



**AEDIB|NET**  
AFRICAN EUROPEAN DIGITAL INNOVATION BRIDGE NETWORK

# Gaps and needs of the innovation ecosystem in Africa

## Task 2.1 - Work Package 2 Digital Africa



AEDIB|NET has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017105



Project Acronym:	AEDIB NET
Programme:	HORIZON 2020
Topic:	ICT-58-2020 International partnership building between European and African innovation hubs
Type of Action:	Innovation Action
Start date:	February 2021
Duration:	36 Months
Website:	aedibnet.eu
Coordinator:	DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT GMBH - Germany
Consortium:	ABAN FOUNDATION - Mauritius AFRICAN TECHNOLOGY INNOVATION HUBS - Nigeria AGENCE FRANÇAISE D'EXPERTISE TECHNIQUE INTERNATIONALE - France CIVITTA EESTI AS – Estonia DIGITAL AFRICA - France ENABEL, BELGISCH ONTWIKKELINGSAGENTSCHAP - Belgium EUROPEAN BUSINESS ANGELS NETWORK - Belgium EUROPEAN BUSINESS AND INNOVATION CENTRE NETWORK AISBL - Belgium FUNDINGBOX ACCELERATOR SP ZOO - Poland INNOVATION FOR POLICY FOUNDATION - Mauritius STEINBEIS INNOVATION GGMBH - Germany VC4AFRICA BV - Netherlands

About  
AEDIB|NET:

The vision of AEDIB|NET (African-European Digital Innovation Bridge Network) is to shape a common African-European innovation and start-up ecosystem in collaboration with key players and initiatives from Africa and Europe. The core of the project is to strengthen pan-African and African-European digital innovation partnerships with the objective to promote exposure and knowledge sharing between SMEs, start-ups, academic institutions, governments, hubs, incubators, large companies, research organisations and others.

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# Gaps and needs of the innovation ecosystem in Africa

Issued by: Digital Africa

Issue date: 29/07/2022

Due date: 29/07/2022

Work Package: 2

Work Package Leader: Expertise France

Keywords: benchmark, mapping, innovation, ecosystem, Africa

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## Introduction

Africa is a huge continent made up of 55 countries with different economic and geopolitical situations.

The maturity of tech ecosystems presents a strong disparity between these different countries, as well as within them, and it is not representative to speak of the African ecosystem when it comes to many ecosystems.

The entrepreneurial and technological ecosystem in the African continent is booming, since 2017, and there are actors such as Briter Bridges, Partech, AfricArena or Disrupt Africa that release frequent reports on topics related to the ecosystem such as the key actors, fundraisers, and industry analysis. In an ecosystem where information is lacking, their work is important.

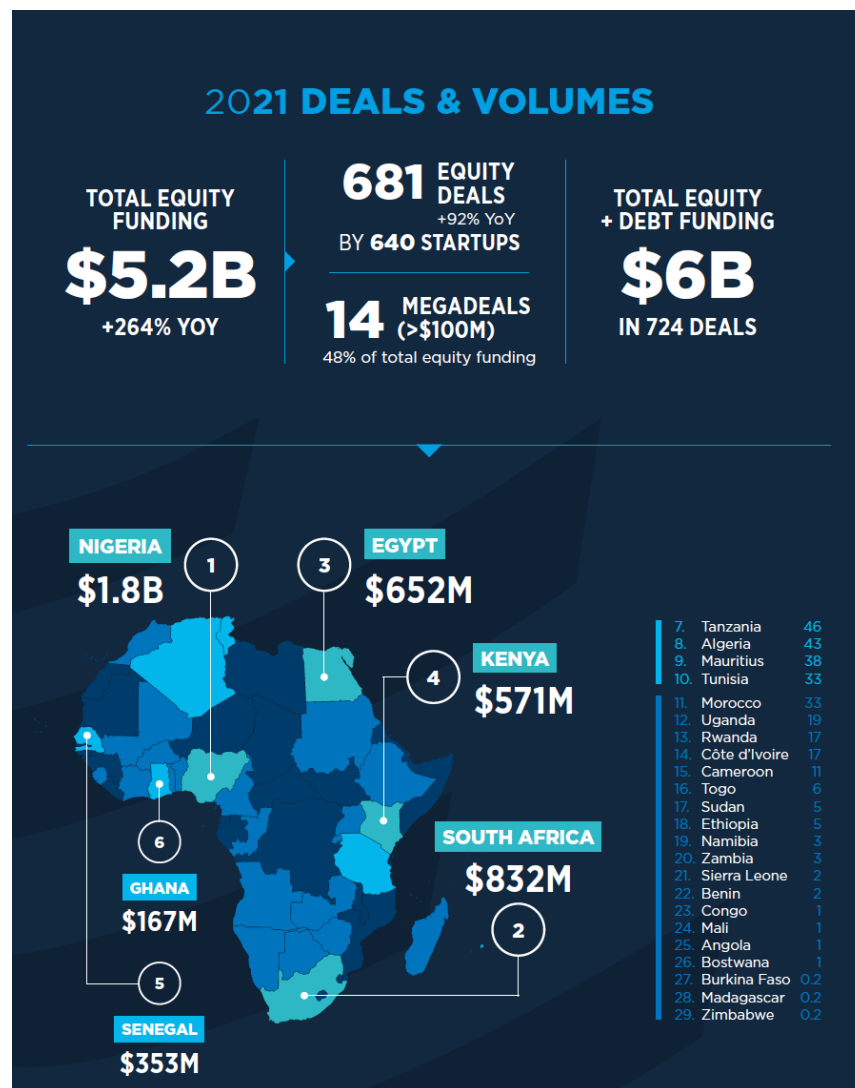
The growing interest from new actors creates a virtuous circle. Every stakeholder works towards a skill increase, to get the maximum impact, individually and collectively.

Interest in the African continent is growing among investors, particularly foreign investors who represent more than 70% of investments in 2021, growing with a doubling of the number of investors who have made at least one deal in 2021 to reach 891, including 268 involved in at least 2 deals and 65 in more than 5 deals. This last figure has been multiplied by three over one year.

Three strong trends stand out:

- Fintechs obtain more than 62% of deals by value
- 4 countries receive more than 73% of the funds: Nigeria as the general African locomotive (34.6% of deals in value) and Kenya, Egypt, and South Africa.  
Despite this, many countries not on the tech map, such as Sudan, started to have startups financed by local and international actors.  
Investors are also looking more at French-speaking Africa, particularly with consideration of the potential of the UEMOA space. Senegal attracted the attention through its unicorn, Wave (fundraising of \$200M). Côte d'Ivoire is not to be outdone with a growing number of startups raising more than \$1M (Julaya, Anka, CinetPay, StarNews Mobile...).
- 14 startups have raised more than \$100M such as ChipperCash, Andela, and Opay. Deals over \$50 million represent \$2.9 billion, a 20-fold increase over one year.

Despite the global recession, 2022 suggests continuity in the strong growth of African fundraising with +3 billion USD raised in H1 2022, an increase of 2.3x over one year (source: Africa the Big Deal)



Source : 2021 Africa tech venture capital - Partech

As a markup of the desire for Europe to support the emergence of the tech ecosystem and strengthen relations between the two continents, the European Union has launched the AEDIB|NET initiative.

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This report is integrated in the work package 2 of the AEDIB-NET project, entitled "Ecosystem mapping and policy framework development.

The purpose of this report is to address the challenges of the innovation ecosystem in Africa in 4 focus areas (Cleantech, Digital Trade, Climate Smart Agriculture and Smart Cities) by identifying and mapping key players and stakeholders, with a special focus on African Digital Innovation Hubs (DIHs) and work on their needs through 3 phases: a mapping and benchmarking phase, a focus group phase with selected stakeholders and a white paper bringing together the gaps and needs as well as the recommendations of the various stakeholders.

This report does not intend to be presented as research work. AEDIB-NET wanted to map the key players by country and bring out those who make the ecosystems, thinking of potential future collaborations.

To carry out this analysis, we relied on numerous publications that you will find at the end of the report, and exchanges with ecosystem actors to identify “doers”. To do so, Digital Africa as the writer and task leader on this report, met some of these actors, particularly in France, Tunisia, Senegal, and DRC.

The Digital Africa initiative aims to build the capacity of African entrepreneurs to design and deploy digital innovations on a large scale to serve the real economy.

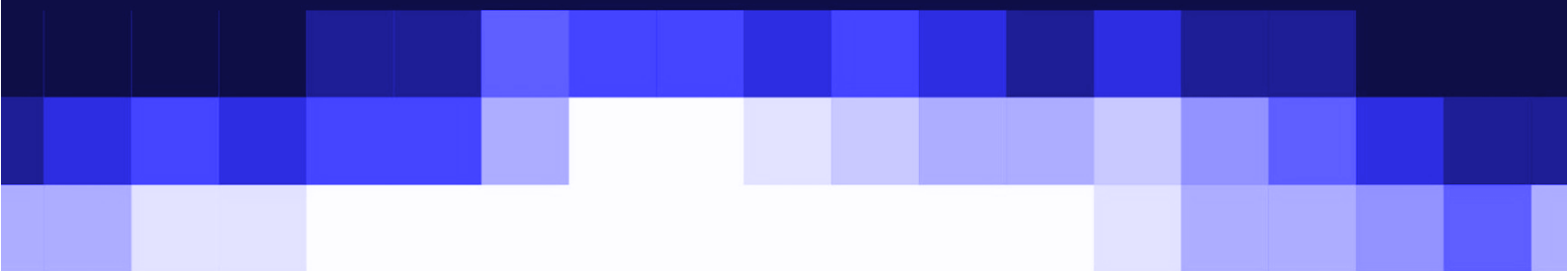
The initiative brings together a set of partners - startups, researchers, incubators, institutional financiers, venture capitalists, and hubs - engaged with African digital entrepreneurs.

Digital Africa develops a set of programs around three main areas:

- Support for digital startups with high-impact potential
- The search for funding in Africa and around the world and access to it to ensure the scaling up of African tech innovations
- Support for ‘made in Africa’ innovation policies favorable to digital innovative entrepreneurs in Africa

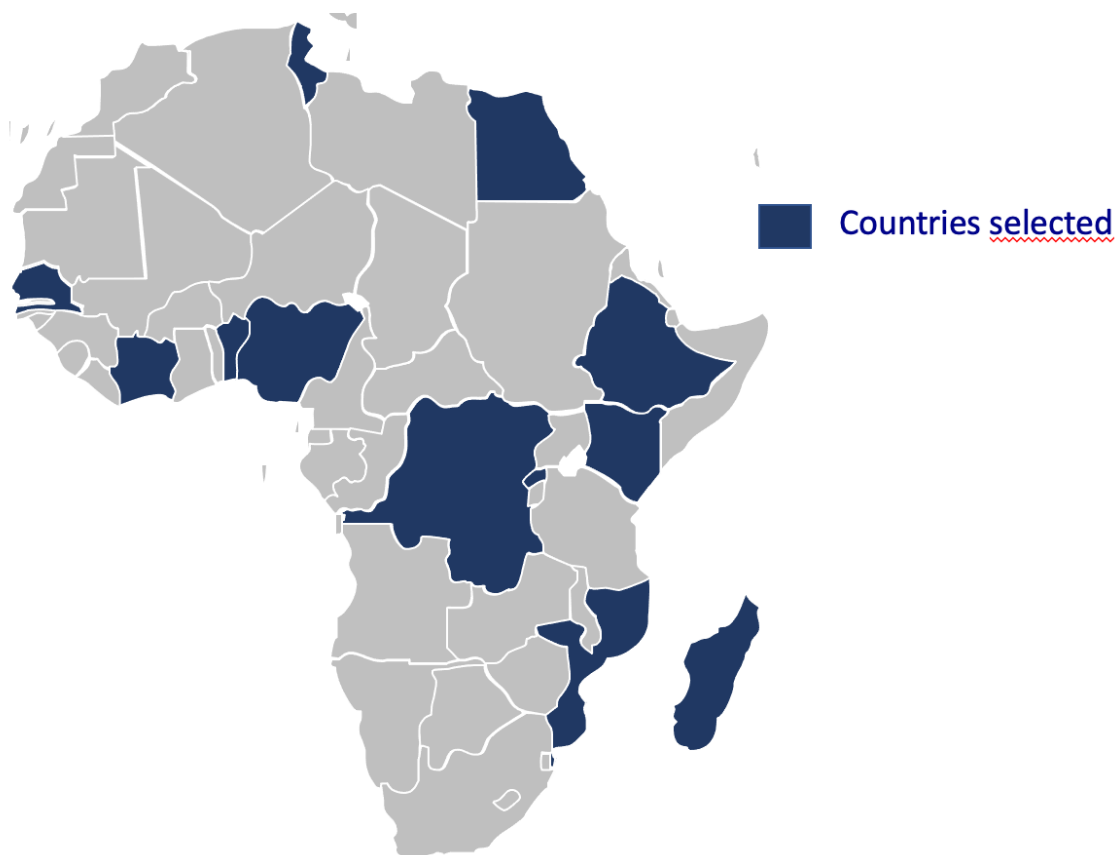
# MAPPING AND BENCHMARKING OF THE ECOSYSTEM

Countries individual analysis



To have a better understanding of national ecosystems, the first phase of this analysis is carried out by country and in 12 countries (Benin, DR Congo, Côte d'Ivoire, Egypt, Ethiopia, Kenya, Madagascar, Mozambique, Nigeria, Rwanda, Senegal, Tunisia) with the mapping of key players (Entrepreneurship support organisations, universities, investors, main existing startups...) and a reminder of the maturity of the local innovation ecosystem.

## Key metrics and analysed 12 countries



In an alphabetical order, the 12 selected countries for the analysis are:  
Benin, Côte d'Ivoire, DR Congo, Egypt, Ethiopia, Kenya, Madagascar, Mozambique, Nigeria, Rwanda, Senegal, Tunisia

To ensure a fair geographical and mature repartition the selection comprises:

1. Francophone, Anglophone and Lusophone countries
2. Countries from North, East, West, Central Africa and an Island
3. Total population of 671,65 million in 2020 (World Bank), more than 51% of the entire African population
4. Mature and nascent tech ecosystems

Here are the keys information about data shown on that analysis:

- **From World Bank, year 2020: total population - country's capital population - GDP per capita – percentage of youth below 14 years old**
- **Doing business ranking from the report 2020**
- **The percentage of internet penetration from <https://www.internetworldstats.com/stats1.htm>**
- **Size of VC deals in 2020 from 2020 Partech report**

Let's note that for a few structures, because of the pandemic, businesses have evolved, and communication does not give an indication if it is still active but neither on a potential shutdown.

The AEDIB initiative focuses on 4 sectors: smart cities, climate smart agriculture, cleantech and digital trade.

Within this ecosystem mapping, we were able to analyse, individually, in the 12 selected countries, the maturity of digital ecosystems in connection with the 4 concentration themes. We noticed that some actors are involved in several countries, if not all.

In *universities*, only AIMS operates in Rwanda and Senegal. They also have campuses in Ghana, Cameroon, Tanzania, and South Africa, where the project started in 2003.

Among the *communities, networks, and development agencies*, three development agencies stand out in almost all countries: USAID, GIZ, and AFD.

The Impact Hub network, which supports impact entrepreneurs, has offices in more than 50 countries. In Africa, they are present in 11 countries such as Senegal, Côte d'Ivoire, Benin, Nigeria, and Rwanda.

Among the *support structures for entrepreneurship*, only Orange also has a Pan African presence through its strategy of opening Orange Digital Center in their countries of operation, the last of which is Cameroon and Côte d'Ivoire.

Among the *funders*, only Proparco and Investisseurs et Partenaires have an office in several countries. Some actors, mainly VCs, for synergy regions (Nigeria - Kenya) have two offices.

We remind that *finance structures*, especially VCs intervene in countries where they don't specifically have offices.

Below is a selection of countries from different areas: Tunisia for North Africa, Senegal for West Africa, Kenya for East Africa, and DR Congo for Central Africa. This selection is to maintain a representation of language, and maturity, in addition to geography.

## 1. Tunisia



**Country's capital:** Tunis (2,4 million)

**Total population:** 11,57 million

**Percentage below 14 years old:** 24,9%

**GDP per capita:** 3 500 U\$D

**Funds raised by entrepreneurs in 2020:** 3,4MU\$D

**Doing business rank:** 78

**Internet penetration:** 68,4%

The Tunisian ecosystem is a place where women are visible. They manage 58% of startup support organisations, represent 55% of coworkers in coworking spaces and have founded / co-founded more than 32% of labialized startups.

The government works closely with the entrepreneurs and has established the Tunisian Start-Up Act. It has been in place since 2018. This legislation provides an incentive framework for entrepreneurs, startups, and investors. These concerted measures are, among others, the startup grant which allows founders and shareholders to receive an allowance for one year in an amount between € 300 and € 1,500, the exemption from social security contribution or the exemption from capital gain tax.

### Key ecosystem stakeholders:

- University research institutes (between 10 and 50):





The National Institute of Applied Sciences and Technology (INSAT) is a Tunisian university attached to the University of Carthage. The institute trains senior technicians and engineers, particularly in computer training including masters.

Some other structures:

The National School of Engineers of Tunis (ENIT) is the oldest school in the country.

The National School of Computer Sciences (ENSI) is one of the most prestigious engineering schools specialising in computer science in Tunisia.

The Higher Institute of Computer Science (ISI) is a higher school located in Ariana and attached to the University of Tunis.

**- Entrepreneurship support structures (between 50 and 100):**



There are +72 hubs and coworking spaces in different regions: Tunis, Sfax, Carthage and others.



The Dot, launched in June 2021, aims to become the national hub for digital entrepreneurship particularly through training of young people in the tech industry, strengthening the digital transformation and supporting innovative startups.



The strength of Flat6Labs is to couple its 4-month accelerator program, which takes place twice a year with some seed capital. More than 60 startups from 7 regions of Tunisia were supported and we received + 5MU \$ D in funding with +400 jobs created.

Flat6Labs also operates in Egypt and different locations in the Middle East (Lebanon, KSA, UAE, Bahrain, and Jordan).

Some other structures:

WeCode Land is developing training to help 18 to 35 years old join the labor market by getting digital jobs and launching digital businesses.

She Starts Africa is a social enterprise that aims to empower women and increase the number of women actively engaged in the economy through building their capacities in leadership and entrepreneurship.

Redstart Tunisia is a stimulator that provides an acceleration program created to meet the needs of SMEs and Startups.

Biatlabs is the BIAT incubator, a non-profit incubator that offers free mentorship to entrepreneurs, and covers the incubation's life cycle: Pre-incubation, incubation, and post incubation. BIAT is a structured banking group. The comprehensiveness of the BIAT Group's business lines allows the development of efficient synergies and a relevant and complete offer for all its customers and stakeholders.

Orange Digital Center Tunis is the first open in Africa and is used as a model for the new openings.

Tunis Tech Villa is a coworking space in Tunis focused on tech.

CoStarT, launched by the Technopole of Sfax, its goal is to boost startup entrepreneurship within the ITC and digital.

DigiArt Living Lab is the only lab focused on digital art.

Creative Digital Lab is the first lab in Tunisia focused on creative industries and especially on video games.

#### - VC and business angels' networks:



AfricInvest is a firm operating since 1994 and that invests between 1MU\$D and 5MU\$D in tech companies. They invested around 2BNU\$D in +170 ventures. The actual portfolio has some renowned startups such as Aerobotics, Boomplay or Heetch

Some other structures:

Maxula Gestion is an investment platform dedicated to public and private investors wishing to invest in private companies. In their portfolio they have NewGen studio and MooMe.

DAMYA is the Tunisian women business angel network

Capsa Capital Partners is an Asset Management firm that manages private equity funds on behalf of a selected group of institutional investors. In their portfolio they have IntiGo.

Bridging Angels is an angel network launched in France with ambition to invest up to 250KU\$D.

Carthage Angels is the main business angel network in Tunisia.

Anava Seed Fund is a 10MU\$D VC structure launched by Flat6Labs to fund seed to pre-series A startups.

Impact Partner, also known as Yunus Social Business Tunisia, is known for its capacity to quickly disburse tickets up to 70KU\$D, for startups from seed to pre-series A.

Other investment structures in Tunisia are InnoVest and Proparco.

#### - Communities - Networks - Development Agencies (between 10 and 50):



TunisianStartups.

TunisianStartups is a think tank and representative of startups in Tunisia that aims to promote innovative entrepreneurship, establish an entrepreneurship culture, and create a founder-friendly environment.



Entrepreneurs of Tunisia has been created to gather every stakeholder of the ecosystem and ease access to information, strengthen entrepreneurship and innovation and promote Tunisian startups nationally and internationally.

Some other structures:

HackUp organizes a lot of hackathons and challenges in the digital industry, and partly works as a facilitator between talents and recruiters.

The French Tech Tunis is part of the global French Tech community and reunites French actors in Tunisia, and Tunisian tech entrepreneurs, sharing the values of innovation, entrepreneurship, collaboration / mutual aid and wish to promote talented Tunisian youth.

Other networks, communities, development agencies and chamber of commerce we can find are : Réseau Connect, Novation City Sousse, Redstart Tunisie, The Next Women, GIZ, USAID, The Next Women, Smart Tunisia, Chamber of Commerce and Industry of Tunisia, Tunisian – American Chamber of Commerce and Industry, Tunisian - French Chamber of Commerce and Industry, Tunisian – Dutch Chamber of Commerce and Industry, Tunisian - Italian Chamber of Commerce and Industry and, Agence Française de Développement.

### - Entrepreneurs (+100):

A total of +700 registered startups of which +35% founded or co-founded by at least one woman.



Some of the biggest national fundraises:

InstaDeep <https://www.instadeep.com/> - DeepTech – 7MU\$D – May 2019

NextProtein <http://nextprotein.co/> - Agriculture – 11,20 MU\$D – May 2020

Among the latest national fundraise:

NewGen <https://www.newgen-studio.com/> Entertainment - n.c. - Jan21

MooMe - <https://moome.tn/> Agriculture - n.c. - Jan-21  
Lifeye

### - Diaspora:

An active diaspora that has also founded startups all over the world and mainly in France (+50%). Almost 73% of all these startups created by the Tunisian diaspora are in Europe which shows a strong link between the two shores.

TheNextWomen Tunisia is a professional platform for women entrepreneurs in Tunisia and the Mena Region, with a presence in France, the Netherlands and England.

## 2. Senegal



**Country's capital:** Dakar (3,23 million)

**Total population:** 15,85 million

**Percentage below 14 years old:** 42,6%

**Funds raised by entrepreneurs in 2020:** 8,6MU\$D

**GDP per capita:** 1 410 U\$D

**Doing business rank:** 123

**Internet penetration:** 56,7%

Senegal is one of the two most developed tech ecosystems in Francophone West Africa, along with Côte d'Ivoire. This was made possible with numerous investments from the private and public sectors into skill development (technical and vocational training are a government's priority), innovation funding as well as programs such as accelerators and incubators.

In December 2019, Senegal was the second African country to pass the start-up act, recently ratified by the President Macky SALL. As every startup act it gives start-ups conditions to get access to training, tax incentives and funds but it also concerns Senegalese diaspora who own at least 50% of the startup.

The Senegalese Startup Act, among other things, seeks to promote innovation in the country's economy towards achieving the country's "Digital Senegal 2025" strategy.

### Key ecosystem stakeholders:

- University and research institutes (between 10 and 50):





Building on the local experience acquired with the management school, BEM decided to join forces with a specialized engineering school to launch BEM School of Technology.



AIMS African Institute of Mathematics and Sciences teaches the best African talents to data sciences and mathematics and runs the Next Einstein Forum whose goal is to create the conditions for the next Einstein to be African.

Among the other universities and schools training entrepreneurs and digital workforce there are Bakeli School of Technology by Volkeno, ESP Dakar (Polytechnique), Dakar Institute of Technology or, mJangale.

**- Entrepreneurship support structures (between 10 and 50):**



The Orange / Sonatel group is a key player in the digital world in Senegal, notably through the Orange Digital Center which offers a completely free space ranging from the Orange Fab to support for entrepreneurs and access to collaboration opportunities.

As of today, there are 27 hubs, the most known are CTIC Dakar, RDE – Rencontre des Entrepreneurs, Concree, Jokkalabs, Innovation House Dakar, MakeSense, Impact Hub Dakar, Expresso Innovation Hub or the newly launched D-Hub by the DER.

- VC and business angels' networks (between 10 and 50):



Teranga Capital is the first impact investment fund dedicated to supporting startups, MSMEs and entrepreneurs in Senegal. The fund partners with Investisseurs et Partenaires which focuses on mature businesses.



Launched in March 2019 by the Women's Investment Club (WIC) Sénégal, WIC Capital is the first investment fund that exclusively targets women-led companies. The Fund brings together both local and international institutional and individual investors, who pool their resources to invest in women owned MSMEs



Orange Ventures is dedicated to investments in innovative startups in areas of strategic interest of Orange (Networks & IT, Digital Enterprise, Cybersecurity, and Fintech) and beyond (Consumer platforms, E-gaming, Edtech, Health etc).

We notice a high number of new funds trying to raise money such as Vertis Capital, Wuri Ventures, Brightmore Capital, Noru Capital, Kinaya Ventures Lab, Haske Venture,

Cayor Ventures or MM Capital Partners. So far, they are all doing consultancies especially in supporting ventures to be investor ready but could lead to some money for entrepreneurs in the next few years.

Among the other finance structures there are Partech Africa, Proparco, Energy4Impact, Dakar Network Angels (DNA), DERJF or Fonds Souverain d'Investissements Stratégiques (FONSIS).

**- Communities - Networks - Development Agencies (between 10 and 50):**



DER Senegal is an initiative launched by the Senegalese government to support and fund ventures founded by young people and women as part of the ambition PSE (Plan Senegal Emergent) by 2035. DER has become central in the entrepreneurship space with initiatives such as D-Hub launch in October 2021.



Afric'innov is an association whose general objective is to help strengthen the Entrepreneurship Support Organizations in French-speaking Africa, to facilitate the emergence and development of businesses with high creation potential of value on the continent.



Teranga Tech Incub is an initiative of the French Embassy with the objective to provide a welcoming and supportive environment for innovative companies.

Among the other structures there are The French Tech, SenStartup, Fonds d'Appui à l'Investissement des Sénégalais de l'Extérieur (F.A.I.S.E), Club des Investisseurs

Sénégalais, USAID, GIZ, FESTIC, Chambre de Commerce d'Industrie et d'Agriculture de Dakar, American Chamber of Commerce in Senegal, Senegal-UK Chamber of Commerce and Industry, Chambre Bilatérale De Commerce Et D'industrie Sénégal-Roumaine or, Agence Française de Développement.

- **Entrepreneurs (+100):**



Some of the biggest national fundraises:

InTouch <https://intouchgroup.net/> - FinTech – n.c

Among the latest national fundraiser:

Wave <https://swvl.com/> - Logistics & Transp – 200 MU\$D – Series A

Fleeti <https://fleeti.co/> - Logistics & Transp – 1 MU\$D - Seed



Sudpay develops service platforms and electronic payment platforms, around mobility and ticketing solutions. Sudpay gives support to public institutions, especially in taxes recovery.



Afrikamart is a distribution platform for fresh produce that will, on one hand, offer its go-to-market services to farmers - the suppliers - and on another hand, operate as a digital purchasing center for professionals in the retail sector (large-scale distribution, traditional market) and in the hospitality sector (hotels, restaurants) - the customers.



Yobante Express is a web and mobile platform that connects e-commerce, retailers, businesses, and individuals with independent and casual carriers, that will handle point-to-point deliveries repeatedly until the last mile. The startup raised 1,2MU\$D from Launch Africa Ventures and other investors.

#### - **Diaspora:**

Senegal relies on its diaspora to develop the local tech scene as well as investments. After graduating or the first positions of responsibility, especially in France and the USA, many people called "repats" are involved in the development of digital tools to meet the challenges of their country of birth/origin. Some such as Ibrahima KANE, CEO of the fintech KalPay or Birame SOCK (engineer, entrepreneur, and state adviser on development issues) are helping to set an example.

The Senegalese Government as well as structures like Diafrikinvest are working to create an adequate framework and, and facilitate administrative procedures for their projects, to best harness the technical and economic potential of the diaspora.

### 3. The Democratic Republic of Congo



**Country's capital:** Kinshasa (14,97 million)  
**Total population:** 84,07 million  
**Percentage below 14 years old:** 45,8%  
**Funds raised by entrepreneurs in 2020:** 4,6MU\$D  
**GDP per capita:** 490 U\$D  
**Doing business rank:** 183  
**Internet penetration:** 17,7%

DR Congo is about big numbers. It represents all the issues and challenges of the African continent with the need for commitments and actions, especially regarding primary needs (energy, access to water, waste management, health, food for all and decent housing).

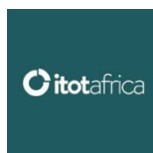
The Congolese government has made digital technology and leapfrog that it activates a stake in the development of the country and means have been given to the various ministries in this direction and a national digital plan has emerged. On top of that, no major technology event in Africa and Europe takes place without a Congolese delegation.

Creation is not concentrated in the capital and a dynamic youth strives despite the cost and the quality of the internet to develop solutions to the responses to the populations in Bukavu, Lubumbashi or even Goma.

The greatest need of this nascent technological ecosystem, less than 5 years old, concerns funders still hampered by inherent and political risks.

#### **Key ecosystem stakeholders:**

- **University and research institutes (between 10 and 50):**



Itot Africa, launched in 2018 in Lubumbashi, the second biggest city with 2,6 million citizens, is a social impact company that focuses on vocational training and job creation with particular emphasis on digital skills.



Kinshasa Digital Academy, launched in 2020 by the IT company Kinshasa Digital, offers certifying, intensive and professional training in information technologies.

Among the other universities, schools and institutes, there are Institut Africain de Cybersécurité et Sécurité des Infrastructures (I-CSSI), Cedyà and, Uptodate Developers.

**- Entrepreneurship support structures (between 10 and 50):**



Silikin Village is an entrepreneurship and innovation hub. Catalyst for start-ups and companies, with a mission focused on identifying talent and developing innovative products and services.

As part of its continental plan, Orange is setting up an Orange Digital Center in Kinshasa, planned for Q1 2022. There are around 20 active hubs in the country, among them we find Orange Corners, Cinolu, Kivu Entrepreneurs, Kivu Hub Smart Innovation, the recently launched Ishango Startup Center, Digital Lumuba Lab, Kobo Hub, Sycomore Ventures (Ingenious City) or, Dellions.

**- VC and business angels' networks (less than 10):**

Some banks (Ecobank - UBA - EquityBCDC – Rawbank) in DRC are playing a crucial role to strengthen the entrepreneurial ecosystem. There are also some actors working on preparing the path for future investments such as Proparco, DRC Impact Angels, Congo Business Angels or, XSML.

**- Communities - Networks - Development Agencies (between 10 and 50):**



The Micro, Small and Medium Enterprises Development Support Project, PADMPME in acronym, is a support program that the DRC government has put in place to promote the economic initiatives of operators in this category, within the framework of the national SME strategy.

The other main communities, networks and development agencies operating in DRC are Youth Connekt RDC, Makutano, ANAPI (Agence Nationale de la Promotion des Investissements), Agence Française de Développement, American Chamber of Commerce | DR Congo, CCI France Congo, Congo Business Network, GLZ and, Belgian-Congolese-Luxembourg Chamber of Commerce.

- **Entrepreneurs (between 10 and 50):**



Among the latest and biggest national fundraises:  
Nuru <https://nuru.cd/> - Energy – 1,2 MU\$D – Seed



Hoja's initial goal was to be a platform that secured taxi rides. With the support of the government and the registration of most taxis, the startup wants to evolve into a data business.

- **Diaspora:**

As a sign of a certain reputation for chaos that precedes the DRC, the size of its diaspora is difficult to quantify, and many agree that it exceeds 5 million of people. Diaspora investments were initially focused on the wealth of the soil, but despite an unfriendly business climate difficulties members of the diaspora create startups like MaxiCash, return home country to launch KoboHub-type incubators or even evangelize international investors on its potential to put in place the elements of success.

## 4. Kenya



**Country's capital:** Nairobi (4,92 million)

**Total population:** 51,39 million

**Percentage below 14 years old:** 38,6%

**Funds raised by entrepreneurs in 2020:** 304MU\$D

**GDP per capita:** 1 620 U\$D

**Doing business rank:** 56

**Internet penetration:** 85,2%

The Kenyan ecosystem is robust, with entrepreneurs building solutions for their communities that they want to scale across the globe. There are several training and funding opportunities available to these entrepreneurs that are run by incubators and accelerators across the country. There are also several regular opportunities to engage entrepreneurs building sector specific solutions or engage with public or private sector players to talk through opportunities available to local entrepreneurs. Finally, there are opportunities for entrepreneurs to get involved in shaping policy and ensure that they are startup friendly. As a result of these opportunities, entrepreneurs in Kenya enjoy more ease of doing business than in several other countries.

However, a subject that has been making a lot of noise in recent years is the very low representation of local entrepreneurs in fundraising, especially those greater than 1 MUSD where only 6% of fundraising in 2020 have been to local founders. One of the ways to remedy this is to support and facilitate the local business angels and VCs committed to financing Kenyan talent.

### Key ecosystem stakeholders:

- **University and research institutes (between 10 and 50):**



Strathmore University in Nairobi is one of the most famous ones in the country for leading inclusive and progressive fights in history. They host iLabAfrica, which is a Centre of Excellence with a focus on ICT Research & Innovation, and Entrepreneurship & Incubation.

The other most renowned universities and schools are Kenyatta University, Technical University of Kenya and University of Nairobi.

- **Entrepreneurship support structures (between 50 and 100):**



Nailab is a Kenyan startup incubator, located in Nairobi, that was founded in 2010. The company incubates technology-based companies and offers 3-6 months entrepreneurship programs with a focus on growing innovative technology driven ideas.

 **Melanin Kapital**

Melanin Kapital is financial platform that provides African social impact entrepreneurs with access to mentors, business partners and investors. They have a focus on women-led businesses and agriculture.



iHub, among the most famous in the continent and launched in 2010, is an Innovation hub and hacker space for the technology community in Nairobi.

There are more than 90 active hubs in the country and, among the most actives and famous there are GrowthAfrica, MEST Incubator Nairobi, Startup Africa, The Land Accelerator, TUMI, BitHub, Eldo Hub Innovation Centre, Gearbox, Metta, Nailab, MLab, Sote Hub, Swahilipot Hub, The Entrepreneurs Hub and, The Baobab Network.

- **VC and business angels' networks (between 10 and 50):**



VestedWorld is an early-stage investment fund manager founded in 2014 that invests in early-stage startups and SMEs in East and West Africa across diverse sectors, including agribusiness, consumer products, and enabling technologies. Vested World has offices in Chicago, USA, Nairobi, Kenya and Lagos, Nigeria.



Acumen Fund invests sustainable businesses, leaders, and ideas. changing the way trying to tackle poverty and working on specific sectors like drugs, solar energy, or agriculture.



Managed by Norfund, Antler East Africa is a start-up generator and early-stage venture capital fund based in Nairobi.

There are many active actors willing to fund entrepreneurs in Kenya, among them ABSA Bank Kenya, Nairobi Business Angel Network (NaiBAN), Viktoria Business Angels Network (VBAN), Energy Access Ventures (EAV), Africa Tech Ventures, Root Capital which supports rural agricultural businesses with loans of up to 1,5MUSD, including coffee cooperatives, Bamboo Capital Partners, DOB Equity, Energy4Impact,

Creadev, Grassroots Business Fund, Proparco, GroFin, Safaricom Spark Venture Fund, Savannah Fund, TBL Mirror Fund, Investisseurs et Partenaires, TLcom Capital or 88mph.

**- Communities - Networks - Development Agencies (between 10 and 50):**



The Kenya Industry and Entrepreneurship Project (KIEP) is a US\$50 million project implemented by the Ministry of Industry, Trade and Cooperatives (MoITC), with support from the World Bank Group between 2019-2024. KIEP aims to increase innovation and productivity in select private sector firms in Kenya by strengthening the private sector (including startups, SMEs, incubators, accelerators, technology bootcamp providers, etc.) through financial grants and technical assistance. (Source: Kenya Industry and Entrepreneurship Project)



Association of Startup and SME Enablers of Kenya (ASSEK), an association established to represent the interests of organizations supporting the development and growth of startups and SMEs.



The Youth Enterprise Development Fund (YEDF) is a state corporation under the Ministry of Public Service, Youth & Gender Affairs. The Fund was established in 2007 as one of the strategies to address the challenge of youth unemployment in Kenya. It is one of the flagship projects of Vision 2030, under the social pillar. The Youth Fund is mandated to create employment opportunities for young people through entrepreneurship. This is achieved by providing financial support and business development services to youth owned enterprises.

The other main networks, communities and development agencies in Kenya are GIZ, Endeavor, Make it IT in Africa, LakeHub, WhiteBox, UK Kenya Tech Hub, USAID, Sinapis Group, Luminare and Agence Française de Développement.

**- Entrepreneurs (+100):**



Some of the biggest national fundraises:

Gro Intelligence <https://www.umba.com/> - Data analysis – 85 MU\$D – Series B

Twiga Foods <https://twiga.ke/> - Agriculture – 50 MU\$D – Series C

Among the latest national fundraise:

Opibus <https://www.opibus.se/> - Logistics & Transport – 7,5 MU\$D – Seed

Craydel <https://www.craydel.com/> - Education – 1 MU\$D - Seed



Mzalendo is a website whose mission is to keep an eye on the Kenyan parliament and promote and enhance public in politics by providing relevant information about the National Assembly and Senate's activities.



Taimba is an AgriTech company that creates linkages between rural small-scale farmers and urban traders.



MarketForce is a B2B retail marketplace that empowers informal merchants in Africa to source, order and pay for inventory digitally and conveniently, access financing, collect digital payments and make extra money by reselling digital financial services such as airtime, electricity tokens and bill payments.

#### - **Diaspora:**

Almost three million Kenyans living in mostly North America and Europe sent an estimated \$3bn in remittances to Kenya in 2019 representing the largest source of foreign exchange for the country. The Kenyan Government is willing to convert a part of this remittances into investments an investment firm, the African Diaspora Asset Managers (ADAM), has been granted the first licence of its kind for a diaspora fund by the Kenyan Capital Markets Authority to provide a safe and regulated investing body for Kenyans living overseas.

More than one year later it seems that the project has failed to raise money.



# Mapping and benchmarking of the ecosystem

Criteria Eligibility

The report measures the maturity and liveliness of a country's startup ecosystem and overall entrepreneurial culture. Countries with a more vibrant startup scene not only support existing start-ups through networking and learning, but also provide resources for potential new founders and bring people into the community by encouraging entrepreneurship.

## Criteria Eligibility

No: 0 Partially: 0,5 Yes:1

	Regulatory framework	Gov support for innovation	Strong number of sustainable hubs	business climate	Education and skills	Improvement in the last few years	Stable ecosystem	Regional reach	Dynamic stakeholders	Total	TOP 5
Tunisia	1	1	1	1	1	1	1	1	1	9	OK
Kenya	0,5	1	1	1	1	1	1	1	1	8,5	OK
Rwanda	0,5	1	1	1	1	1	1	1	1	8,5	OK
Senegal	1	1	1	0,5	1	1	1	1	1	8,5	OK
Egypt	0,5	1	1	0,5	1	1	1	1	1	8	OK
Côte d'Ivoire	0,5	1	1	0,5	0,5	1	1	1	1	7,5	
Nigeria	0	1	1	0	0	1	0,5	1	1	6,5	
Benin	0,5	1	0,5	0,5	0,5	1	1	0,5	0,5	6	
Ethiopia	0	1	0,5	0,5	0,5	1	1	1	0,5	6	
DR Congo	0,5	1	0,5	0	0,5	1	1	0,5	0,5	5,5	
Madagascar	0	0,5	0	0	0	1	0,5	0,5	0,5	3	
Mozambique	0	0	0	0	0	0,5	0,5	0	0,5	1,5	

For each criteria, a rate has been granted and the answers are meant to be factual:

Rate 0 NO, the criteria does not exist in a real, active, and efficient way

Rate 0,5 The criteria does PARTIALLY exist in a real, active, and efficient way

Rate 1 YES, the criteria exist in a real, active, and efficient way

- Regulatory framework: Is there a startup act?
- Gov support for innovation: Is there any minister in charge of the digital economy? Is there any incentive for innovative entrepreneurship?
- A strong number of sustainable hubs: Are the hubs working for years? Are hubs' business models sustainable? Is it possible for an entrepreneur to get support?
- Business climate: Has the country a business climate recognized by the stakeholders?
- Education and skills: Do digital and IT schools exist? Are the schools and institutes recognized for the quality of their training and education?
- Improvement in the last few years: Has the country improved in the last few years?
- Stable ecosystem: Is the ecosystem stable and growing with new actors?
- Regional reach: Is the country capable and willing to be a regional hub (finance/entrepreneurship/education/international structures...)?
- Dynamic stakeholders: Are the stakeholders active in their area?

An ecosystem with every stakeholder active gets better rankings. This may indicate that an evolving ecosystem is possible where there are every kind of stakeholders, and they are active.

Using the criteria eligibility template, the top 5 countries matching the most the project AEDIB I NET are Tunisia, Kenya, Rwanda, Senegal and Egypt.

This gives countries from different regions in Africa North, West, Est, Central.

It also gives countries with different languages and maturity of ecosystems, especially when it comes to the number of funds raised in the past years.



# Mapping and benchmarking of the ecosystem

AEDIB Consortium

Feedback from the entire AEDIB|NET consortium highlighted the importance of the project and the need to support this first phase even more strongly. Thus, the project has evolved in its implementation, and a call for projects has been launched to select 12 Digital Innovation Hub (DIH) projects across the continent.

Digital Innovation Hubs, as defined by the European Commission, are one-stop-shops that help companies to become more competitive with regard to their business/production processes, products, or services using digital technologies. They are based upon technology infrastructure (Competence Centre) and provide access to the latest knowledge, expertise, and technology to support their customers with piloting, testing, and experimenting with digital innovations. DIHs can also provide business and financing support to implement these innovations if needed across the value chain. As proximity is considered crucial, they act as a first regional point of contact, a doorway, and strengthen the innovation ecosystem. A DIH is a regional multi-partner cooperation (including organisations like universities, industry associations, chambers of commerce, incubator/accelerators, finance firms, regional development agencies, and even governments) and can also have strong linkages with service providers outside of their region supporting companies with access to their services.

As part of their application, the DIHs had to make a written presentation but also a video of their projects which had to explain who the members of the consortium were, the vision of the project, and what it should bring to the ecosystem as well as the roadmap.

The elements requested made it possible to judge objectively and factually all the files to select the 12 with the best chances of success.

The selected projects and all members of the consortium have been gathered for a 3-day summit from April 26 to April 28, 2022. This was the perfect occasion to meet up, network, present AEDIB, and pitch about the different DIHs.



Source: AEDIB-NET Gathering

The key information about the AEDIB initiative was recalled.

AEDIB is an initiative of the European Commission under the D4DHub. Launched in December 2020, this project is the first pilot that goes until January 2024. Funded with 4,88M€, it has the objective to promote exposure and knowledge sharing between ecosystem actors via supporting DIHs.

AEDIB's activities are:

- **Inspire** (WP2, WP3): Supportive innovation policy framework, capacity building of marginalised group
- **Create** (WP4): Creating 3 DIHs
- **Connect** (WP5): Transcontinental partnerships of entrepreneurs DIHs diaspora and ecosystem
- **Uptake** (WP6): Spread synergies and sustainability of the project

The consortium is composed by:

- SMEs and intermediary support: Civitta, Steinbeis Afrilabs, Digital Africa
- Investors networks: Eban, EBN, Funding box, ABAN, VC4A
- Policy actors and Think tanks: Enabel, EF, GIZ, Smart Africa, Innovation for Policy Foundation



Source: AEDIB-NET Gathering

During those days, all consortium members were able to meet with the DIHs and exchange on their activities. Keeping in mind the ranking made in the previous part of the report, Digital Africa selected three of the DIHs from the top countries in the ranking to co-organised with them the workshops that were going to nourish this

report. The get together in Brussels was the perfect moment to exchange with them on the workshops that Digital Africa was about to organize and to settle an action plan with the DIHs. The three DIHs are the following :

- **GIA Hub in Senegal --- Smart Agriculture**

The DIH aims to help fishermen and farmers improve their productivity to ultimately achieve food security, by facilitating access to meaningful digital solutions using geospatial data.

The consortium members are Université Cheikh Anta DIOP of Dakar (UCAD), Yessal AgriHub, and Conseil National de Concertation et de Coopération des Ruraux (CNCR).

- **Cleantech216: in Tunisia --- Cleantech**

The DIH is a hybrid hub for the development, prototyping, and incubation of clean technologies to improve climate resilience. In Tunisia, 150 operating cleantech startups and SMEs were mapped in 2021-2022.

The consortium members are Future Islands, Talent lab, and Ipalm.

- **DOORS in Rwanda --- Digital Trade**

The DIH aims to increase the technology adoption and digitalisation efforts of Rwandan SMEs.

The consortium members are 250Startups Incubator, International Centre for Transformational Entrepreneurship, and Coventry University Africa Hub.



# Mapping and benchmarking of the ecosystem

Focus Group

The AEDIB|NET initiative in its essence was set up to rely on the knowledge of local actors and their actions to bring up the challenges, issues, and opportunities in the field.

As part of the scoring of applications, there was also the ability to bring together a robust ecosystem, draw from their recommendations, implement them, and move forward.

In order to gather this knowledge, Digital Africa co-organised three focus groups in three regions about three specific thematic areas :

- A workshop on Cleantech with the DIH Cleantech 216 in Tunis (Tunisia)
- A workshop on Digital Trade with the DIH DOORS in Kigali (Rwanda)
- A workshop on Climate Smart Agriculture with the DIH GIA hub in Dakar (Senegal)
- 

During these events that were organised in a similar way, Digital Africa's contribution was to facilitate the integration of the entire ecosystem, through its central place in local ecosystems and its presence on the ground, as well as the provision of realisation of these events.

Below is an example of the events agendas:

Time	What	Who
8.30am-9am	Welcoming of the participants	All
9am-9.15am	<i>Get to know each other:</i> Presentation by small groups of the super power of your organization and your personal super power	5x5 groups
9.15am-10am	<i>Get to know each other:</i> cross-presentations You present someone from your group	All
10am - 10.15am	Presentation of AEDIB NET, Digital Africa's role, and the ecosystem approach	Digital Africa : Julio (slides support)
10.15am - 10.30am	Presentation of the DIH : value proposition, challenges and solutions, needs	DIH
10.30am-11 am	Networking coffee	All
11.am-11.10am	Presentation of the activity : World Café	Digital Africa
11.15am-12.15am	World café: 3x20mn rotations <ul style="list-style-type: none"> <li>Here is what we identified as needs of the Cleantech ecosystem, <b>what do you think?</b></li> <li>How Cleantech 216 can be useful to the tunisian Cleantech ecosystem? <b>What opportunities?</b></li> <li>Which actors are missing, what allies do we need? Are there opponents or allies that are not identified?</li> </ul>	3x7 groups
12.20-1pm	Wrap up of the day : last words from the DIHs to sum up the conversations and determine the next steps	DIHs
1pm-1.10pm	Contribute to the mapping of allies: place your post-it	All
1.10pm-2.30pm	Networking lunch	All

Through the focus groups, the will of the DIHs and the AEDIB|NET initiative was to bring together the actors of the ecosystem to reflect on various questions around the situation of the ecosystems in connection with the selected project, to make known the initiative, and think about everyone's place under the strategy of the allies.

The strategy of the allies consists in these situations in mapping and knowing the stakeholders, identifying their levels of commitment, their skills and working together, and setting up an action plan that leads to achieving the objectives of the project.

Through the mapping work carried out in phase 1 of the AEDIB|NET project, Digital Africa was able to confirm that thriving ecosystems are those where most of the

stakeholders are active and work together, so the contribution was initially to highlight the key players. in all areas: financials, public actors, entrepreneurs, hubs, or educational structures so that they are represented.

Subsequently, the work of Digital Africa consisted of the implementation and operational management of these meetings, as well as the drafting of this report containing all the recommendations reported.

- Tunisia



**Date:** May 12th, 2022

**Place:** The Dot, Tunis

**Participants:** 15 participants excluding Digital Africa and the Cleantech216's consortium. Among the participants, there were startups (Kumulus, Monsapo, Oleomar, Split...), public institutions (Ministry of Technology), hubs (WikiStart, Impact Partner, Hivos, Flat6Labs), funds and business angel networks (Bridging Angels), or education structure ( Borj Cedria technology center, Insight Formation).



Source: Photo taken during the workshop in Tunis (12/05/2022)

### Discussion's recap:

Cleantech216 defines itself as a hybrid hub for the development, prototyping, and incubation of clean technologies to improve climate resilience in Tunisia. For this they plan to provide:

- Access for SMEs to technological and innovative solutions, with a possibility to discover and test
- Training on digital transformation
- Focal point of the ecosystem to support SMEs in finding partners and implementing their projects
- Sourcing of funding opportunities

The roadmap provides for an operational, official launch in Q4 2022, starting first with raising awareness among SMEs and then working better to raise awareness, train, and support them.

Following the presentation, a Q&A session took place due to the need for the guests to understand the reason for their presence. It emerged that the presentation of the DIH was too general and raised fears of a lack of concreteness, except that they are all there to obtain concreteness. The participants, having had the opportunity to present themselves, also pointed out the absence of multiple public actors such as the Ministry of the Environment, which was working on the development of a green economy

strategy. The absences of the Ministries of Plan and Digital Transformation were also noted, although it was recalled that the execution was faster with private actors.

Following this, 3 groups were made with rotations between each. The topics discussed were mapping of key players to be involved, identification of challenges and opportunities, as well as how Cleantech216 could be useful to the ecosystem.

#### Identification of key actors to get involved

From the start of the event, a missing key player was noticed: the public sector. Whether through municipalities, state structures or Ministries, the involvement of public actors aims to establish a legal environment, both fiscal and environmental, and synergies on concrete actions in current or future in connection with the environment.

Development Finance Institutions need to change their approach. The participants criticized the current functioning with the implementation of plans that do not come from locally and are linked to political agendas. To have results, it is recalled the need to have the DFIs involved, but to adapt the initiatives to the concrete local realities and local needs.

There are initiatives that bring together private structures, such as Tunisian Startup, which must be involved to collaborate with those in the field of Cleantech.

The hubs recalled the need to collaborate in a non-competitive position. There is a need to prevent duplicate projects.

The bank sector needs to be involved, as a key player in the financing of SMEs.

#### How Cleantech216 can be useful to the Tunisian Cleantech ecosystem?

The role of lobbying was the most highlighted, with different topics of representation:

1. The need to promote the creation of a regulatory framework has been raised. For example, the term carpooling does not exist legally, which creates a legal vacuum in which startups in the field navigate without any idea of future development.
2. To participate in the creation of jobs, such as in the management and recovery of waste, it is necessary to link with universities and the education sector to support them in participating in the response through training in these professions.
3. Tax promotion should be part of it to facilitate the tasks of these value-creating companies.
4. Highlighting and supporting Cleantech players in front of investors and bankers. It is necessary to work with them to see the common economic and image interests.

### Challenges and opportunities of the Cleantech ecosystem:

What is Cleantech? Is it a circular economy, a blue economy, or renewable energies? It is necessary to give a clear and common definition of Cleantech. Subsequently, this will facilitate the search for companies in the sector and support work.

Tunisia is experiencing strong migration in the countryside due to climate change. The challenge, therefore, does not only concern Tunis but the whole country.

The subject of waste management, climate change and how our actions impact the future is not taught. It would be advisable to raise awareness from an early age on actions such as waste sorting. Raising awareness must also be about technology.

Companies are the biggest lever in the context of the implementation of best practices. The absence of a legal framework is currently hampering the taking of CSR measures. However, this is seen as an opportunity even from a job creation point of view.

Tunisia's strongest asset in the field of Cleantech is that the country has an extended access to the surrounding sea, which is an important natural resource.

Universities and companies are not sufficiently connected in training for the skills sought. There is a coordinated work challenge to respond to the challenges.

Waste recovery is a real opportunity because it creates wealth, resources, and jobs. The challenge here concerns large groups reluctant to have operational constraints and obligations.

Tunisia is renowned for the quality of its digital education. Issues to remember

Funds must play their part to finance Cleantech, as they are struggling to find the funding necessary to develop innovations.

**Summarize:** The discussions highlighted the need for the ecosystem to have a structure capable of lobbying and reporting needs to the various actors. It appears that this is where one of the main strengths of Cleantech216 lies. The participants want the initiative to bring concrete achievements in training, information, support, and lobbying, and this is as much with training structures as with public structures and financiers.

In addition, a request was sent to Digital Africa and the AFD Group to be a pioneer among donors in providing better information on support and financing opportunities.

All the actors present who represented innovators, hubs, educational structures, and funders positioned themselves as cooperating in the strategy of the allies.

**Feedback from the organization:** The organization went perfectly with good preparation of the consortium, a clear distribution of roles, and a natural leadership taken by Future Island through Khaoula BEHI. Although questioning at the beginning the reasons for their presence, the need for a bigger communication to get involved more actors, and the real opportunities of the project, the participants actively

participated and demonstrated a desire to see the initiative go to the end and become concrete.

- Rwanda



**Date:** May 26th, 2022

**Place:** Remera Corner, 250 startups, Kigali

**Participants:** 11 participants excluding Digital Africa and the DOORS's consortium. Among the participants, there were startups (Bag Innovation, Irembo, Olado, GoCook), public institutions (Ministry of ICT, Ministry of Trade and Industry), hubs (FabLab, KLab), funds and business angel networks (Angaza Capital, Katapult Africa), or education structure (Carnegie Mellon University).



Source: Photo taken during the workshop in Kigali (26/05/2022)

**Discussion's recap:**

The consortium is composed of 250Startups, International Centre for Transformational Entrepreneurship (ICTE), and Coventry University Africa Hub.

DOORS plans to be a digital innovation hub that aims to increase the technology adoption and digitalization efforts of Rwandan SMEs.

It is aimed that the DIH and its activities will help in capability and capacity building towards digitization and develop an entrepreneurial ecosystem that will empower Rwandan SMEs to use digital tools and technologies to create economic and social value.

The consortium will develop and deliver a series of activities:

- Create awareness of digital technologies through seminars, forums and using existing SME networks
- Help SMEs integrate technology into business
- Improve digital entrepreneurship skills through workshops and online programs
- Launch and management of hackathon
- Provide matchmaking services that develops venture, angel capital and crowdfunding networks with a view to strengthen the access to capital and innovation ecosystem in the region
- Seminars to help SMEs involved or interested in exports to understand the process of exporting, market selection, analyzing risk factors etc.

Following this, 3 groups were made with rotations between each. The topics discussed were mapping of key players to be involved, identification of challenges and opportunities, as well as how DOORS could be useful to the ecosystem.

**Identification of key actors to get involved:**

Participants highlighted the need to include policymakers so that they are aware of the challenges of digital players and the challenges of digital transformation for SMEs. The Ministry of Commerce (MiniCom) is working on a legislative and support strategy for SMEs. The Rwanda Development Board that seeks to fast-track Rwanda's economic development by enabling private sector growth was also quoted.

The need to include major business associations was highlighted. An example of the National Agricultural Export Development Board (NAEB). This public actor brings together agricultural actors (coffee, tea, horticulture,...) and works to develop their export capacities. It represents a significant number of structures that do not take advantage of digital technology to improve their operations.

The telcos, first and foremost Airtel and MTN, were mentioned because their decision, through mobile money have impacts on SMEs, and this group must have a more sustained dialogue.

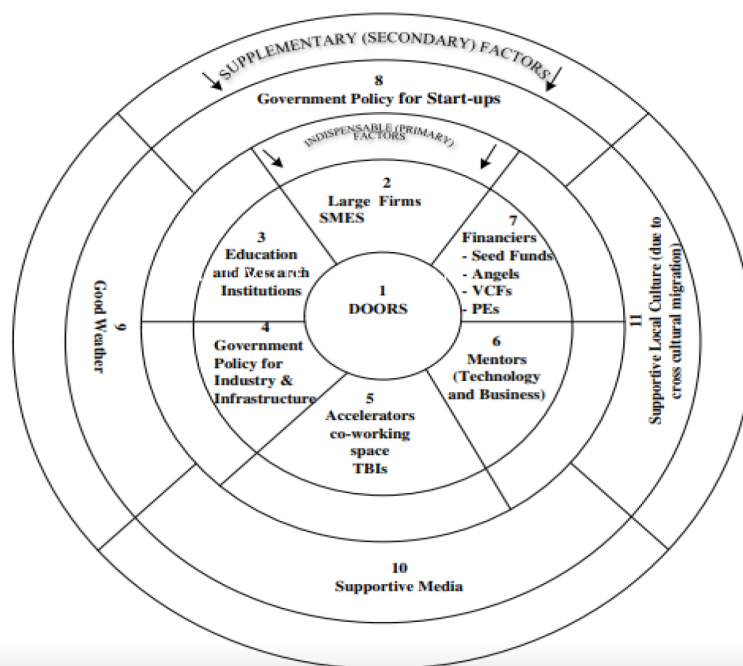
DFIs such as AFD or GIZ should be included. It also highlighted the need to use the research they have done; it is the case of Make IT on innovation ecosystems in Rwanda.

### How DOORS can be useful to the Rwandan ecosystem?

The first recommendation concerned what DOORS should not be: one more hub. The participants highlighted that there were too many hubs, they are on the same axis and cannibalize each other while not allowing the startups and SMEs to pass the different stages.

Due to the lack of coordination in the sector, the participants point to the need to have a focal point player in the ecosystem to represent the other hubs. This point is part of DOORS' ambition, as this page from their pitch deck demonstrates.

## Ecosystem enhancement



Source: Pitch-deck from DOORS Hub

DOORS could participate in the organization of many events where entrepreneurs connect, and network but also share their failures with others to learn together from mistakes and not reproduce them.

### Challenges and opportunities of the Rwandan ecosystem:

There is a lack of coordination between hubs so they don't do the same thing - the same people get the same opportunity - and mastering this would make it possible to become complementary. At the time of covid, a WhatsApp group was set up with the different incubators to see how to work together. Although the group was abandoned and used very little, this initiative demonstrated the desire for synergy in the ecosystem.

The hubs are concentrated in Kigali, however, the needs to support entrepreneurs are throughout the country. Work should be done with the government to put in place the necessary infrastructure to support businesses and correct these inequalities.

It was highlighted that very few actors support the ideas, but these ideas will become real projects and perhaps SMEs.

Among the challenges reported by the Ministries, there is the need to have a platform that resources local and global players. Government actors seem eager to be better informed for more efficient work on trade laws. On the other hand, it was pointed out that the laws are not known by entrepreneurs and that better communication should be made on these subjects. It would be about working on a channel of information where you can find all the verified information.

There is a need to open events to new people and work on awareness. The spread of information will contribute to overall improvement and opportunities to reach larger markets.

Fundraising is difficult for Rwandan startups and SMEs. We must work as much to improve the quality of opportunities but also ensure that investors understand that the market is not only national.

**Summarize:** There are two main points:

- The need not to create an umpteenth hub, ("no more hubs" has been repeated often). The participants believe that there is already a multitude of actors present but that they are poorly distributed over the territory as well as on the offer and that they deserve an increase in skills to have a better impact with companies.
- The need to improve what already exists. All the stakeholders are present with a desire to move forward, better general coordination would allow this

**Feedback from the organisation:** Despite some difficulties at the start, we were marked by the level of involvement of the participants. It will be important for the members of the consortium to find their places regarding the existing initiatives within the ecosystem and to take advantage of the will of the actors to participate in this ambition.

- Senegal



**Date:** June 3<sup>rd</sup>, 2022

**Place:** D Hub, Dakar

**Participants:** 19 participants excluding Digital Africa and the GIA Hub's consortium. Among the participants, there were companies (Dictaf Corporation, Ofrutti, Jokolante, Geomatica, SpaceSeed), public institutions (Ministry of Digital Economy and Telecommunications, DER/FJ, Enabel, FAO, French Embassy in Sénégal, Expertise France, Region Nouvelle Aquitaine), NGOs (Action contre la faim, AgriSud), and education and training structures (EurekaGeo).



Source: Photo taken during the workshop in Dakar (03/06/2022)

## Discussion's recap:

The workshop took place following the workshops of the #D4D hub on geospatial data and its applications for Senegal. It has been in the continuity of the discussions with a desire to be more concrete.

The consortium is composed of the University Cheikh Anta DIOP of Dakar (UCAD), Yeesal Agri Hub, and the Conseil National de Concertation et de Coopération des Ruraux (CNCR).

The mission of GIA hub is to promote the usage of geospatial technologies for the improvement of agricultural productivity and for food security.

The strategic objective is to modernize the agricultural economy by facilitating access to digital tools for fishing, breeding, agriculture, and forestry.

The consortium will develop and deliver different services:

- Raising awareness on existing digital solutions, using geospatial data for smart agriculture application
- Skills training to support the digitalization, as well as business and entrepreneurship courses
- Promotion of consultation, cooperation, and the sharing of experiences between the hub members
- Advocacy with public and private partners, and the essential stakeholders for the development of the rural environment

Following this, 2 groups were made with rotations between each. The topics discussed were identification of challenges and opportunities, as well as how GIA Hub could be useful to the ecosystem. In this second topic, participants were asked to indicate how they could be used by the DIH.

## Challenges and opportunities (under a SWOT matrix):

Strenghts	Weakness
<ul style="list-style-type: none"> <li>• Strong innovation's dynamic in the ecosystem with committed players</li> <li>• Favorable institutional framework</li> <li>• Strengthening economic inclusion</li> <li>• Renowned universities, with a good level of human capital training</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of collaboration between researchers and entrepreneurs</li> <li>• Lack of laboratories and experimental spaces. Research and development needs space, tools, and time</li> <li>• Low digital education in rural areas</li> </ul>

- Ability to collect data through technological innovation
- Stable communication network
- Development of the research sector
- Strong human capital with young people and women who want to discover the Agri sector
- Legitimacy and experience of actors

- Weak network coverage in rural areas, and not dense enough in urban areas
- Complexity of access to information. Data exists but is too general and not detailed enough
- No data protection policy. The open data strategy is inefficient.
- Potential of collection innovations under-exploited
- Plurality of languages
- Not enough digital actors will interfere with farmers to have the best possible return and use
- Absence of intermediary financing (from 30K€)

### Opportunities

- Leverage existing data
- In rural areas, farmers use WhatsApp. This is a possibility to transmit advice and training
- Synergy between actors, particularly from the private sector, because the structures are complementary
- Transition to more profitable models of agriculture
- Many young people come to energize a conservative environment
- An increase in funding, although still insufficient
- Interoperability of information between the different actors
- Birth of structures like kwely.com which create export opportunities
- The language barrier is an important advantage for newcomers, non-locals

### Threats

- Climatic change - disasters
- Slowness in launching activities
- Need for expertise to access the satellite domain
- Low consideration of creative approaches (human-centric design)
- Risk of social fracture due to the smartphone (old and in poor condition)
- Dependencies created on potentially unsustainable projects
- Lack of profitability of family farming
- Exogenous players and/or large non-local groups
- Young people do not stay in rural areas because agriculture is not sexy
- Urbanisation and land speculation

### How can GIA Hub be useful?

It was also reminded that there was a profusion of actors on the same subjects and the same entrepreneurs. We must therefore work to diversify the support and focus of the actors. In this sense, there is no need for an additional hub but for a unifying actor, capable of bringing together the ecosystem, presenting the solutions to each other, and advocating for their needs.

To make the subjects of the ecosystem visible, the DIH must itself be made visible by the actors who implement innovations so that they can share their solutions and expectations.

The ecosystem needs an information relay, capable of identifying actors and interacting with them. This includes funding opportunities.

### How do the participants think they can be useful?

The consortium's desire was to start with actions that could be implemented from the start and correspond to the expectations of the stakeholders. This highlights, from the start, the desire for common and active collaboration.

As part of the strategy of the allies, all the players have positioned themselves as at least interested. Here are the key elements they highlighted from their participation.

Startups (Dictaf Corporation, Ofrutti, Jokolanté, Geomatica, SpaceSeed):

- Support and capacity building
- Community Animation
- Ability to create jobs
- Within the framework of collaboration with research, the transmission of standards and specificity of end products, seeds, etc.
- Dissemination of geo-satellite data to producers
- Availability of innovations

Public institutions (Ministry of Digital Economy and Telecommunications, DER/FJ, Enabel, FAO, French Embassy in Senegal, Expertise France, Region Nouvelle Aquitaine):

- Support and finance more projects
- Institutional work in progress on the #StartupAct ⇒ accreditation for support structures: subsidies, tax reduction, the analysis of startups.
- Facilitation in obtaining start-up status
- Relay and advocacy with Digital Senegal for the improvement of data storage infrastructure
- Creation of bridges between France and the sector on actors working on geospatial data
- Support for the project to revitalize agricultural areas / In conjunction with the CNCR

- Support for the labeling of training
- Provision of a supercomputer (Expertise France)

NGOs (Action contre la faim, AgriSud)

- Research support
- Point of contact with the provision of networks
- Find targets for the programs they put in place
- Advocacy

Education and training structures (EurekaGeo)

- Specification and harmonisation of geospatial training

**Summarize:** Apart from the need to position themselves as a unifying actor, the participants pointed to the opportunity presented by the untapped synergies between the actors. These synergies concern researchers who need to open their applications to concrete entrepreneurs and farmers, but just as much collaboration in the private sector and that of other stakeholders.

The need to include civil society, representations of farmers, hubs, and financiers, all of whom were absent from this meeting, was pointed out.

**Feedback from the organisation:** DIH managed its organization well. The actors present did not know each other/little, and this made it possible to create a network of actors who work with the same goal. The only question could be related to the absence of hubs and financing structures necessary for the advancement of the project.



# Mapping and benchmarking of the ecosystem

Overall summary

Through these 3 countries located in different areas, Arabic-speaking North Africa, French-speaking West Africa, and English-speaking East Africa, we were able to meet more than 50 actors from local innovation ecosystems. These actors represented all the stakeholders; among the participants there were public actors, donors, entrepreneurs, support structures, but also financiers and education and training actors.

Digital Africa has been involved in inviting participants to increase the lists proposed by the various consortiums.

In ecosystems where people work on the same subjects, we notice that they do not necessarily know each other. This demonstrates the need to strengthen networking.

It was interesting to note that despite the difference in themes, regions, and maturity of ecosystems, many remarks and recommendations were similar.

Among the main lessons of these workshops:

- Development Finance Institutions need to change their approach. The participants criticised the current functioning with the implementation of plans that do not come from local and are linked to political agendas. To have results, it is recalled the need to have the DFIs involved, but to adapt the initiatives to the concrete local realities and local needs.
- A greater collaboration with public actors is requested because they are able to facilitate the emergence of ecosystems.
- Numerous initiatives and hubs are born and duplicate existing projects. It would be better to create more alliances and collaborate in building skills without starting from scratch for each project. Hubs are on the same axis and cannibalise each other while not allowing the startups and SMEs to pass the different stages.
- There is a concentration of hubs in the countries' capitals, which is understandable. However, it is essential to spread into the regions.
- A specific regulatory framework is absent. This would allow, among other things, to define a startup, the typology of sectors, and the rights and duties specific to the actors.
- The ecosystems lack actors for the advocacy part. There are associations but not many structures that reach consensus and have the ability to speak to all stakeholders and identify needs to change the ecosystem. The DER/JF in Senegal is one of those actors capable of knowing the needs/expectations of hubs and entrepreneurs and working with the public sector and donors. This would also make it possible to better share information with the entire ecosystem.
- It is essential to finance the idea and the first stages of the projects. The need to involve financing players applies to all stages of a business.

- There is not enough collaboration between entrepreneurs, the public sector, and research structures. These collaborations are to be encouraged because they are beneficial for all.

Many common points emerged during the 3 workshops, but the main one remains the desire of the participants for all the DIHs to bring concrete added value to the ecosystems. If this objective is achieved, everyone is committed to participating in the success of the DIHs.

It should be noted that these workshops focused on gaps and needs, but ecosystems rely on local strengths and a real human desire for progress and success with regard to sustainable development objectives.

These events were seen as a real success and the fact that participants stayed there for all hours demonstrates the interest expressed in filling these gaps and needs.

## Glossary

- ICT - Information and Communications Technology

A diverse set of technological tools and resources used to transmit, store, create, share, or exchange information.

- DFI – Development Finance Institution

National and international development finance institutions (DFIs) are specialised development banks or subsidiaries set up to support private sector development in developing countries.

- Universities - research institutes and development skills organisations

The report only shows the key actors working on training the next digital workers (data science – developers – entrepreneurs...)

- Communities - Networks - Development Agencies

By communities and networks, it means every structure regrouping and supporting tech entrepreneurs and workers with money, training, lobbying and any other support needed.

The development agencies shown are only those with a local office / representation.

- Entrepreneurship supports organizations

Only a few hubs are focused exclusively on tech entrepreneurs. The report shows those accepting digital businesses and with a local presence.

- Entrepreneurs

Some startups are built abroad and then move to other markets to develop. The report only keeps startups launch places.

- Banks, VC and business angels' networks

Some investors have a focus on different countries. The report only selects those with an office in the country.

- Smart cities

A smart city is a city where actors use ICT to improve and ease services and reduce their costs. The reports consider startups supporting governments to improve their services, but also those working to improve how citizens use services. Hence, transport companies are, depending on their business included.

- Climate and agriculture

The report includes every startup using ICT to work on climate or / and agriculture challenges.

- Digital trade

Besides classical digital trade startups (marketplace, e-commerce...) the report includes FinTech supporting these businesses and their customers.

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