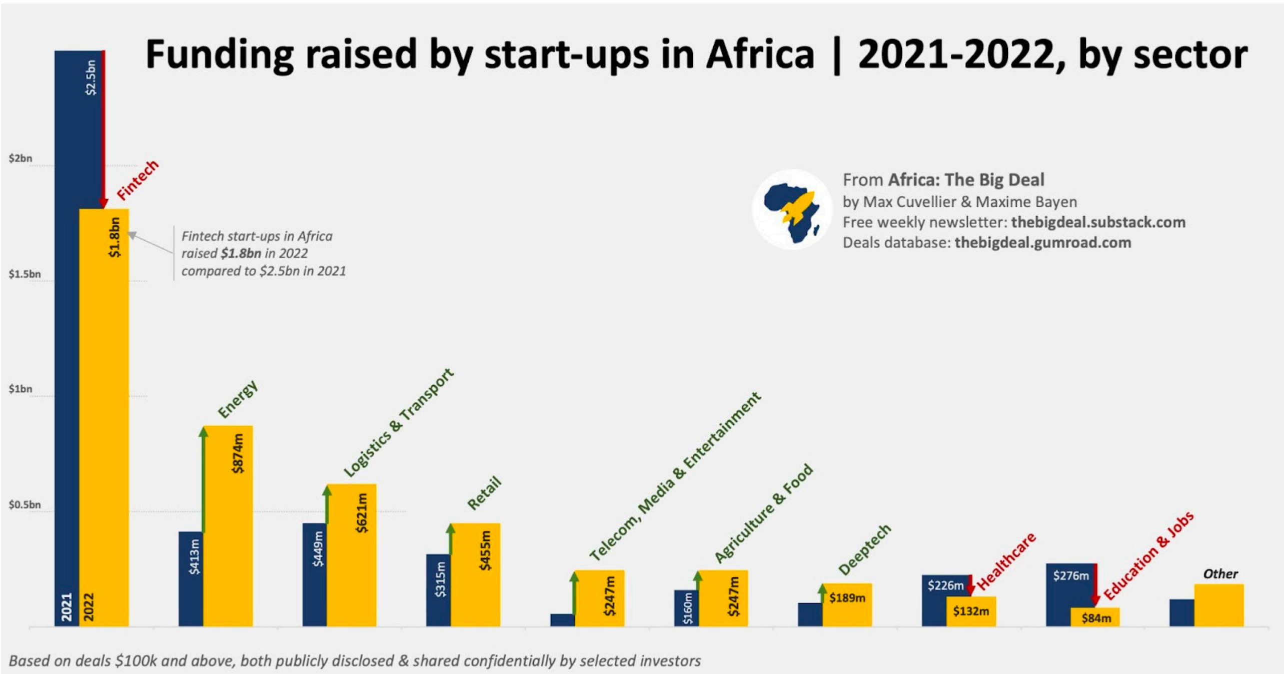
So how has Africa fared in comparison to the global market and investments into climate-tech based startups and businesses at a time when venture capital firms and investors have set a record in investments but with fewer deals and a lot more focus on single growth startups?

Over the past 15 years, many hundreds of startups have sprung up to offer climate smart technologies and solutions to African consumers. According to Briter Bridges's Adapt, Migrate and Grow report of 2022, they have more than 500 startups on their count, operating across Africa in the climate-tech space in industries such as agriculture, clean energy, sustainable materials, e-mobility, transportation, and nature based solutions. Of these 500 climate-tech startups, 147 have been able to raise funds from venture capital investors since 2015. Within that period until the second quarter of 2022, they raised $2.1 billion. Of the total $440 million was raised in 2021, according to Briter Bridges. This amount is almost doubled, where the Partech State of Tech in Africa report states that clean-tech raised US$863M in equity, representing 18% of total funds raised across all tech sectors. This YoY increase of 347% highlights the rise and investability of climate-tech in Africa and the notable trend by venture capital investors in seeing climate-tech startups and the sector as a viable means to migrate inflation in the long run. However, one must note that the performance of 2022 was largely due to some large clean-tech rounds such as Boxx acquisition of PEG for $200 million. Most of the funding deals were made with climate-tech startups in their scale and growth stages of funding, where only 69 deals were made according to Partech, a 65% increase from 2021 where 26 large deals were made.

It should be noted that the African Private Equity and Venture Capital Association (AVCA), counted 79 climate-related deals worth $1.3 billion for 2022, with an average ticket size of $22.7 million. Of these deals, 73% were venture capital investments while there was a mix of debt investments and other financial products like grants. However, one must be reminded that due to the overlapping and interchangeability of the terminologies clean-tech, climate-tech and green-tech and the technologies associated under each umbrella term and that there will be differences in numbers and data according to the preferences and frameworks of the market research agencies.

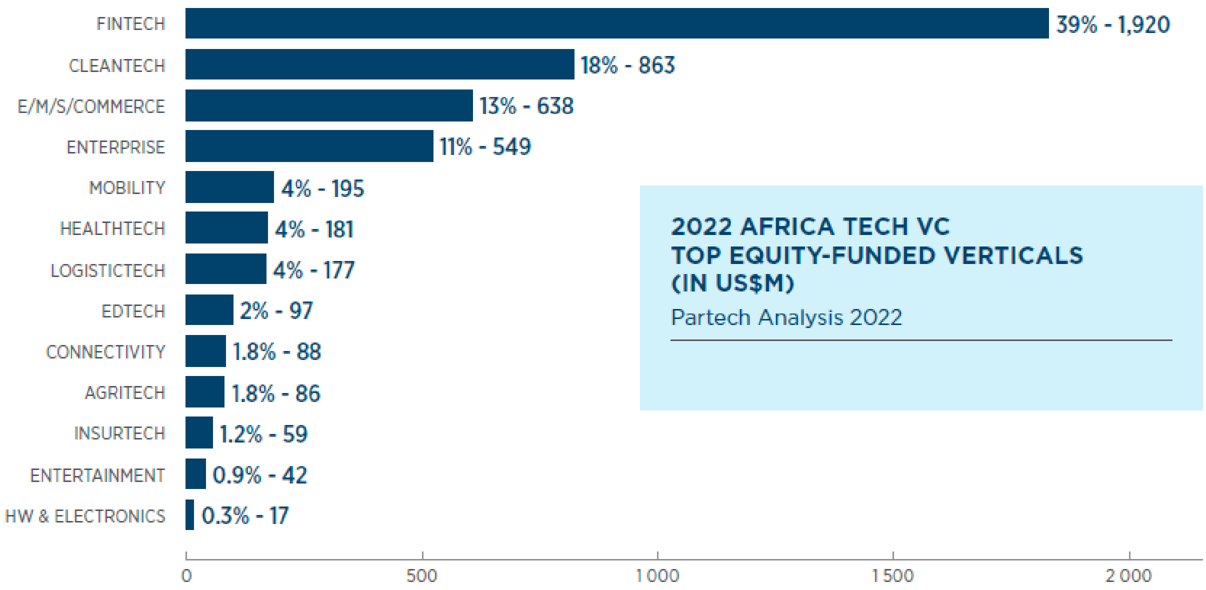
According to the Big Deal (2023), 25% of all funds raised by startups in 2022 were by startups within the climate-tech sector that offered renewable energy products and solutions. However, he states it is a bit tricky to engage due to the overlaps and interchangeability of the terminologies for the sector. He states;.

> ***"The Climate Tech scene for sure will grow. All into one sector because not all agriculture startups are necessarily climate and not all energy startups are climate. So it's a bit tricky, but I would say it's about 25% in 2022, the total investment that went to overall climate or environment type stuff, whether it's solar energy, waste management, access to waste management, resilient agriculture, and carbon edits. That's roughly 25% perfect. Not far from FinTech."***



Source: The Big Deal, 2023

For Partech (2023), their State of Tech report for Africa states that clean-tech claimed 2nd spot after Fin-tech as the sector that raised the most during 2022.



Source: Partech State of Tech in Africa, 2023

According to Briter Bridges, 75% of venture capital investments associated with the climate-tech sector went to climate-tech startups that provided renewable energy technologies and solutions such as solar power. Agri-tech followed suit with 14% of the investment fund distributed to climate-tech startups within Africa. Clean alternatives or low carbon emissions technologies and e-mobility are the only two other noticeable technology product sectors with 6.8% of the funds raised and 2.3%. Thus, the African climate tech market is dominated by technology products and solutions that fall under clean-tech and agri-tech.

Figure: Sector distribution by sum ($)

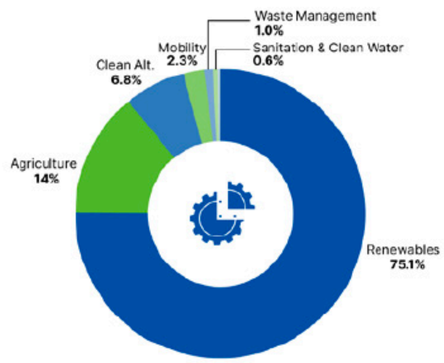
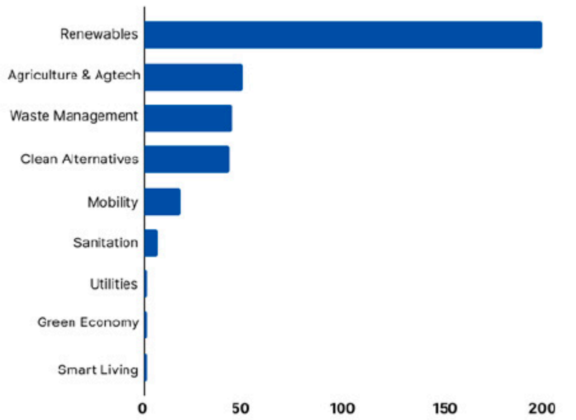


Figure: Sector distribution by number of deals



Source: Briter Bridges - Adapt, Migrate and Grow, 2022

According to Cerin Maduray, a finance consultant for the WWF Green Trust Fund,

> ***"Clean-tech technologies such as the renewable energy sector still represents a huge opportunity for businesses in Africa. In South Africa we are seeing a massive growth in demand for Solar Systems, Inverters, generators and other energy sources. The circular side as well, with regards to waste management, upcycling and sustainable consumer goods represents growing markets. As consumers become more conscious about their impact they are looking for plastic free alternatives, biodegradable packaging as well as upcycled, second hand (pre-loved) and earth friendly goods. Sustainable foods are also a growing sector, from organic farming to alternative protein as well Agri-tech. Sustainable Transport and related industries are also sectors to look at".***

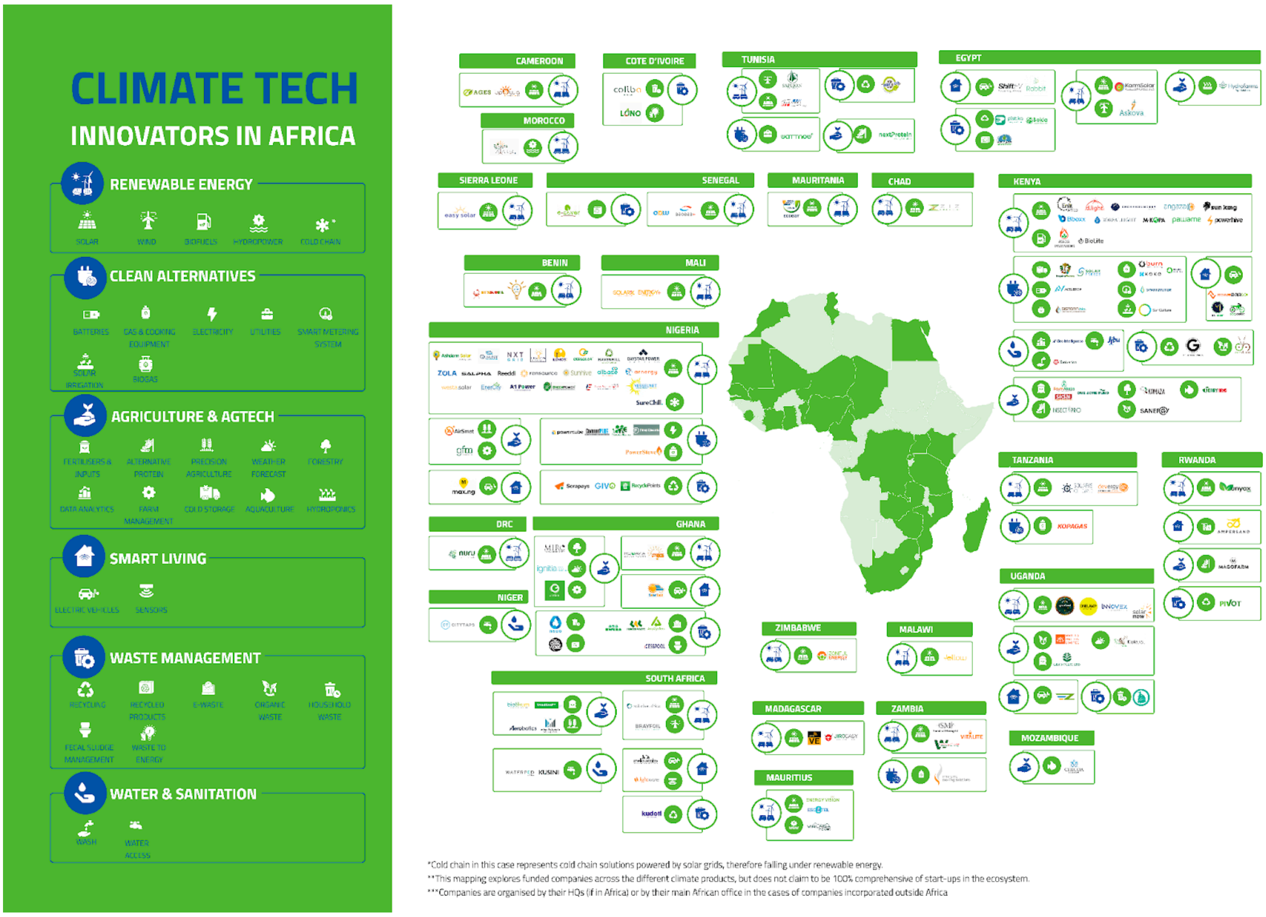
In the addition to the above, the importance of agri-tech as an investable and impactful business sector within Africa was highlighted at the AfricArena East Africa Summit in a panel discussion on Agri-tech investments in Africa during 2021 and 2022 .

Click on the image to view the full video.

When one looks at HolonQI's top 50 climate-tech startups of 2022 based on the funds they raised and who were the best performing in market, product, team, capital and momentum, we can see that again renewable energy startups dominate the climate-tech sector with agri-tech following in second. E-mobility startups saw a surge in deals made and growth in the market. Thus, there are similarities in the numbers between Briter Bridges and HolonQI in the percentage of funds raised and deals between the different climate-tech product sectors.

Source: HolonQI 2022 Africa Climate Tech 50

It can also be highlighted that most of HolonQI's top 50 climate-tech startups of 2022 and Briter Bridge's map of climate-tech innovators in Africa that the "Big 4" tech ecosystem's of Nigeria, Kenya, Egypt and South Africa still dominate the tech landscape of Africa. However, with resources being more accessible to entrepreneurs in the climate-tech sector such as black soldier and protein farming, there are a number of climate-tech ecosystems emerging from countries like Ghana, Senegal, Tunisia, Uganda and Rwanda. This thanks to a number of international financial institutions investing into the tech sector within these countries, the conducive business environments that countries have established and the active policies promoting climate change migration and the growth of the tech sector.



From these two maps of Africa's climate-tech startup landscape, one can identity the best performing start-ups per climate-tech product sector and who will be the emerging startups to lookout for in 2023. From the startup maps by sector, it is highlighted that the most common technology product sector of funding and growth in the climate tech market is renewable energy, agri-tech and clean alternative energy technologies. However, one of the interesting new markets starting to rise across is the hybrid circular economy and agri-tech business and black soldier and insect farming for protein to be feed back into agricultural ecosystem. Inseco from South Africa was able to raise $5 million in 2022 while other black soldier farms in Kenya, Rwanda, Uganda, Tunisia and Tanzania.

When access to finance is limited, debt investments

The goal of transforming Africa into the epicenter of the world's low carbon industry has not been easy to achieve. Climate tech startups in Africa have received less than one per cent of global venture investments into Climate Tech. According to PwC State of Climate Tech for 2022, just 0.2% of global Climate Tech deals in 2021 were inked in Africa in comparison to 93% of the deals being secured by startups in the USA, China and Europe. In addition, there has been a slow down of deals being made by venture capitalists in the last 2 quarters of 2022 with only large growth deals sealed which has led to a down turn in deal strike with early stage climate tech startups.

On the slow down of investment deals below $5 million being made into climate-tech startup, Cerin Maduray from the WWF Green Trust states that "2021 was a risk off year for financial capital markets. With public equity markets taking pain this makes unlisted investments as well as venture capital market investments more difficult to make. Rising interest rates plus rising inflation and contracting economies is not good for venture capital investment. These factors could explain a reduction in investment in start-ups".

Thus, access to finance has become a barrier for climate-tech startups during 2022 and going into 2023, especially for startups in the early stage of growth. What hasn't help either is critical gaps in infrastructure and support in most African countries which has stagnated investment and growth in the tech sector. Outside the "Big 4" markets of Egypt, Kenya, Nigeria and South Africa, climate-tech startups face hurdles such as poor internet connectivity and high access costs, power sector challenges, unfavorable regulation, weak ecosystem connections, and a general lack of access to funding (Briter Bridges, 2022). These issues are highlighted in Startup Basecamp's view of key challenges for climate-tech startups in Africa.

According to the Romain Diaz (2022),

> ***"Funding is a big part of being able to grow or not succeeding. There is a shortage of funding (trillions of dollars) that'll help get us to net zero, and part of it needs to come from the financing of startups. Climate investments in Africa represent only a tiny fraction of other verticals, such as fintech, which have taken the lion's share of VC investments on the continent to date. We are convinced that this is poised to change as the climate agenda becomes front and centre for all nations and corporations".***

With limited options of venture capital finance, climate-tech startups in Africa went and started looking for other avenues of financing in 2022 when there was a dry powder market with venture capitalists and the supportive tech ecosystems of their home country failed them due red tape policies and shortage of resources. According to Partech's State of Tech in Africa report for 2023, there was an "apppetite for debt financing from start-ups that needed to fuel their growth and develop". For climate-tech startups with well built and advanced operations such as renewable energy startups looking to scale operations further and outside their border, debt capital financing became attractive in 2022 with 39% of all debt capital accessed by tech startups going to clean-tech startups. Only fin-tech was larger in debt funding with 45% of the captured debt capital investment. This 39% of debt capital investment comprised of $605 million through 16 deals. These deals comprised 23% of the total deals secured by climate-tech startups in 2020. Thus, making 2022 not only a record breaking year for climate-tech startups during a dry powder market with a slow down on VC investments and financing but also year with record debt capital investments and financing due to the difficulties of accessing large investment at a time of a slow down in the global economy.

In relation to the slow down of venture capital funding for climate-tech startups, Cerin Maduray from the WWF Green Trust states that “economies may be contracting and borrowing costs may be rising but technology continues to progress. This means there are always inventors and innovators out there bringing new solutions to market and as the environmental challenges rise so too will the solutions rise to solve them, which generally involves deploying new tech in innovative ways”

Key takeaways

• Climate-tech in Africa was only able to raised 0.2 percent of the total global investments into climate-tech startups for 2022

• Clean-tech startups in Africa were able to raise $863 million consisting of 69 deals, most of them above $5 million according to two State of Tech Reports, Partech and the Big Deal.

• The overlapping of technologies and interchangeability of terminologies associated with climate-tech and clean-tech mean that tracking deals and funds raised can be tricky with data also pointing to the climate-tech sector raising $1.3 billion in investments for 2022 with 79 deals made

• Although 2022 was a record breaking year for climate-tech startups in terms of funds raised, there was only a 69% increase in deals made compared to 2021 and most of them were large equity deals, making 2022 a dry powder market in terms of VC investing.

• With limited options in financing due to investors holding onto their funds and only investing into large growth climate-tech startups, 2022 was also a year of debt capital investments for climate-tech startups where clean-tech companies represented 39% of all debt capital investments in Africa with 16 deals that totalled $608 million

• Renewable energy, agri-tech and clean energy alternatives dominate the climate-tech technology product sectors in terms of VC funding raised by startups, deals made and growth in the sectors.

• Alternative protein, especially black soldier fly farming, has become an emerging market in Africa with VC investment in 6 Africa countries

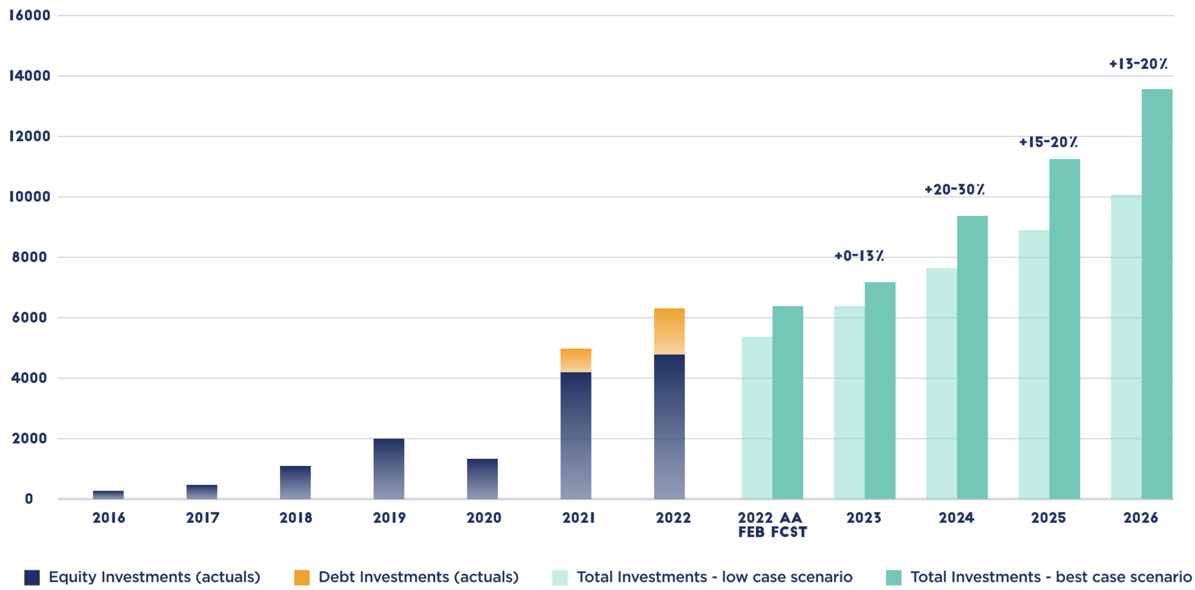
OUR KEY PREDICTIONS FOR 2023 AND BEYOND FOR INVESTMENT IN AFRICAN TECH STARTUPS

6.1

Based on the above observations, our views at the time of writing this report (January 2023), on the basis of a model we have trained since 2019 on the basis of demographic, economic and market drivers, are that 2023 will see a flat to moderate growth, and a total investment ranging between $6.5 and $7.3 billion dollars - with a likely decline in equity investment more than the offset by a continuous growth in Debt Venture (which we expect will continue to grow at a double digit rate).

As we had foreseen for 2022, we further believe that we will continue to see increased activity on the M&A side, in particular an increased number of acquisitions of startups by corporations as part of the innovation plan or other startups as part of their scale-up strategies around the continent, particularly in FinTech.

Investment in African tech startups: 2015 - 2026 (in $ million)
Source: Partech reports (2015 to 2022), AfricArena Analysis (2021 to 2026)



Our model for subsequent years, indicates an upper range of $9.5 billion dollars in 2024 with a substantial rebound of the market and an expected 20 - 30% growth. Total investment should exceed for the first time $10 billion by 2025 and may approach $14 billion dollars in 2026.

While the growth of these numbers appears significant, it should be noted that this remains a very small fraction of the overall VC activity in tech globally and as of 2022 less than 1.2% of the global VC market and $4.65 per capita.

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GLOSSARY

A-I

Accelerator: A structure that offers cohort-based and fixed term programmes to support growth stage ventures to achieve scalability and self- sufficiency. Accelerators offer advisory services, mentorship, workshops, networks and usually investments in cash or in-kind.

Accounting Rate of Return (ARR): The expected percentage rate of return on an investment, compared to the initial investment's cost. (Compare with Return on investment)

Agritech: A portmanteau of "agriculture" and "technology", which refers to technology-enabled products or services geared towards better agricultural practices and outputs.

Angel Investor: An individual investor who uses their own money to fund an early stage business.

Bootstrap: The founder(s) of a business using their personal capital to start the business and the money coming from the sales to grow it.

Corporate Venture Capital (CVC): Corporate venture capital is the investment of corporate funds directly in external startup companies.

Development Finance Institution (DFI): A financial institution that provides risk capital for economic development projects on a non commercial basis.

Early Stage: A startup in its early days, usually with little or no funding.

Ecosystem: A dynamic framework consisting of a set of stakeholders - startups, hubs, investors, academic institutions, public institutions, corporates - who interact and engage with each other to seize new opportunities, support innovation and strengthen the overall business environment for entities at different stages, sectors, and geographical locations.

FinTech: A portmanteau of "financial" and "technology" which refers to any sort of technology used to support or enable financial-related services.

Founder: The initial person(s) that start a business.

Fund Manager: A person or a legal entity who determines the investment strategy and manages the investment of money on behalf of an institution or group of people.

GDP per capita: The division of a country's GDP distributed across the population of the country.

General Partner (GP): A general partner in a VC fund manages the deployment of funds into investments in startups and the day-to-day operations on running the VC firm. (Compare to Limited Partner)

Gross Domestic Product (GDP): The total value of goods produced and services provided in a country during one year.

Healthtech (or e-health): A portmanteau of "healthcare" and "technology" which refers to the use of technology (databases, applications,

Impact investing: Investments made into companies/ organizations/funds with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return.

GLOSSARY

Incubator: A support structure that helps early-stage startups transform from idea to venture, by offering advisory services, resources, workshops and hands-on training that guide entrepreneurs in defining and refining their business models and value propositions with the goal of becoming sustainable businesses.

IPO: Initial Public Offering allows a private corporation to raise equity capital from public investors by offering their shares to the public in a new stock issuance for the first time.

Limited Partner (LP): A limited partner in a VC fund transfers to the general partners the assets under management for a limited duration in order to deploy them through investments in startups. Limited partners are not commited operationally in the management of the fund. They are usually public institutions, pensions funds, development finance institutions, etc. (Compare to General Partner)

M&A (Merger and Acquisition): A general term used to describe the consolidation of companies or assets through various types of financial transactions, including mergers, acquisitions, consolidations, tender offers, purchase of assets, and management acquisitions.

Minimum Viable Product (MVP): A product with enough features to attract early-adopter customers and validate a product idea early in the product development cycle.

Off-grid: Technologies/products/facilities that do not rely on connectivity to a main electric grid to function, but rather, use alternative power options.

Open Innovation: The use of purposive inflows and outflows of knowledge and resources to accelerate internal innovation.

Open Innovation Challenge: Part of an Open Innovation program. Its goal is to source and connect startups with corporates.

Private Equity (PE): An alternative investment class and consists of capital that is not listed on a public exchange.

Proof of Concept (PoC): The materialization of a certain method or idea in order to demonstrate its feasibility.

Return on Investment (ROI): The measure of the amount of return on a particular investment, relative to the investment's cost. (Compare with Accounting Rate of Return)

Seed Funding: Early stage of funding where the startup might not even have an MVP.

Series A Funding: Follows the Seed Funding, usually enables the scaling phase of the business.

Startup: A company using technology to bring new products or services to the market. In our definition, it covers only companies being headquartered in or with most of its operations in Africa.

Startup Act: A legislation that is intended to encourage the growth and viability of startup companies.

GLOSSARY

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Tech Hub: A centre, structure or network comprising actors supporting or facilitating the development of an environment conducive to entrepreneurship or innovation (e.g. incubator, accelerator, co- working spaces, etc.).

Ticket: "Ticket size" refers to the amount of money that goes into an investment transaction.

Venture Capital (VC): A venture capital firm is a specific type of private equity investment firm that focuses on high- growth potential, risky and innovative businesses. The expected above-average returns compensate for the high level of risk associated. It usually takes the form of an equity stake in exchange of cash money.