



Innovation

MAPPING OF KENYA'S INNOVATION ECOSYSTEM

How Innovation Hubs are Driving the Start-up Ecosystem in Kenya



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Therefore, this publication highlights the role played by innovation hubs in supporting innovators and start-ups in Kenya. It documents views and insights from managers of selected innovation hubs in the country and how they are driving the ecosystem. It brings out their challenges, struggles, successes and opportunities on one hand, and how they fit into the ecosystem jig-saw puzzle on the other.

Based on the views from managers of innovation hubs, it is apparent that these spaces play a pivotal role in the rising tide of innovations and start-ups in Kenya, whose highest watermark was reached when the country's start-ups raised USD 375 million seed funding in 2021.

An innovation hub is defined as a physical space that brings together researchers, creators and innovators to nurture ideas into industry-changing products and services, by helping develop entrepreneurial and especially tech communities, inspire and build skills and networks among potential young entrepreneurs. Also included in this document are co-working spaces, maker-spaces and innovation labs.

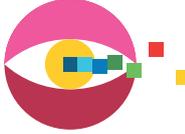
Whereas the innovation hubs that form the basis of this publication were randomly selected, their views - more or less - reflect their critical role in supporting innovators and start-ups. Although the views may not be exhaustive, they provide a fairly good picture of how hubs are driving the start-up ecosystem in Kenya and the impact they are having.

THE CONTEXT

These case studies are part of a broader study on the Kenyan innovation ecosystem commissioned by the United Nations Development Programme (UNDP) and Konza Technopolis which set out to map out the ecosystem with a view to identifying opportunities for collaboration, learning and investment; and to support the growth and development of local innovators across the country.

The study exhaustively mapped the Kenyan innovation ecosystem by identifying its characteristics, organization (players and actors), challenges, and opportunities; identifying its key levers; and highlighted emerging themes and opportunities. It was conducted by the African Centre for Technology Studies (ACTS).

These case studies add to the growing knowledge and understanding of the complex web of interactions among actors in the Kenyan innovation ecosystem.

The logo features a stylized eye with a yellow center and a blue horizontal bar across it, set within a red circle. To the right of the circle are several small colored squares (red, green, blue, yellow).

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How Nakuru Box hub is supporting start-ups in the county

From a humble beginning in 2018, Nakuru Box has grown to become a leading innovation hub in Nakuru County, providing a viable and sustainable model for supporting entrepreneurs. The hub has created a mini-ecosystem where innovators, government entities, the private sector, entrepreneur associations and international organizations work together to create synergistic relationships towards catalysing the growth of start-ups in the county

Nakuru Box is fueling the growth of start-ups in Nakuru by supporting entrepreneurs and creating viable linkages among actors in the ecosystem. George Wayne, the founder of Nakuru Box, started off as a mobile App developer in Nairobi but relocated to Nakuru to create a hub for supporting innovators. Inspired by iBiz and iHub, considered the pioneer of innovation hubs in Kenya, he wanted to recreate the same model and support entrepreneurs to build viable start-ups from scratch. And now, the hub has grown to become one of the most promising innovation centres in Kenya.

THE BEGINNING

Why did Wayne relocate from Nairobi, the centre of Kenya's innovation ecosystem to set up an innovation hub in Kenya? And how was the beginning like?

"It was an untapped market. A lot was going on in Nairobi, Kisumu and Mombasa but there was very minimal activity in the entrepreneurship ecosystem in Nakuru; I decided to relocate from Nairobi to Nakuru in 2018, started doing the set-up of the space. I got a space in town, started setting up the office structure, the relevant infrastructure and got my first team members," Wayne explained.

After taking more than a year to set up the necessary structures, the hub started its operations in 2019, with only 2 staff: an accountant and a receptionist. Then when all seemed rosy and promising, Covid-19 struck. The situation turned from promise to despair.

However, after almost a year of uncertainty, the situation started improving as the Covid-19 wave slowly subsided and normalcy returned. After Covid-19 restrictions were eased they picked up and continued with their operations in 2021, which was one of their most successful years in their quest to support entrepreneurs and start-ups in Nakuru. But what has made Nakuru Box successful, barely three years after it was set up?

THE ROLE OF PARTNERSHIPS

One of the reasons for the phenomenal growth of Nakuru Box is the extensive partnerships it has nurtured with key actors of the innovation ecosystem in Nakuru. The hub has created and nurtured viable relationships with key actors - both national and international - who have contributed not only to the growth of the hub but also for the development of the local innovation ecosystem. These include KPMG, the World Bank, UK aid, AfriLab, Association of Startup and SMEs Enablers of Kenya (ASSEK), the Kenya Network Information Centre (KENIC), Office of the President, Konza Technopolis, Kenya Private Sector Alliance (KEPSA) and the Kenya Association of Manufacturers (KIM). The hub also works closely with local actors and hubs which include CoeLib - based at Egerton University - Sentonomy, Ongoza, balloon ventures and Micro and Small Enterprises Authority.

SUPPORTING LOCAL ENTREPRENEURS

Nakuru Box has been supporting entrepreneurs in various ways: helping them fine tune and run their businesses, creating proper structures for their businesses, mentorship, proving business and partnership opportunities for them, create a platform for them. And whereas the hub has faced myriad challenges, they have been supported by various organisations in their journey.

“Our first big event for supporting entrepreneurs was with KPMG and World Bank. We held a business plan training for about 25 entrepreneurs for three days. That was a big event that opened a number of opportunities for us. Later, we worked with the Office of the

President, the Department of Urban Planning, Konza Technopolis, KEPSA and Ajira Digital in digitizing SME’s and businesses in Nakuru,” said Wayne.

According to Wayne, though the journey has not been smooth-sailing, it has been interesting; despite the challenges of running a new innovation hub, they are on track and have already started harvesting the fruits of their efforts.

One of the working spaces for budding entrepreneurs at the Nakuru Box Hub. The hub supports innovators to commercialise their innovations.

Nakuru Box also partnered with, with UK aid and Liquid Intelligent Technologies to support start-ups in various ways in the county. In April, Nakuru Box in partnership with the Association of Start-up and SMEs Enablers of Kenya (ASSEK) organised an innovation road show in Kenya where start-ups were required to pitch their innovations and from which two innovators got an opportunity to pitch their innovations in Dubai.

The hub has also partnered with KENIC to provide free online domains for SMEs in Nakuru and is also helping them digitise their businesses by giving them free domains, hosting and training to help entrepreneurs understand how to digitise their businesses. In addition, the hub hosts events where chief executive officers (CEOs) of leading organizations give talks to start-ups on how to navigate the treacherous path of entrepreneurship. At the beginning of March 2022, Nakuru Box organized a breakfast event where leading CEOs held a session with founders of start-ups in Nakuru. The event was attended by more than 60 CEOs from across the country.

According to Wayne, though the journey has not been smooth-sailing, it has been interesting; despite the challenges of running a new innovation hub, they have started harvesting the fruits of their efforts.

“We have managed to support more than 250 entrepreneurs. Some of them came to Nakuru Box with just an idea and right now they’re running very successful businesses. . Some of them come with different challenges and we’re able to provide solutions for their businesses through our consultancy and business development arm ” he said.

One of the most successful start-up supported by Nakuru Box is Siha Organic Groceries; they approached the hub with just a business plan but are now operating a fully- fledged business. Wayne explains how Nakuru Box supported them.

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“It was a crazy journey for us because we are all about bringing people to the space. Everybody faced this challenge but I think the people who are more focused on bringing people together felt it more; however we didn’t give up, we kept on pushing and being resilient and transferred all the events that we had done to online versions,”

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George Wayne, the CEO and founder of Nakuru Box Hub

“They came into our space, we fine tune their business plan and structure and chose a location for them. We set up the structures, we helped them set up their ecommerce platform, their social media pages through a partner. Before we did that, we connected them to Mbele Na Biz competition in which we supported them to fine-tune their application through which they got funding,” he said.

WHAT MAKES A SUCCESSFUL INNOVATION HUB?

According to Wayne, the trick for running a successful innovation hub is to know how to add value to entrepreneurs. In essence, what is your objective as a hub? What is your focus? Who can you work with? What kind of programs do you have? What kind of services can you offer to support entrepreneurs? What services are you going to offer?

“If I am an accelerator, I need to have programs that can support businesses to move from start-ups to the next level. If I am an incubator, I’m targeting people who have businesses at ideation level or businesses that are less than three years. So, of course, it’s about coming up with relevant programs that can help young start-ups develop their businesses” he said.

Meanwhile, according to Wayne, it is also important to think about partnerships? “How do I partner with someone who shares a common goal? Partners who can work with you and are aligned to the same objectives that you have’ he added.

CHALLENGES

The two main challenges facing Nakuru Box - just like other innovation hubs - is sustainability, especially with regard to getting funds to pay for space; and working together with other actors in the ecosystem. “Sustainability is a big issue because the space we have cannot sustain us alone. The other is finding ways to work with development partners to offer an incubation program, deliver a project to the entrepreneurship ecosystem or to run a particular program directly. There is also the challenge of working together with other actors in the ecosystem. It is still difficult to work together and share data. We see ourselves as competitors but not as complimentary actors,” said Wayne.

Advice to hubs and innovators that are starting out Wayne advises those running innovation hubs not to give up despite the numerous challenges. Though the going might get tough, they should persevere and the results will show over time.

“One is to never give up in this ecosystem. Sustainability is a big challenge but never give up. Keep on pushing. Keep on trying to tap into the opportunities. Focus on what your core objectives are and try to get support from the county government,” he advised.

“We also helped them fine tune their application to the Kenya Climate Ventures where they also got funding and were able to implement their business ideas and all the plans that we had. We still mentor and support them in various ways as they continue building their business. They now have a shop and a growing customer base. It’s a very successful story that we are proud of,” said Wayne.

NEXT STEPS?

The hub envisions being a key player in the Nakuru innovation ecosystem, a model on how to run an innovation hub with relevant activities to support entrepreneurs.

“We want to run our own projects that are Nakuru centered and organise regular innovation challenges, innovation weeks, pitch competitions, and hackathons. This is because we have start-ups in Nakuru who need support; there are ideas sitting on students’ laptops, people’s brains but they’re not bringing them out. We want to actualize them,” said Wayne.

KEY LESSONS LEARNED

Based on his experience of running the hub, Wayne has learned three vital lessons:

- To survive in this ecosystem, you have to be well networked, know ecosystem players because the entrepreneurship ecosystem is very small, it’s not vast. It’s not like the manufacturing ecosystem or the tourism ecosystem. It’s possible to know almost everybody in the ecosystem: all the organisations, all their heads, the associations, their leaders, key government stakeholders, key government ministries that support the ecosystem. So it’s very possible to know at least 70% of the actors in the ecosystem. And if you know 70% of actors in the ecosystem then you will not miss to spot the opportunities once they come.
- You need to be very active. Let the entire ecosystem recognise you as a hub. Let the entire entrepreneur ecosystem know who you are, know what you do, what value you add and get to know what other people are doing, how you can plug in into what they’re planning.
- Learn the network, know the network and be acquainted with them. If there’s an event in Nairobi, go and participate and be active. Networking is one of the key factors you need to take into account if you want to grow as a hub and the rest will follow. For example, if there is a Lake Basin Innovation Week or Mombasa Innovation Week, participate as a hub. Be fully integrated into the ecosystem and know what everybody is doing and be plugged into it.



Adanian Labs Africa CEO, John Kamara(right) and CEO of LBank Allen Wei after sealing a partnership deal on cryptocurrency.

Adanian Labs Africa set to build 300 viable start-ups by 2025

Founded in 2020, Adanian Labs Africa has already built and launched 15 startups, raised seed funding for 5 of them and are finalizing the uptake of a new cohort of 25 companies into the labs. They have now set their sight on building 300 impact driven commercially viable tech companies in Africa by 2025 ty

The path from ideation to a commercially viable and sustainable business venture is paved with hundreds, perhaps thousands of failed start-ups. This is backed by statistics indicating that about 90% of start-ups fail within the first year.

This begs the question: where are they failing short and what can be done to mitigate against this high failure rate? Part of the reasons for this discouraging statistics is the cut-throat competition, limited business experience among new entrepreneurs and lack of capital to commercialize their products.

And now, a fairly new business accelerator is on a mission to build smart start-ups by nurturing them into successful and scalable data driven commercial busi-

nesses. While only two years old, Adanian Labs Africa is a Pan African venture building studio with a mission to build, incubate and launch impact-driven technology companies and entrepreneurs working to solve some of Africa's most pertinent challenges.

Adanian Labs uses smart technologies (AI and Blockchain) as building blocks to create solutions that are impact- focused, commercially viable and scalable across Africa and other parts of the world.

Currently, the company has built 14 startups in the 1st cohort and 18 startups in the 2nd cohort in Agritech, Healthtech, Womentech, Fintech, Adtech, Smetech and other industries; and has launched 2 centres of

excellence - Artificial Intelligence (AI) Center of Excellence and the Africa Block Chain Center for Blockchain Technology.

THE BEGINNING

Adanian Labs Africa was established in 2020 and has grown exponentially in 2 years, within which they have opened offices in Kenya, Tanzania Zambia, South Africa and Nigeria and are looking to open new offices in 5 other countries in Africa in the next 2 years.

MOTIVATION BEHIND STARTING THE LAB?

According to Kenneth Agina, the Business Development Manager, Adanian Labs focuses on capacity building, tech consulting, venture building, investments and partnerships. The lab focuses exclusively on tech start-ups.

“We established that existing incubators and accelerators do not address key issues which can de-risk these start-ups from possible failure. For this reason, we came up with a solution which involves a very structured 360 degree incubation program,” said Agina.

SKILLS GAP

According to Agina, there seems to be a skills gap within the start-up ecosystem which stifles its group. For this reason, the accelerator has initiated capacity building programs for budding entrepreneurs mainly on data science, artificial intelligence and machine learning.

To facilitate training on emerging technologies, Adanian Labs has established centers of excellence on artificial intelligence, block chains and Internet of Things (IoT) for this purpose. These centres are also revenue generating arms of the accelerator to enhance its sustainability.

“We are looking to train about 6000 data scientists who will focus on artificial intelligence and machine learning in addition to 1000 block chain engineers within the next 5 years,” he explained.

INCUBATION PROCESS

The process of incubation and acceleration starts when Adanian Labs puts out a call for start-ups willing to be taken into the Adanian Labs. The applicants go through a rigorous vetting process and those who are lucky to be selected get seed funding of about of KSh 1, 200,000 (USD 120,000).The seed funding comes

both in cash and kind. Adanian Labs then retains an equity stake of between 10-20% in the start-up based on different parameters but with a clear exit clause. Apart from the seed funding, the selected start-ups are taken through a 12 month acceleration program which include marketing their products and upscaling their activities. They also benefit from the labs’ shared resources including corporate structures - legal services, investment portfolios and human resources.

FUNDING

Adanian Labs has different ways of raising funds. Apart from equity in start-ups, the it has strategic investors who support the accelerator financially. In addition, there is a technical arm - Adanian Tech -which is responsible for building technological solutions targeting specific market needs based on tech research conducted by the accelerator or requests from the corporate world. This is also meant to raise funds.

An informal interaction at Adanian Labs Africa offices, Nairobi.

TECHNOLOGY SUPPORT

For any start-up, funds are always limited; and setting up a technology platform to support the business is always beyond reach. In this respect, the Adanian Labs also supports start-up to build relevant technological platforms - based on web 3.0 technology - to support their businesses. All these services are meant to save the start-ups from spending money to set up these structures.

According to Agina: “technology is often a huge challenge for start-ups because technical resources are quite costly. So within Adanian Labs, we build for you whatever platform you need based on web 3.0 technologies. We also build a team to support you on this.” Web 3.0 technologies, also known as the third-generation Internet, is the next evolution stage of the World Wide Web. It provides a data-driven machine-based understanding of data with a view to developing a more intelligent and connected web experience for users. Adanian Labs also leverages on web 3.0 enabled technologies which has advanced features over and above web 2.0 technologies.

“The fact that we have a presence in Kenya, Tanzania, Zambia, South Africa and Nigeria means that the start-ups we onboard automatically have markets in these countries together with the necessary legal services and human resources necessary for business development,” Agina revealed.

A POOL OF INVESTORS FOR START-UPS

Apart from technology support, start-ups attached to Adanian labs can have access to a pool of potential investors where they can pitch their businesses for funding.

In his view “we ensure that start-ups get access to these investors through several platforms where they can pitch their business ideas for funding. The start-up can do the pitching to several investors and in the process perfect their skills; and hopefully get funding for their ideas” adding that Adanian Labs also provides an elaborate mentorship program for start-ups through which they get to meet business leaders in different sectors. The leaders are also available to offer business support when needed.

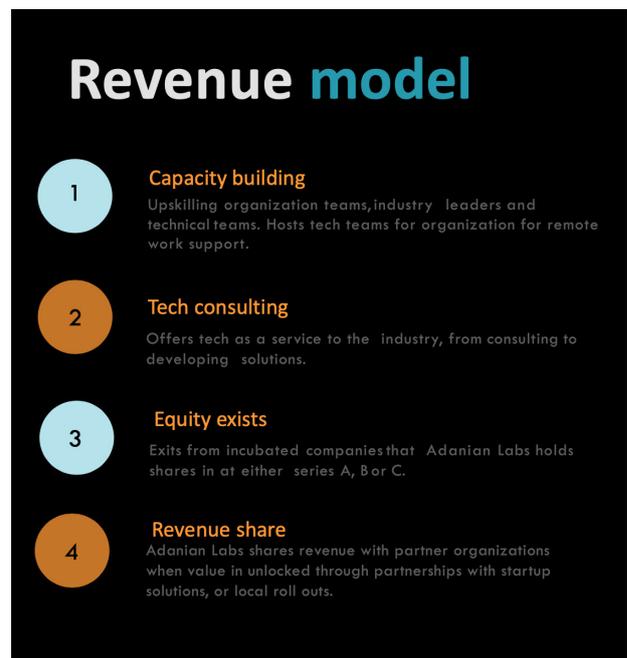
SELECTION CRITERIA

For a start-up to be taken to the Adanian Labs, they must show evidence of a viable project with a potential for growth and socio-economic impact. In addition, the innovators must exhibit entrepreneurship acumen and show how their solution fits with the identified need; preference is given to youth and women. Adanian Labs mainly focuses on supporting start-ups in financial services, health, education, advertising, agriculture and gaming.

FOUR START-UPS RAISED OVER USD 8 MILLION

Although the Adanian Labs has been in operation for about 2 years, its impact has been enormous. This is illustrated by the fact that four starts associated with it have already raised over USD 2 million.

The three centres of excellence based at Adanian Labs have trained over 200 youth on emerging technologies – data science, artificial intelligence and machine learning. The second cohort of 100 youth are currently in session.



“Four start-ups incubated at Adanian Labs have each raised over USD 2 million seed funding. Afya Rekod, which is a patient driven health data platform; Paylend which is a Fintech platform that supports the SME sector and the African Block Chain Centre have raised USD 2 million each in seed funding,” said Agina.



An informal interaction at Adanian Labs Africa offices, Nairobi.

KEY LESSONS LEARNED

Having a proper mentorship programme is key for start-ups. This allows them to think from an entrepreneurial point of view. This is because some of the start-ups that pass through Adanian Labs may have great solutions but may not succeed if they don't have the right mindset.

Also, in his view, there is a gap in specialized skills in the innovation ecosystem especially in specific tech areas.

“One thing that the entire ecosystem is struggling with is having dedicated skills developers to work with in their projects. This is because to get a qualified developer is quite costly,” he said.

And finally, Agina opines that partnerships and collaboration is very healthy for the ecosystem.

“Unless innovators collaborate with the corporate sector and public institutions then the ecosystem will not understand what you are upto,” he said.



Part of the team at Sote Hub at their offices in Mombasa.

Sote Hub: We have supported more than 300 businesses

Over the last four years, Sote Hub has supported over 250 entrepreneurs and provided job/internship matching opportunities to more than 800 young people. The hub has also created an entrepreneurship pipeline from school to work and has supported over 50 high schools and impacted over 10,000 students.

Sote Hub runs a successful incubation programme in the coastal region of Kenya, supporting budding entrepreneurs and providing internship to young people. The hub has supported more than 300 Small and Medium Enterprises (SMEs) in different sectors, some of which have gone to become successful companies.

Using digital technology, Sote Hub trains rural youth from Coastal Kenya - often marginalized with fewer opportunities - on online jobs and career preparedness; and in the process supports them establish start-ups where they create products/services with the potential of growing into successful businesses.

According to the Head of Programmes, Alvin Chole, innovation and sustainability are the core values of the hub.

“We work with innovative and marginalized small business that face challenges in form of business training, finance and any other gaps that face businesses in the area. We come in as a hub to support them,” he asserted.

Over the last four years, the hub has supported over 300 entrepreneurs and provided job/internship matching opportunities to 800 youth; about 85% of enterprises incubated are currently running successful businesses.

“About 85 % of enterprises that goes through out incubation programme are successful. We are working to ensure a 100% success rate,” he said.

AfyaBoost is one of the most successful start-ups to pass through Sote Hub. Founded in 2020, AfyaBoost provides nutritional health care solutions using immune boosting fortified products processed from organic ingredients. The start-up addresses health challenge of malnutrition and immunodeficiency in young children, maternal nutritional health care in nursing and expectant mothers as well as immunocompromised individuals.

MEASURING SUCCESS

It is always a dream for an incubator to ensure that start-ups they support become successful; but how do they measure success?

PARTNERSHIPS

According to Chole, nurturing strategic partnerships has been one of the pillars of their success. The hub works closely with stakeholders both in the public and private sector including the national and county governments.

In addition experts in various business fields have been very supportive to the hub, providing valuable professional advice to budding entrepreneurs, which has played a great role in achieving the 85% success rate.

He revealed that “we often have someone from the Kenya Revenue Authority coming to talk to the business people about taxes. When it comes to quality standards, then we have someone from KEBS coming to talk to the start-ups.”

Being a member of the Countrywide Association of Innovation Hubs has also helped not only in creating viable linkages but also learning from their peers. Through the association, they have worked with other hubs to implement joint programmes.

THE BEGINNING

Sote Hub was established in 2010 as an IT solution company, which mainly provided simple technology solutions particularly to schools, but evolved to become a hub; it was formally registered in 2016.

“We started as Sote ICT in Taita-Taveta around 2010 we used to offer IT solutions and supporting schools - donating computers, setting up cyber cafes in schools, teaching students on matters to do with ICT in schools,” Chole revealed.

THE HUB'S STRUCTURE

Sote hub is registered both as a limited company and a not-for profit organisation, each of which serves different purposes. This hybrid structure is meant to generate income for sustaining the hub and which enables it to serve community needs as part of Corporate Social Responsibility.

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According to David Ogiga, a director and co-founder of the hub, the hybrid system helps to enhance sustainability.

“We are hybrid of an NGO and limited company. The NGO model is usually not sustainable so only used for grant applications. However, the limited component enables us take on consultancies and projects,” said Ogiga.

“We measure success by asking several key questions: are they in the pipeline along which people are making money? Are they creating more jobs in terms of increasing staff, making profit, complying to the standards within their sectors? Do they have access to the value chain,” explained Chole.

Chole explained that the hub has 10 permanent staff who are experts in different innovation project management, finance and ICT.

Part of the team at Sote Hub at their offices in Mombasa.

“We also have about 40 short term experts and consultants, They are sector specific experts whom we engage depending on the tasks in hand. They support us in implementing our projects and programs across the six coastal counties,” he said.

CHALLENGES

Chole asserts that funding for both the hub and small businesses is a key challenge facing the start-up ecosystem. And though they would like to support as many SMEs as possible, lack of funds is a major issue adding that some SMES have great ideas on how to expand their businesses but securing funds to do so is a problem.

NEXT STEPS

Sote Hub has embarked on a process of digitizing all its operations in bid to increase its client base. This will also enable the hub to grow beyond the coast region and even to venture outside the country.

“We are looking at Sote Hub as a voice in the business acceleration sector where we will be in a position to mentor other hubs. Small businesses passing through our hub will be sector leaders and a voice of change, inspiring young business people to do it the right way; not just getting into business because you’re not employed or because you don’t have anything to do,” he said.

KEY LESSONS LEARNED

According to Chole, a good attitude and a burning desire for change is a key success factor in business.

Therefore, in his view, small business must embrace be flexible to accommodate change and be able to continuously improve.

And for those venturing into business, Chole has some advice.

“This journey is a marathon, not a sprint and you must take one step at a time. Your future success will be guaranteed by your current excellence. If you perform excellently in the small things then you will handle the great stuff. Whatever you put your hands on, whatever idea you have to execute, there must be excellence, because that will determine what comes after,” he said.



A training session at Sote Hub in Mombasa. The hub has supported over 250 entrepreneurs in the coast region.



A training session underway at Mombasa Box Hub.

Swahili Box: Where the youth acquire tech knowledge and skills

E-mail conversations and a chance meeting created Swahili Box, an innovation hub in Mombasa aiming to address the widening knowledge and skills gap amongst the youth through its programs.

For Aly Salim, finding a space where like-minded technologists could sit and have meaningful discussions, network, share ideas or even teach other new technology was a huge struggle especially in 2009 when he came back to Kenya from the UK armed with his education and experience. It was through a chance meeting a couple of years later with Ahmed Maawy that Swahili Box came to be. He states that as much as they are currently on different paths, the experience and lessons learned are truly invaluable.

IMPORTANCE OF SUPPORT

With no physical premises to call home, Swahili Box was initially set up as a mobile hub. During this time the then Senator Mombasa County, Hon. Hassan Omar offered the duo a space within his offices in Kizingo, Mombasa. Aly remembers that with this support, they were able to conduct meetings, have workshops and other important activities - activities that were key in their operations but a challenge to undertake without a permanent home. The dream to finally settle materialized in 2013 after the duo secured funding.

SUCCESS AT LAST?

Far from it, this was just the beginning. Having a new lease on life, Swahili Box set up a boot camp for programming/ software development that was geared towards enhancing the skills of the youth.

Some of Swahili Box trainees have landed roles in Microsoft, Dell and Safaricom. Others work remotely for foreign countries; others have joined start-ups which have secured funding.

“Overtime, we have built our reputation as a trustworthy hub where one can get proper developers. We train and prepare our youth not only on software and hardware but also the struggles they would inevitably face when they are in the industry,” he said.

A training session underway at Mombasa Box Hub.

Women in Tech

In addition to the incredible work Swahili Box is doing, the hub also has a ladies wing that secured funding from the French Embassy to run a program focusing on women. The target for the program was to run 4 cohorts in a year. They successfully finished 5, each having 30 students, with 70 % of the candidates being women. Another 3 successful cohorts were run; over 300 participants took part in the program.

“We have ladies who are now skilled in IT. One of them who had just finished high school and couldn’t go to university interviewed for Akirachix and won a scholarship with them. Others have set up their own digital businesses from the skills and training they have acquired,” he revealed.

He adds: “seeing our youth move on to bigger things makes me so proud. We do keep in touch and help out whenever help is needed.”

As a result, a number of the students have gone through this internship and have moved on to greater heights across the globe.

“This is how we morphed into becoming what we have become right now which is a program that deals with skilling youth in software development, and giving them a pathway into industry.” said Aly

When asked what makes Swahili Box unique, Aly explains that the hub does not approach its activities like educational entities such as universities do. He states that the end goal of many institutions is a piece of paper – which is also important - but with the hub, one can hone their skills and experience creating and working on projects in a team as well as alone. It allows interactions as a software developer in real life, in real time.

This enables growth and one can hit the ground running when the job offers start coming in. He further states that companies in industry have raised a flag on well learned individuals who join the industry but have no clue where to start, and this is costly in terms of training from scratch.

SUSTAINABILITY

In terms of sustainability, Aly shares that funding has always been a challenge.

“We continue to struggle for money. That’s why we started the consultancy on the side which has been helping us pay the bills and ensures the space is always available for those who are ready to learn.”

With the consultancy, Aly explains that they have changed their approach to funding by encouraging potential funders to instead give them jobs/tasks that can give their students a chance to develop their skills. “By working on a project, the client/funder will be paying us for something and at the same time giving these young guys a chance to develop their skills and who knows they might like one or two of them and decide to on-board them in their company,” he explained.

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“We did not have a specific caliber of trainees. As long as anyone wanted to learn, we would let them jump in and we gave them the liberty to leave if at some point they felt this was not what they wanted. We ended up with a very successful cohort of 20 survivors who finished the whole program. Today as we speak, they are all working,” Aly explains.

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KEY LESSONS LEARNED

Aly explains that the industry wants the complete package and paper work needs to be accompanied with practical skills or experience with programming projects.

“We have made our program such that one is practically learning software development over a course of about four months, after which our students get to intern with our us. We set up a separate entity which works as a consultancy that would allow us to take on client work. This has provided our young students who want to become software developers an opportunity to join and experience first-hand the software development world,” he said.

TURNING CHALLENGES INTO OPPORTUNITIES

As Aly mentioned earlier, funding has always been a challenge for Swahili Box; this was further emphasized when the hub had an opportunity to secure funds from Google which slipped through their hands. The funds were instead given to a hub in Nairobi.

This, Aly says, was the reason why they started a movement with a few other hubs from outside of Nairobi - the Countrywide Association of Hubs - which is a coming together of hubs based in other parts of the country. He further states that the association has given them a voice and has enabled them to navigate the world of funders.



Aly Salim conducting a training session at Mombasa Box

WHAT NEXT?

In addition to its programs, the hub is currently working on local TV station's (K24) tech infrastructure. They have developed K24 plus app that is available on Google Play Store and on iOS. This project, Aly explains has been a major breakthrough for the hub.

Asked some of the mistakes he has made along the way and what advice he would give, Aly stresses whether it is a person or an institution, one needs to be very careful of the kind of people they bring into their space and always have a plan B for creating revenue.

“You have to be very careful because one mistake can derail your whole vision completely,” said Aly

All in all, Aly is hopeful. He says that while he may not know what the future holds, he hopes to see the hub evolve from being a place where they take on 5, 6 or 10 kids to being able to take on at least 50 to 100 kids at a time. He sees a vibrant consultancy with a vibrant developer community around it.

Parting shot for the youth: “If they really want to become developers, then they need to put their money where their mouth is - put the hard graft in. If they can't do that then this industry isn't for them,” he said.

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“We want the country and the world to see that Mombasa County has talented kids in this space who can give quality software/service like their counterparts in other counties,” said Aly.

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Some of the clients working at Wera Space, Nyeri.

Wera Space: Where innovators meet, interact and create

Having been nurtured by the Ajira program, a government initiative that supports the youth to develop ICT skills and sharpen their entrepreneurship acumen, Emiphas Muchangi used the same model to create a space where he can support youthful entrepreneurs in his home county of Nyeri, Kenya.

After successfully going through the Ajira program, Emiphas harbored a dream to create a space where entrepreneurs in Nyeri could come together, converge, network, share ideas and support each other to develop their ideas into viable enterprises.

And he did exactly that: he created Wera Space, where young innovators from Nyeri could converge and nurture their entrepreneurship dreams. Interestingly, 'Wera' is a Kikuyu word that means work; so it literary means a work space.

The Ajira program sharpened his budding entrepreneurship acumen, equipping him with the tools to start a company and how to navigate through the technicalities of registration and more importantly the fundamental of establishing an innovation hub.

"I realized the biggest challenge we had as entrepreneurs from Nyeri was that we do not have a place to converge. We were competing rather than collaborating; young people are doing the same businesses that could be able to complement each other but instead were competing with each other," said Muchangi.

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“When I was opening Wera Space, I actually thought people will be excited with the idea and flock in to the hub. This did not happen. We had to have start creating awareness about what the hub is about and how it will be beneficial to the local people,” Muchangi revealed.

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One of the success entrepreneurship stories to have emerged from the hub is that of PickTuk, the first motorcycle taxi riders training institute to be certified by the National Transport and Safety Authority (NTSA). The institute was formed and nurtured at Wera Space and supported to formally register and start its operations as a training institute for motorcycle taxis in Nyeri. They did not have a space to operate and started their business at Wera Space

Now, the institute is working closely with Wera Space and the County Government of Nyeri to train and give licenses to motorcycle taxi riders and is operating in three constituencies.

“We were able to give them space to start and operate their institute. And now they are operating in three constituencies, training and providing licenses to riders of motorcycle taxis in Nyeri,” he said.

Wera Space provides space for innovators from the rural parts of Nyeri County where they get space and technical support for their projects and also mentorship. They also meet and network with other innovators.

“We are located in Nyeri town but supports innovators from the interior; they know they have a space in town where they can be able to meet clients and conduct their own businesses,” he said.

Some of the clients working at Wera Space, Nyeri.

CHALLENGES

The journey of establishing Wera Space has not been without its fair share of challenges. The first of which is the prevailing attitude of local people with regard to what a hub is. He thought that once he establishes the hub, innovators will come in droves. He was mistaken. The concept of working in a hub was still new and even strange. And so it took time before they started warming up to the idea. So it took sometime before they could pick up the concept of a co-working space and actually be able to come and work from the working space.

In his view, people in Nyeri had no idea of what a working space is and how it could help them. They still believe in working from their own personal offices or working from home and not a dedicated space where they could interact with their peers.

Secondly, getting finances to start and sustain a working space is a major challenge. He has to use his own money, which he earns from his digital marketing business to sustain the working space.

“I’m a digital marketing strategist on the side, so that is what usually funds the hub most of the time because we do not have enough people who are paying to come and use the space,” he said.

In addition, Wera Space is not able to offer all the services and facilities required by innovators to develop their businesses. In his view, innovators from Nyeri have great ideas which if nurtured would greatly enhance the local innovation ecosystem.

“We had a young man from Nyeri who, being very good in engineering, had this plan of how we can be able to produce electricity. But technically my hub cannot be able to support that because it’s actually resource intensive. We need to have facilities to support such innovations,” he said.

WHAT TO CONSIDER WHEN STARTING A WORKING SPACE

Before, you start a work space, the first thing to consider is the number of people it can accommodate; secondly, and most important, is how you are going to sustain it. You need to ask yourself several questions.

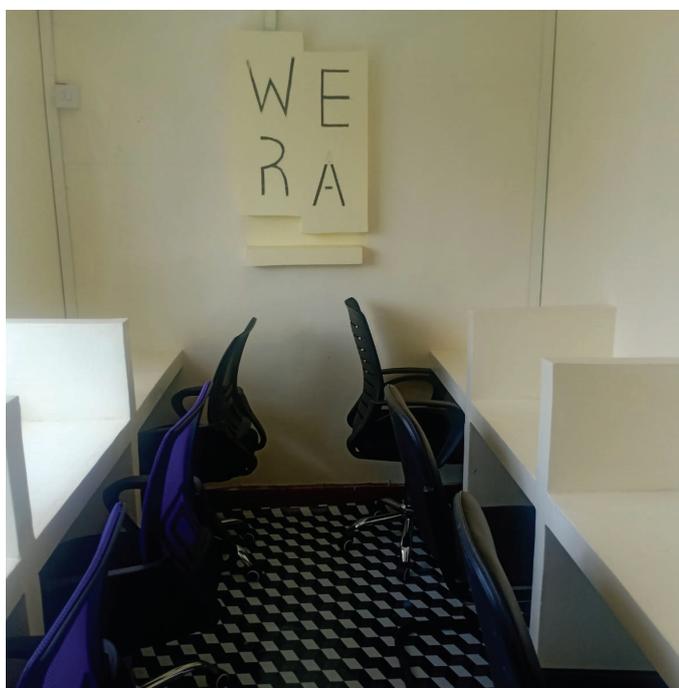
“Are you going to be charging the innovators, are you going to be investing in them, are you going to get donors?”

You technically need to think around how you're going to get all the resources because you need to furnish the space, if you're having a space you need money for rent, electricity and Wi-Fi. You have to think around how you're going to get all the resources running," said Muchangi.

VISION

Muchangi has a grand vision for Wera Space where entrepreneurs in Nyeri will come and get the necessary facilities to develop their businesses.

"I want to have a space that can be able to accommodate entrepreneurs and hold events where entrepreneurs will be able to get the right resources to have their business running with access to electricity and Wi-Fi all the time and printers.



One of the areas that serves as a working areas at Wera Space.

Technically all the resources that an entrepreneur might need to be able to run their business effectively," he said.

He has a final word of encouragement for those struggling to set up and run work spaces and innovation hubs.

"It may not be going exactly how you expected it to go, but with time and tweaking a little bit here and there, you might be able to actually have the hub working and you will be able to create an impacts in your society," he advised.

“

"We had a young man from Nyeri who, being very good in engineering, had this plan of how we can be able to produce electricity. But technically my hub cannot be able to support that because it's actually resource intensive. We need to have facilities to support such innovations," he said.

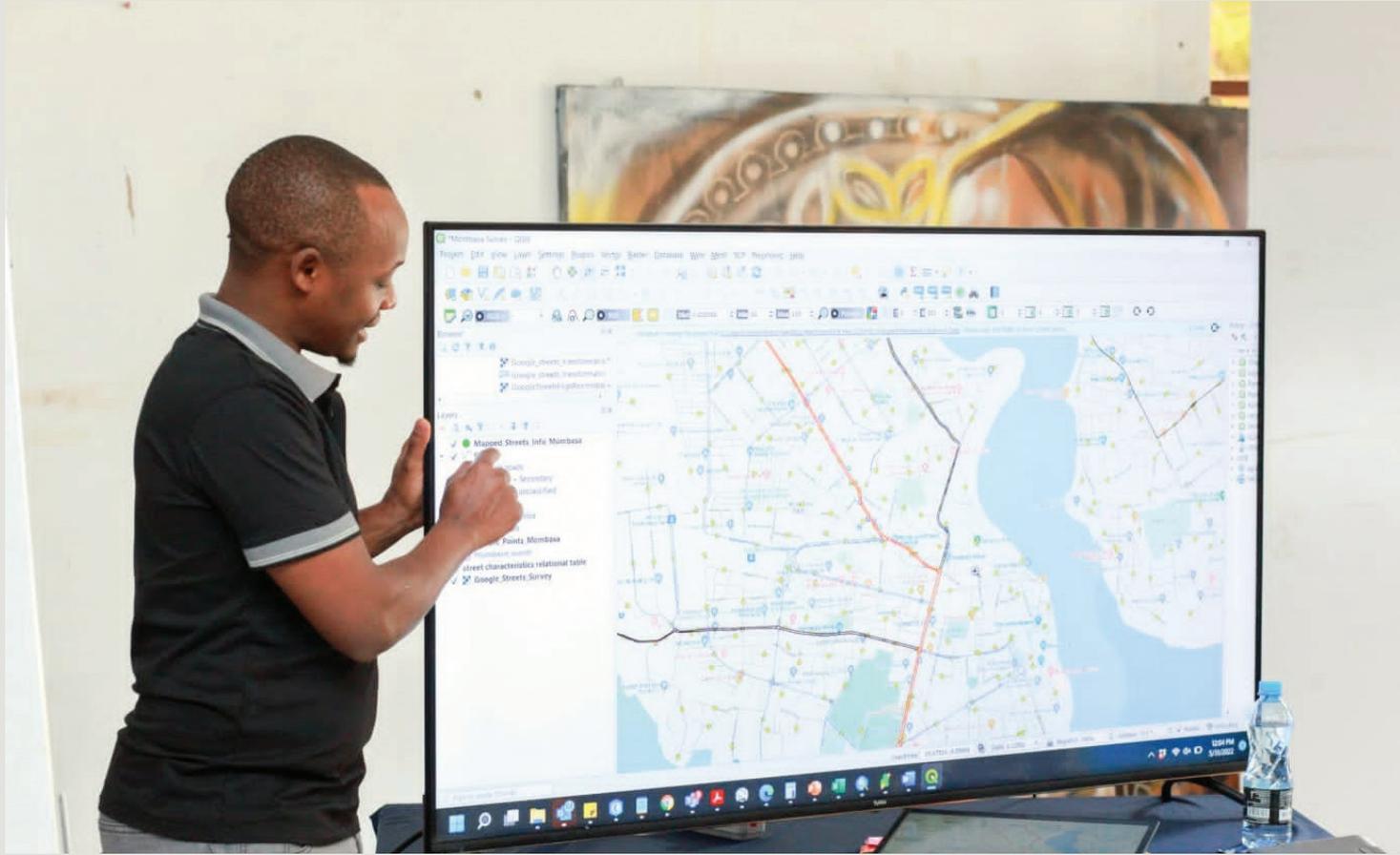
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KEY LESSONS LEARNED

One of the lessons Muchangi has learned while operating the work space is that having a business plan and having a business are two different things.

"So you might think you have this business plan that is going to work in this specific way, but then when you get to the ground things get a little bit different," he shared.

Secondly, networking is very important. Getting to meet people, talking to them, telling them exactly what you do. And finally, just having a hub is not enough: You will need to technically go out, tell the people about your hub and tell them the benefits that they might accrue by being around the hub or being members of that specific hub.



Why some companies prefer IT technicians from Swahili Pot

A number of companies in Mombasa prefer sourcing IT technicians from Swahili Pot, a tech innovation hub based in Mombasa, not only because their proven record in technical skills but also due to their superb soft skills, which gives them an edge over their contemporaries.

Swahili Pot, a tech innovation hub in Mombasa is creating footprints in the local innovation ecosystem by providing additional technical and soft skills that are not necessarily taught in traditional colleges. Due to their emphasis on practical skills, a number of companies in Mombasa are increasingly seeking IT technicians from the hub.

Chris Achinga, the founder explains why this is the case.

“Swahili Pot is a place where we get all the trainings that you don’t get professionally outside schools and colleges; it makes you blend with people well and helps you grow. We’ve had a lot of companies in Mombasa, some technology schools - who want to hire some IT technicians - come to Swahili Pot first and ask, our company is looking to hire like 2 technicians, can you help? We’ve seen people getting job opportunities, advancing their entrepreneur skill and getting scholarships to study abroad,” said Achinga.

Apart from supporting innovators in Mombasa to develop their ideas into commercially viable start-

ups, the hub also provides training to young people on emerging digital technologies that would enable them get employment.

HOW DID IT ALL START?

Chris Achinga, the founder of Swahili Pot, was exposed to the idea of a tech hub while in Nairobi and thought of replicating the same in Mombasa. In 2016, he started the process of initiating an innovation hub in Mombasa. He wanted to create the hub in the mold of iHub, the pioneer of innovation hub in Kenya - but with a different motive. However, getting space and initial capital to set up the hub proved a challenge. But as the old adage goes, where there is a will, there is always a way. After several futile attempts to acquire space,

they got wind of a vacant space at the National Museums of Kenya; they approached the management and asked if they could set up an innovation hub. And just like that, they were given a space to start their operations. Coincidentally, one of the founding members was also working with an Internet Service Provider, who offered to partner with the newly established hub to provide internet services for free.

HOW DOES THE HUB RUN AND SUSTAIN ITS ACTIVITIES?

All the activities at the hub are run by volunteers. The hub recruited volunteers to help in the day-to-day running of the facility. Currently, the hub is run by about 20 volunteers. They also solicit for funds and sponsorships to keep the activities going. They have also signed agreements with specific companies to offer regular trainings for free and internships opportunities or entry level jobs to the innovators at the hub. "We have a team of over 30 volunteers who assist in different categories. We have people in the administration, people that specifically deal with partnerships, who help us get more partners We've signed some MoUs with some training organizations to come and train us for free and then they also offer an opportunity for the trainees to go practice what they've trained, either internship opportunities or entry level job opportunities," Achinga said.

Oka bags Africa is one of the most successful start-ups to emerge from the hub. The start-up recycles used clothes, advertising materials and similar items to make bags. They have also supported a start-up being run by an entrepreneur living with disability.

"They use recycled billboard materials, canvas tents that have been used for long and recycle them to make travel bags. They recently got the chance to expand to a larger African market. They were just serving the Kenyan Coast for some time and now they are looking to Africa. There's also one person with disability who is recycling coconut shells into charcoal or renewable energy, but he's doing it at a smaller scale that is easy to manage and sustain." he said.

CHALLENGES?

One of the main challenges facing Swahili Pot as an innovation hub is lack of trust on the part of the innovators. The hub may support the idea upto the level where it is commercially viable, devoting time and resources in the process. However, it becomes tricky when the entrepreneur starts generating money and the hub approaches them to chip in and help support the hub's operations.

Some innovators are also suspicious that the hub may want to steal their ideas and are cagey about being supported.

"So what happens if this business grows and then Swahili Pot now comes in and says we helped you to build this idea so we want a percentage of it. That's a major concern, especially when we get youth who are not that well literate on the innovative ecosystem. Some are also suspicious that we may steal their resources. We've had hard times explaining to them that we're just there to help them at no extra cost," he explained. The other challenge is having adequate resources to support innovative ideas to the level of Minimum Viable Product (MVP), which a product with enough features to attract early-adopter customers and validate a product idea early in the product development cycle.

Achinga opines that some ideas are very expensive to build and require a heavy investment in both financial and human resources. Due to the aforementioned handicap, the hub tends towards supporting ideas that may not require heavy financial investment.

"So to convince investors out there that we need an amount of money to just build on a specific idea that you're not sure whether it will either go good or bad, is kind of a hustle. We've reached at some point where we just abandon an innovative idea not because we don't feel it's good, but because they're not enough funds to make it even to an MVP and also there's a lot of unknown variables in it. So we tend to focus on just small projects that we can also afford to bring up" Achinga shared.

PARTNERSHIP WITH COUNTY GOVERNMENT OF MOMBASA

To leverage on synergies within Mombasa's innovation ecosystem, the hub has been working closely with the County Government of Mombasa, the department of ICT. The county provides training and offers the hub opportunities to provide some IT services required by the county, which provides opportunities for volunteers attached to the hub.

Swahili Pot has also been working closely with the county government to organize specific events aimed as supporting innovators. For example, the hub was the main organizer of the Pwani Innovation Week, where innovators around the region come to showcase their products and innovations.

"This allows our staff to have the skills required to implement specific projects at the county. And if there is

a project, they always select Swahili Pot Hub to be one of the implementers. We also work closely with the county government to organize the Pwani Innovation Week” Achinga revealed.

Vision

Achinga envisions Swahili Pot as a leading tech hub and training centre with cutting edge training facilities, equipping budding entrepreneurs with technical skills to build their businesses or get jobs.

“We have to create a community where those who come through Swahili Pot Hub are successful. a one stop center for supporting young entrepreneurs who have just completed high school and have great ideas or want to know how to start the journey of entrepreneurship,” he said.

SO WHAT?

According to Achinga, it is important to focus on the outcomes of the activities you undertake to support innovators.

In his view, for each activity, you must ask yourself the ‘so what question’. For example, if you are training people on software development, you must ensure it produces tangible results.

“If you are going to train people on software development, what happens after software development? Are you just going to leave them to go their own separate paths? You must have a complete cycle of activities.

If you’re going to focus on training people on programming, ensure you have the training part figured out; and then after the training, give them a platform where they can get opportunities to practice and be hired to do everything” he said.

A group of young people participating in a training session.

It is also important to be sure what the hub is all about and whether its focus is to support the community, in which case the services will be free or whether you will charge for the services.

“With the people paying to be there, you have to offer value for their money. If it’s going to be a boot camp, ensure there is quality and your clients appreciate the peer to peer activities,” he said.

SUSTAINABILITY OF THE HUB?

Innovation hubs are mainly focused on supporting entrepreneurs. Thus, it is not easy to secure funding to start or run such an entity because it is not focused on making money but supporting entrepreneurs.

Therefore, sustaining the operations of a hub is not easy and calls for having different revenue streams to keep it going. For Swahili Pot, they have an amphitheater which they rent out and make money out of it. They also offer catering services and a public address system which they hire out at a fee to supplement their income. They also charge for work spaces in the hub.

KEY LESSONS LEARNED

As mentioned earlier, Swahili Pot is run mainly by volunteers who do not expect payment for their services. But for such a model to work, it is important to get individuals who share the same vision and are not motivated by money; the hub may not make enough money to pay them. This helps in sustaining the activities of the hub.

Thus, when looking into creating a hub, Achinga advises that it’s very important to get people who have the same vision, ambitions and will not give up.

“One of the things that keeps us thriving is that we are a small group of people who volunteer their time and resources. These are people who have formal jobs but in their free time they’re come back to Swahili Pot to keep it running, to get it through, to bring opportunities and solutions. The main thing is just to focus on the team, the people, the value and everything. That’s what will get you through,” he said.

At the same time, not everyone is happy with the activities of the hub especially those offering the same services; they see them as direct competitors.

“You will always end up receiving backlash from the community because of what you’re doing and obviously some institutions will think you’re in direct competition with them given that you’re doing it for free. They’ll always look for a way to break down the processes and make it look more difficult or tougher” Achinga shared.

We have supported
**over 300
start-ups,**

raised over
KES 7 billion

Having accelerated more than 250 African start-ups and supported them to raise over USD 70 million, GrowthAfrica is arguably one of the most successful innovation hubs not only in Kenya but also in Africa. GrowthAfrica is an accelerator dedicated to supporting entrepreneurs and SMEs to become successful enterprises through business acceleration, strategic advice and access to investments.

Given the struggles innovation hubs go through, especially in the early stages, GrowthAfrica seems to have figured out their niche to become one of the leading business accelerators in Africa. According to the Executive Director & Partner at GrowthAfrica, Ian Lorenzen, one of the reasons for their success as an accelerator is knowing where they can add value.

“Before starting an accelerator or hub, you must identify your focus, where you can add value in the entrepreneurship value chain. GrowthAfrica focuses on growing successful enterprises business acceleration, strategic advice and access to investments,” he said.

In addition, the needs of innovators vary in different part of the country; those intending to start innovation hubs must first identify the needs of the innovators and tailor services according to these needs. This will help to ensure the services provided by the hubs meet the needs of the innovators.

“We’re seeing that especially in Kenya, where there’s a big difference between what is required in the capital city and those in secondary cities and towns. The more you move out of the big cities, the focus of emphasis is likely to be on youth and development skills, training and capacity building,” said Lorenzen.



Ian Lorenzen, Executive Director and Partner at GrowthAfrica.

HOW IT BEGAN?

GrowthAfrica was founded in 2002, mainly to provide market and business consulting services to foreign companies, interested in doing business in Kenya. Most of those companies, who had specific technologies, wanted to team up with African countries to enable them deploy their solutions. At the initial stages, GrowthAfrica paired companies in Europe and America with local companies who had market insights and cultural understanding and the required infrastructure to help set up their business.

“We started off being a market business consulting matchmaking, looking out for opportunities in the market trying to test those opportunities and then find the right matching partners in the north, but also locally.

The parties on both sides were typically almost always SMEs. We set up to team up foreign companies with their local counterparts and bring together the best of the two worlds and ultimately unlock job creation and new opportunities,” he said.

THE IDEA OF AN INNOVATION HUB

The idea of changing to an innovation hub was mooted in 2006, inspired by the growth of entrepreneurship in Scandinavian countries.

However, it turned out to be untenable due to lack of funding. At that point, the idea of innovation hubs in Kenya was barely known.

“In 2006 we did a feasibility study for setting up an incubator for startups in Nairobi but concluded that there weren’t the investors and funding for it at that point. So we shelved it because we were ahead of our time,” he remembered.

Realizing that lack of capital was the greatest obstacle to creating a successful business, GrowthAfrica formed a peer to peer lending platform to help budding entrepreneurs access funding. The organization worked closely with microfinance institutions from 2007 to 2011 for this purpose. After operating in this lending platform for five years, the organization realized it’s operations did not align to its vision of growing start-ups into big business that can employ many people.

It emerged that the profile of most entrepreneurs in this space showed they were mainly serving the immediate family with no ambition to grow into big businesses.



KEY LESSONS LEARNED

In the course of running GrowthAfrica, Lorenzen distils key lessons along the journey, which he wishes to share with those starting or at the initial stages of setting up innovation hubs.

First, you need to need to figure out what works for you and evolve constantly as things change. Without constant evolution, you risk being overtaken by socio-economic and technological dynamics, which will render you and your hub irrelevant.

“We’ve seen organizations that got stuck and didn’t develop and probably were very successful at some point and relatively well funded, but at some point they had more competition or they hadn’t evolved with the market and the entrepreneurs” said Lorenzen.

Secondly, Lorenzen believes that hubs must be in tune with local needs saying “a good example is the outbreak of Covid-19, which brought about an increased competition from global players in the online world. In principle, the market was open and anyone could compete online.”

Another key lesson in running an innovation hub is that money or funding is not the most important thing; and that partnerships play a crucial role especially very early stage. In view of this, what is important is creating strong partnerships and delivering good results and quality products.

“If we can deliver good results and impact then there will always be more funding available and we are much better off working together rather than spend time, resources and effort competing. A lot of things we do are best served in partnerships as opposed to competitive situations,” he said.

Finally, it is important to have a core in-house staff rather than engaging consultants, who come and go. GrowthAfrica has a team of core staff who deliver key activities alongside the acceleration program.

ADVICE TO BUDDING INNOVATORS

He advises those wishing to start innovation hubs to choose their location wisely. Does it provide enough raw materials? Does the city or the location have potential inflow of potential entrepreneurs, the kind of profile that you’re looking for?

Related to the above point is finding the right space. One should also consider possibilities of teaming up with existing entities to cut costs. It is also important to conduct market research before setting up the hub – the type of business around the area; do you need to carry out some activities cultivate a sense of entrepreneurial momentum in the local area?

Meanwhile, it is important to look out for potential funders and have discussions with them regarding what you’re offering; and whether it could be interesting to them. And while at it, build management structures and systems for your business.

Lastly, it is critical to find out how you can team or partner with organizations with more experience and expertise and find a model to do it. This will help build your capacity and ultimately help you deliver a better offering. “The idea that we can do everything on our own or that we should or we’re good at what we do is definitely something very flawed,” warns Lorenzen.

SHIFTING EMPHASIS FROM TECH

Lorenzen believes that there has been an undue emphasis on tech innovations at the expense of other areas.

He says: “there seems to be a massive move that everything has to be tech and probably to a point where nobody really knows what this tech thing is any longer; we need to un-tech or de-tech things a little bit and get back to the core of business that have opportunities for employment and for creating value. What’s tech going to live off if there aren’t people making food or doing other products”

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“We wanted to work with fewer high potential ambitious, innovative entrepreneurs who could be part of that growth of Africa, to spark the creation of jobs and also progress in other ways,” he said.

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How Mukurweini Constituency Innovation Hub is supporting youth

Mukurweini Constituency Innovation Hub and Ajira Centre is one of the centres striving to live up to expectations of providing space for the youth in rural areas to exploit online opportunities.

One of the main challenges facing the youth in rural areas is access to internet connectivity and relevant digital skills to exploit online opportunities. To remedy this situation, the Government of Kenya initiated the Ajira Digital Program implemented through the Ministry of ICT, Innovations and Youth Affairs to empower over one million young people to access digital job opportunities.

The idea was meant to raise the profile of digital work, promote a mentorship and collaborative learning approach to finding digital work; provide Kenyans with access to digital work, and finally promote Kenya as a destination for online workers. The centres were to be based in all constituencies.

In Nyeri, the Mukurweini Constituency Innovation Hub which also serves Ajira Centre, is one of the centres striving to live up to the expectations of providing space for the youth in the areas to exploit opportunities in the online space.

The centre accommodates at least 30 young people at any given time and is always full. The youth are learning digital skills that could help them take up online jobs.

“The innovation hub was primarily set up so that our youth can take advantage of the internet space and the opportunities that they can grab from this space,” said Joyce Wambugu, the centre manager.

The main aim of the hub is to provide opportunities for the youth in rural areas to access the internet and also get digital training that could enable them take advantage of opportunities available online.

“This is an innovation hub that is placed in the rural setting to help our young people to grab opportunities in the online space,” she said.

Above image: Kamukunji Constituency innovation Hub in Nairobi.

The Ajira centres are a collaboration of the constituency Office, Ministry of ICT and MasterCard Foundation. The Constituency office provides the equipment and space while MasterCard Foundation caters for human resources through Emobilis, a private entity.

“Provision of space, equipment, electricity, internet connectivity and routers is funded by the constituency office while MasterCard Foundation manages the human resources through eMobilis,” said Joyce.

Being located in a rural setting comes with several challenges which include unreliable internet connectivity and power outages. In addition, there is lack of enough personnel to provide training, create awareness and mobilise the youth while at the same time manage those coming to the centre.

“We do not have reliable internet and sometimes power goes off. In addition, in as much as we want the youth to take up opportunities in the online space, we do not have the capacity to train them in some technical areas as programming. Currently we are dealing with online work only but we need to bring in other advanced programs that could make the youth become innovators,” she said.

TRAINING FOR ONLINE WORK

The center provides training to build the skills of the youth on how they can do online work and has partnered with Digital Opportunity Trust for this purpose. However, the training is still not at the right level to help the youth move acquire the right skills. This would require training in advanced skills, which is not available at the centre.

VISION

Joyce expects the center will ensure all the youth in the constituency are digitally literate and not only engage in online work but develop their skills to the level where they can be innovative in the tech space and provide solutions facing the local communities.

“We are hoping that the innovation hubs are going to come up with solutions towards these problems that the area is facing local communities. We hope to have touched every single person in the constituency who can take advantage of the innovation hubs,” she said. Joyce believes the centre has potential to support the youth in the area to grow their skills and become innovative in the tech space. However, this will require providing advanced skills that would make the youth to become more innovative.

“Because currently we are dealing with online work only, but we need to advance our training programs to make our youth acquire skills that will make them more innovative in the tech space,” she explained.

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“Community involvement or public participation in bringing up these centers is critical. When the communities have adopted the idea, it becomes easier to sell it to them. For example, we go in other constituencies and there are no centers because the youth have not adopted the idea,” she said.

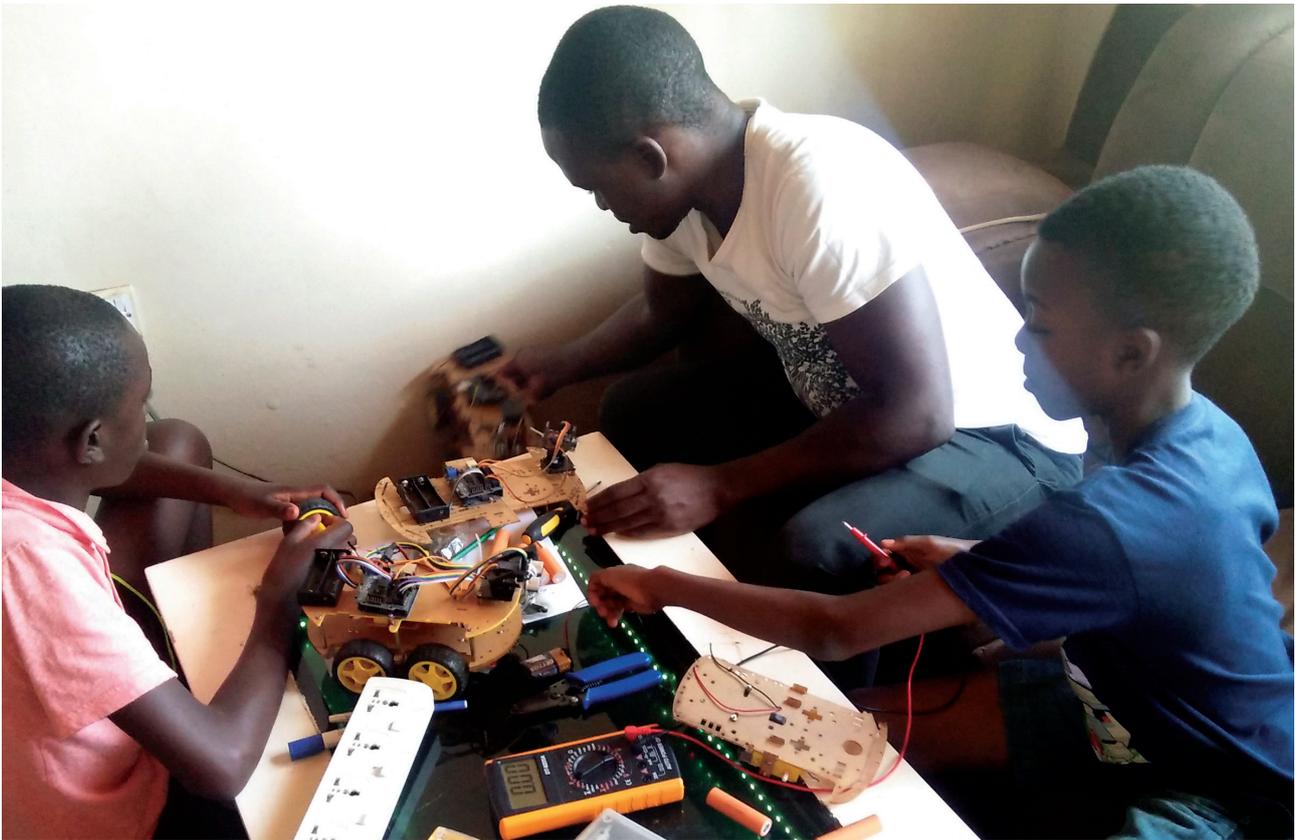
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KEY LESSONS LEARNED

According to Joyce it is critical to have community involvement and participation in stating the centers, without which the centers will not serve the intended purpose; If the community does not adopt the idea, it will be difficult to sell it to them.

Secondly, not all regions are the same and therefore the centers must take into account the unique needs of the youth in specific areas. This explains why similar centres have not taken off in other areas.

Joyce believes that having such centres across the country will not only enhance digital skills among the youth but also keep the youth busy and reduce social vices common among the youth because of idleness.



A computer training session underway at Fablab Winam.

Fablab Winam: Where young girls and youth learn hands-on skills

Fablab Winam is an open-access laboratory where creative fabricators, artists, scientists, engineers, educators, students, amateurs, and professionals learn hands-on skills.

For Martin Oloo, his journey as a social worker in Kisumu County played a huge role in the creation of Fablab Winam. As a social worker, he came face to face with real life challenges confronting young girls in Kisumu's informal settlements. With this in mind, he started thinking of how he could provide a solution.

"One of the reasons which was coming out very clearly is how poverty exposes young girls to early pregnancies. With early pregnancies, they are pushed to get married early to guys who are never ready for marriage. Add the pressures of life, drugs and what we get is a lot of violence in these homes," he said.

With this realization, Martin started a program to support the girls - Young Girls & Women Empowerment Program - through which they could be trained on practical skills to enable them earn sustainable income.

Later, when he was appointed to serve in the board of another non-profit organization in the area, he came to learn about Fablabs, which is a global network of creative community of fabricators, artists, scientists, engineers, educators, students, amateurs and professionals. Fab Labs provide access to a training environment, provide skills, materials and advanced technology that allows anyone anywhere to make almost anything.

Fablabs are located in more than 100 countries and 1,750 Fablabs across the globe. They offer a wide range of educational programs for all age groups and professional digital fabrication services for various types of organizations.

Martin got an opportunity for a 7- month training on digital fabrication training at a Fablab laboratory. After going through the training and successfully graduating as the first Kenyan, he was sponsored to attend a global conference where he met the founder of FabLabs.

Martin orienting visitors on the activities at Fablab Winam. They discussed formation of a Fablab within the NGO where he worked. He came back with an assurance of support as well as some equipment. It was at this point that he created Fablab Winam.

MOTIVATION

Having a space for hands-on skills for young people, especially women and the need to have quality products available was the key motivation for starting Fablab Winam.

CHALLENGES

While they received support from Fablabs in terms of machinery, Martin explains that clearing them at the port was extremely difficult due to the high clearance fee, despite the fact they were educational materials. After some time a partner - Africa's Talking - stepped in and paid for the taxes at the port.

"Africa's Talking continued to support us for about one year with some basic needs including rent among others," he said.

This marked a significant change in their operations as many youth joined their training programs. One of their programs, Fabkids is designed to expose young people to different hands-on skills throughout their school life which will align them to subjects and courses of their choice in high school and college/ university in order to avoid the current status quo of being employed in fields they never studied for. "At the beginning I had support from the Youth Enterprise Development Fund on condition we train in a hotel.

When time came to move to our own space, the numbers were never there because people would only attend if the training was held in a hotel," he explained.

He also highlights the role politics plays in bringing about change and development. Hailing from Nyanza, a region which for a long time was seen as being in opposition to the government, there weren't many development activities.

"A lot of young people in the region will ask you to pay them whenever you call them for a training. Charging trainings has also been very challenging because our setup is not like that of a training institute," he noted.

WHERE IS FABLAB WINAM NOW?

Apart from the kids programme and the Fab Academy training, the hub is focusing on supporting the Jua Kali sector by assisting in improving their products; this is done through computer aided design (CAD) which helps estimate the materials used and improves the accuracy of measurements for the products.

THE NUMBERS

Fablab Winam has worked with 15 different start-ups at different levels. Currently, they are working with 6 different artisans in the informal (Jua Kali) sector. They have trained over 600 children

HAS HE MADE ANY MISTAKES?

Martin highlights that hiring several people at the same time at the initial stages was very costly. Training them requires a lot of resources that is ultimately wasted when they leave.

He also mentions budgeting especially for rent and failure to fundraise is a mistake he regrets but has learned from it.

Fablab Winam is one of 3 labs hosting a fab academy in Africa. The trainings are done in the US but students are hosted in various labs across the globe. Although Martin has tried to bring in different innovators or startups to learn more, it has not been easy.

KEY LESSONS LEARNED

According to Martin, support from the Government of Kenya support is more of goodwill rather than tangible.

“We have a lot of innovations around which are untapped. There is need for industry to work with academia. Graduates are not being prepared for the work which is out there,” shared Martin.

When asked what has made Fablab Winam stay afloat, Martin explains that the hub is surviving mainly through a few volunteers who have been offering support.

“We have also remained focused with our goal and also have leveraged on our network of friends who might not give us monetary support but offer other kinds of support,” he said.

Martin explains that partnerships and collaborations go a long way in ensuring spaces such as Fablab Winam succeed.

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“We have a lot of innovations around which are untapped. There is need for industry to work with academia. Graduates are not being prepared for the work which is out there,” shared Martin.

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Martin orienting visitors on the activities at Fablab Winam.



Conclusion

On the evidence of the impact of innovation hubs highlighted in this document, it is clear that such entities play an important role in supporting innovators to commercialize their ideas by helping them navigate through the initial hurdles of starting a business. They also provide a space where innovators can meet their peers, interact with research organizations, technology companies and potential investors.

The fact that all the hubs interviewed for these case studies have supported and nurtured commercially viable and successful start-ups is a testament to the crucial role they play; that two of the start-ups associated with one of the innovation hubs have secured seed funding is encouraging.

However, just like innovators, hubs face a daunting task of sustaining their operations due to lack of funds. Encouragingly, most of them have developed business models to ensure they continue supporting innovators. Although most innovation hubs are based in Nairobi and major urban centers, emergence of such entities outside the city is encouraging. It would be important to find ways of creating and supporting innovation hubs, especially outside major urban centres.

There is evidence of collaboration of the hubs with other government agencies and the extent to which such collaborations benefit the hubs. However, it appears the level of collaboration is still not to the required magnitude. Networking events opportunities are not regular while collaboration with research institutions and universities are rare, or almost non-existent. And although the Countrywide Association of Hubs provide a good platform for collaboration, much more needs to be done on this front.

The number of innovators supported by the hubs is also limited due to capacity constraints, which indicates a micro- scale level of operation compared to the possible number of start-ups that may require such services. Scaling up the operations of these hubs will be necessary to enhance outreach.

It is also clear that some of the hubs do not have adequate capacity to meet all the needs of the innovators.

Therefore, it can be concluded that capacity building of hub managers and their staff is an important intervention in strengthening the innovation ecosystem in Kenya.

Nevertheless, it is clear that innovation hubs are integral to the development of the ecosystem and must be supported to play their role effectively.