

WP1

Deliverable D1.1

Creating a common vision and bringing in key stakeholders into the initiative

April 2021



Funded by the EU's Horizon2020 programme under agreement n° 101016583



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THE FIRST PAN EU-AFRICA SUSTAINABLE NETWORK OF DIGITAL INNOVATION HUBS (DIHS) FOCUSING ON SMART LOGISTIC

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DIGILOGIC Vision and Stakeholders

Table of content



Systems thinking approach



DIGILOGIC's vision



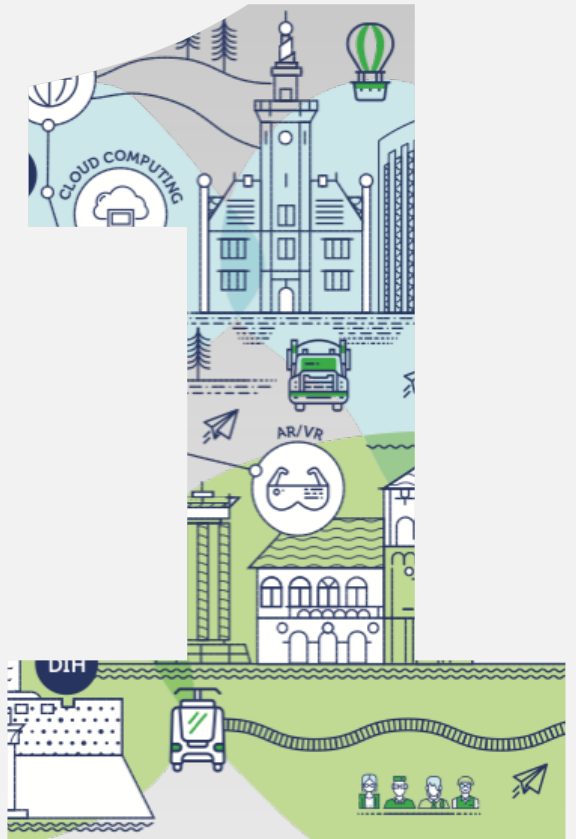
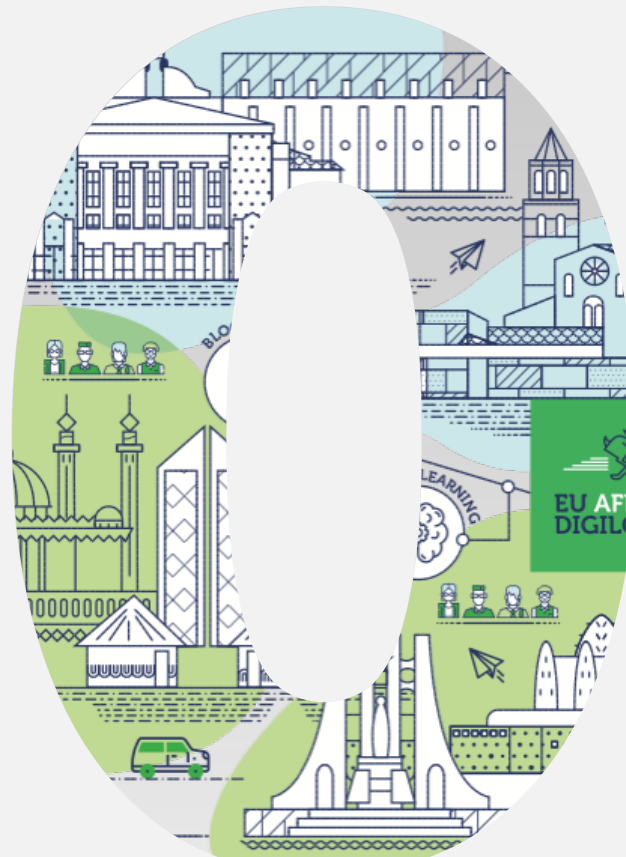
Stakeholders engaged

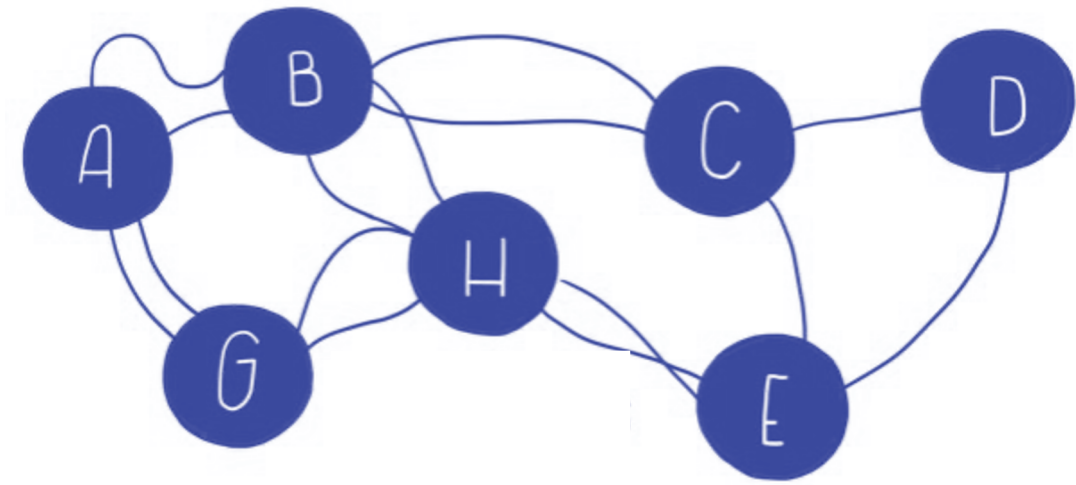


SYSTEMS THINKING APPROACH



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Systems Thinking aims

to push beyond the immediate problems to see the underlying patterns and the ways we may leverage the system.

The value of a systems thinking mindset



Understands the dynamics which cause the system to behave as it does



Helps focus the efforts of partners and create efficiencies



Finds new ways and levers to better solve a challenge



Helps ensure we don't create problems when solving problems



Leads to self sustaining change and impact



Starting point of our visioning process

The common understanding of what DIGILOGIC is aiming at:

To boost the cooperation and strategic partnership between European and African Digital Innovation Hubs (DIHs) to bring innovation to the transport and logistics sector in Africa.

Aim of our visioning process

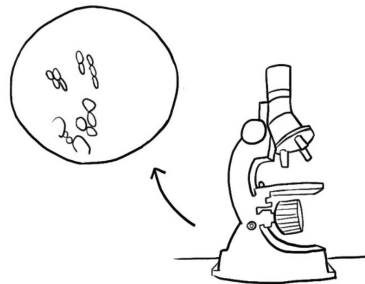
A clearer content specific ground for this cooperation and partnerships between Digital Innovation Hubs (DIHs) in smart logistics.

A concrete system that will be the focus of our future work.

Scope of a system: finding the right balance

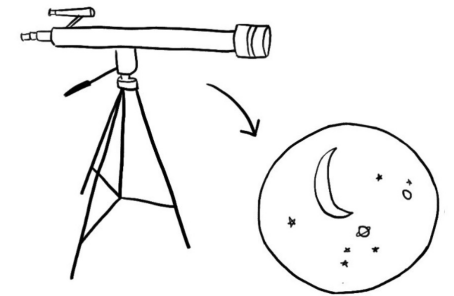
It should not be too narrow and limited

- **A system is a group of entities that are related to each other and affect each other.**
- **One actor, such as an individual innovation hub, does not qualify as a system.**



It should not be too broad and superficial

- **Without a clear boundary, there are infinite interconnected possibilities.**
- **As systems thinking aims to grasp underlying patterns to embrace complexity, a too broad scope would lead to superficial findings**



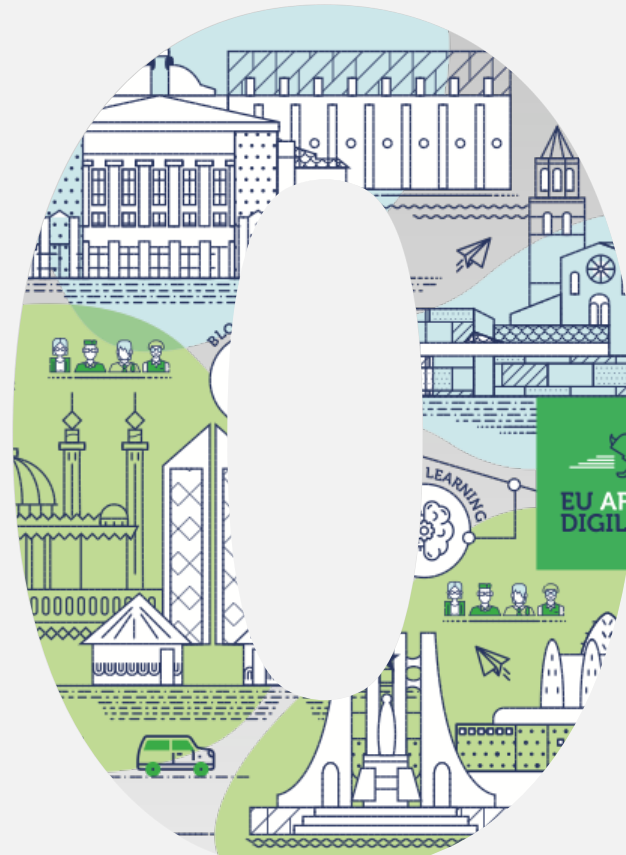
The timeline of the journey



DIGILOGIC'S VISION



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The African logistics system today lacks core parameters



Accessible

420 millions people still live more than 2km away from a useable road.



Affordable

Contextualized introduction of technology is costly and smaller players struggle to access financing; overall, transport is expensive due



Conducive

The risk adverse nature of regulators prevents a conducive environment for introducing innovative solutions.



Security and Trust

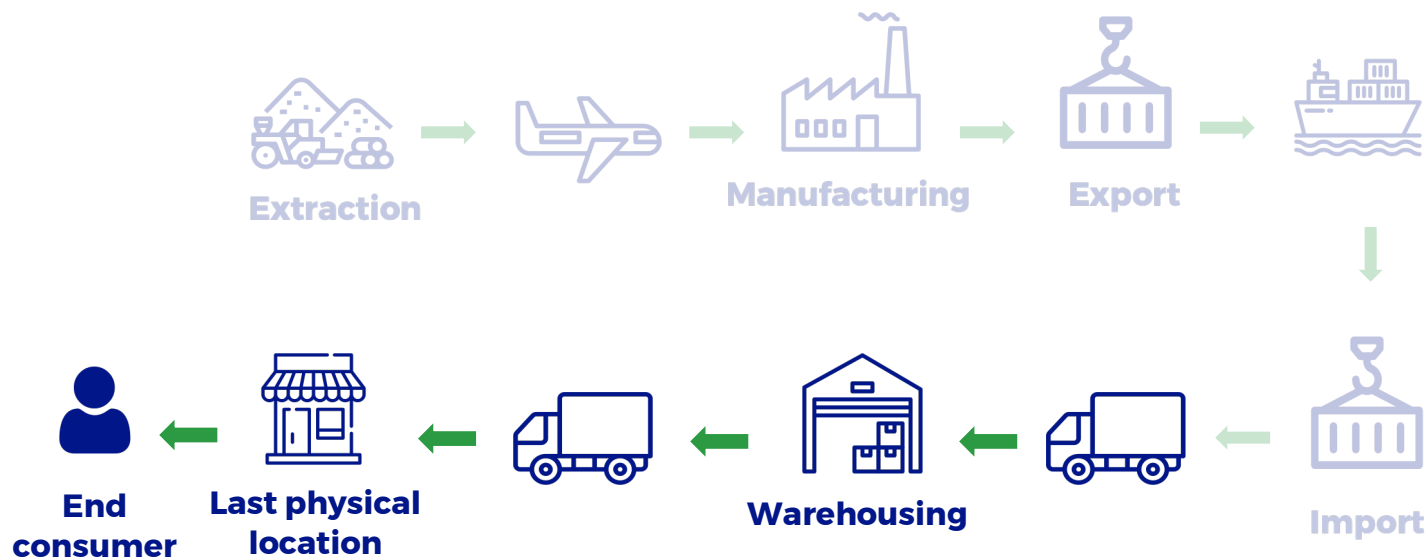
Delivery is considered as unreliable by consumers and carrying cash or valuable freight is considered unsafe.



Sustainable

The majority of vehicles are imported into SSA with lower GHG emissions standards and fuel efficiency.

We propose to put a spotlight on the **critical** mile but not disregard the rest of system



- The **actors** mapped in our systems are also operating further up the logistics value chain
- The **challenges** in the critical mile are relevant across the logistics value chain (e.g need to increase volume, tracking, matching)
- We keep an **open eye** on other relevant solutions connected to the critical mile
- The patterns identified in the African context are **visible across the globe**

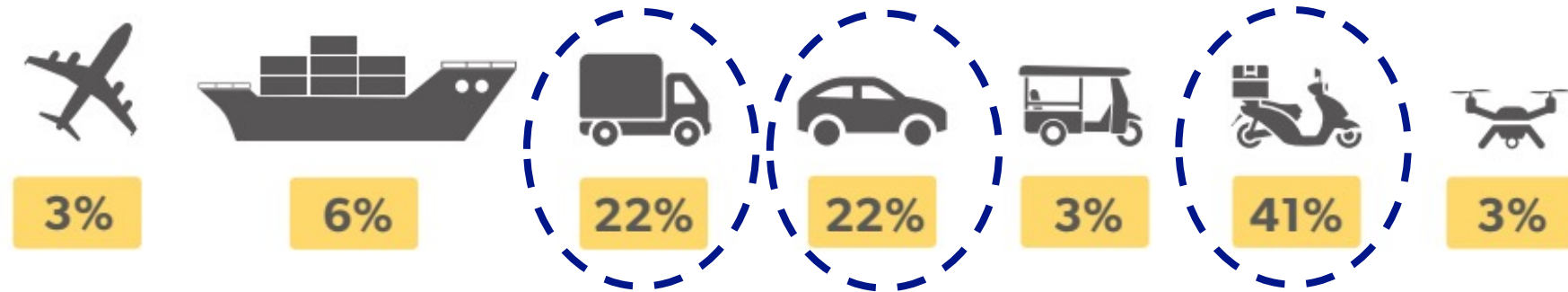
Smart **critical** mile logistics is more than transp

| Technology | Services | Actors |
|--|---|---|
| <p>Hardware</p> <ul style="list-style-type: none">• packing• cooling• e-vehicles• shared vehicles• drones• renewable/solar power• digital lockers• warehousing <p>Software</p> <ul style="list-style-type: none">• matching platform• mobile money• tracking• fleet management• cold chain monitoring• shared vehicles• GPS• USSD codes• data analytics• ID identification | <ul style="list-style-type: none">• Warehousing• Inventory• Packing• Cold chain management• Tracking/tracing• Last mile delivery• Aggregating volumes• Connectivity• Mobile payment• Geo-localization• Connecting first mile and last mile• Recycling• Data flow and analytics | <p>1. Users: FMCGs producer, healthcare providers, e-commerce, local SMEs, farmer cooperatives</p> <p>2. Solution providers: haulage companies, warehouses, courier companies, drivers, vehicles manufacturers, telecommunication operator, start-ups,</p> <p>3. Customers: retailers, individual, SMEs, health centers/pharmacists, farmer cooperatives</p> <p>4. Ecosystem: driver trade union, regulators, regional bodies, communities, micro-financing organizations, insurance providers, tech solution providers, DIHs</p> |

**THE CRITICAL MILE
IS WHERE
INNOVATION
AND IMPACT
THRIVE IN AFRICA**

The majority of African smart logistics start-ups already operate at the critical mile

FLEET COMPOSITION



Source: *Digitising Logistics in Africa*,
2019 https://briterbridges.com/s/20092019_Digitising_Logistics_in_Africa_Report-rjgs.pdf

DIGILOGIC can build on their solutions and inspire more innovations

Start by building on the innovation that is already on the ground...

- **Connect existing stakeholders**
- **Avoid reinventing the wheel**
- **Higher chance of creating long lasting solutions**
- **Higher relevance to answer contextual needs**



...while always keeping an eye on emerging technologies for inspiration



Improving critical mile logistics has therefore a large potential



Low-income consumers represent the majority of spending power in Africa. Nigeria, Kenya, and South Africa combined. Base of the Pyramid (BoP) spendings are expected to amount to US\$52.0 billion by 2030.



As of November 2020, IFC had invested over \$82 million of early-stage equity in the global e-logistics sector, including Kobo360 and Trukker.

This will lead to social, environmental and economic impact

Access to critical goods

Logistics is key to accessing essential fast moving consumer goods (FMCGs), inputs for farmers, raw material or spare parts for companies

Access to markets (esp. import for AfCFTA)

Integrate the continent's value chain and promote intra-Africa trade, as well as facilitating more efficient cross-border processes and cohesive regulatory

Positive effect to key sectors like health

Resilient logistics supply chain are key to provide regular medical deliveries or vaccines and to fight unforeseen shocks like

Employment opportunities for women and youth

From drivers positions to more high-end management oversights many job opportunities lie with bridging the gaps in logistics in the

Less CO2 emissions

The critical mile represent an opportunity to introduce environmental ly-friendly vehicles and reduce empty trips through greater coordination

The vision methodology

The development of the vision had three main outputs:



An aspirational state

A guiding star is a vision that is framed as the desired future system toward which your team is working. It will serve as a navigational tool for the long haul as your team impacts the system and adapts over time.



A nearer term desired outcome

A near star is a 5- to 10-year goal that is framed as a distant, but foreseeable outcome that could be attained. It should be a significant step toward the guiding star.

A guiding question

A framing question

A guiding question to help focus on understanding the system being analyzed and ultimately affected. The mapping journey will seek to answer this question.

The guiding star



Innovation makes critical mile logistics more efficient, affordable and sustainable in Africa, through the facilitation of DIHs



The near star

Pan African – EU ecosystem partnerships, facilitated by DIHs, have created, promoted, and scaled technological innovations that strengthen critical mile logistics in ways that are beneficial for the economy and the society in Africa



The guiding question



How might we create partnerships, facilitated by Digital Innovation Hubs (DIHs) within the logistics ecosystem, that leverage technology in order to make critical mile logistics in Africa more efficient, affordable, inclusive and sustainable?

MAPPING of ENGAGED STAKEHOLDERS















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Stakeholders engaged in the visioning process





Start-ups and SMEs engaged in the DIGILOGIC visioning process

| Start-up | | Focus Area | Country |
|---|-----------------|---|----------------|
|  | Cold hubs | Solar-powered walk-in cold chain storage unit for rural farmers | Nigeria |
|  | Vakava | IoT powered mobile cold chain units | Kenya |
|  | Nexleaf | IoT cold chain tracking for medical goods | Kenya |
|  | Snoocode | Digital addressing of 6 or 7-digit alphanumeric code that acts like a post code | Ghana |
|  | Addressya | Digital addressing system for individuals and businesses to connect and share address information | Rwanda, Uganda |
|  | Sendy | Matching platform connecting entities who need to move goods, with drivers. | Kenya |
|  | Musanga | Mobile platform connecting drivers to businesses and individuals in need of logistical support | Zambia |
|  | Wumdrop | Last mile carrier for same-day on demand-delivery | South Africa |
|  | Amitruck | Trucking logistics marketplace connecting truckers with shippers | Kenya |
|  | Mobility4Africa | Electric tricycles, bicycles and small scale vehicles built for a rural environment | Zimbabwe |
|  | ParcelNinja | Warehousing fulfillment and distribution services (store, pick, pack, deliver) | South Africa |
|  | Prototipi | Innovation design, technology transfer and vocational training | Nigeria |





Vehicle manufacturers and Logistics providers engaged by DIGILOGIC

| | | Focus Area | Country |
|---|---------------|--|--------------|
|  | RTT | Supply chain and logistics providers for the last mile B2B and B2C | South Africa |
|  | BHN Logistics | Trucking haulage services | Nigeria |
|  | DHL | Last international shipping, courier services and transportation | Global |
|  | MAN Truck | Commercial vehicle manufacturer of trucks and buses | Global |




Telecommunication providers engaged in the DIGILOGIC visioning process operating

| | | Focus Area | Country |
|---|------------|---|---------|
|  | MTN Zambia | Mobile phone operator; also offering mobile money and API integration | Zambia |
|  | Orange | Mobile phone operator; also offering cold chain management, mobile money, tracking, last mile delivery for rural remote areas | Global |




Non-profits and NGOs engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|--|--------------------------------|---|------------|
|  Stiftung | Siemens Foundation | E-Mobility Solutions for Rural Sub-Saharan Africa | Kenya |
|  | Transaid | Provision of professional driver training, transport management systems, and rural access to transport. | UK |
|  | Lalala ONG | Improved mobility in rural areas: road safety, driver training and infrastructure development | Madagascar |
|  | Global Distributors Collective | Informal and smaller distributors capacity building network | UK |



Intermediaries and associations engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|---|--|---------|
|  | UK and Ghana Chamber of Commerce | Facilitate the entry of UK businesses into the Ghanaian trade industry | UK |
|  | Alliance for Logistics Innovation through Collaboration in Europe | Set-up to develop a comprehensive strategy for research, innovation and market deployment of logistics and supply chain management innovation in Europe. | EU |
|  | FurtherAfrica | Online platform centralizing news and content focusing on the development and growth of the African continent | UK |

Global corporate logistics users engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|------------------|---|---------|
|  | Procter & Gamble | FMCGs producer; delivering to the last mile through partnership with local retailers and e-commerces | Global |
|  | Dallmayr | Food and beverages company; vending machine and catering importer in Africa | Global |
|  | Pfizer | Pharma company; pharmaceutical supply chain to the last mile (e.g drone, smart lockers, regenerative aluminium) | Global |








E-commerce and online retailers engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|-------|--|-------------|
|  | Copia | Mobile FMCG commerce platform blending online and offline commerce to reach customers unserved by formal retail | Kenya |
|  | Jumia | Online marketplace and logistics service, which enables the shipment and delivery of packages from sellers to consumers, and a payment service | Pan-African |




Finance providers engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|---|---|---------|
|  | Prospero | Private sector investor; supports businesses in about 5 high-growth sectors including food and agriculture, mining and mining services, tourism and hospitality, investment services and business services. | Zambia |
|  | Access View Africa | Investor | Ghana |
|  | Bank of Industry in Nigeria | Financial and business support services to enterprises. | Nigeria |
|  | African Foundation for Development (AFFORD) | Diaspora Financing | UK |
|  | Cole Collective Hub | Business and financial support community for entrepreneurs and professionals | Ghana |



Research and academia engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|---|--|--------------|
|  | The Council for Scientific and Industrial Research (CSIR) | Cluster for Smart Mobility | South Africa |
|  | Lagos Business School | Information system and how technology can drive business and social change | Nigeria |
|  | Strathmore University | iBizAfrica Incubation Center | Kenya |
|  | Frauenhofer Institut | Material Flow and Supply Chain Logistics | Germany |
|  | Kühne Logistics University | Humanitarian Logistics | Germany |
|  | Briter Bridges | Research company with a pan-emerging markets focus | UK |
|  | BoP Innovation Center | Consultancy; novel distribution model for low-income communities | Netherlands |




Government bodies, engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|--|---|-----------------------------|
|  | Zambia Information and Communications Technology Authority (ZICTA) | Postal services under the regulatory body responsible for regulating the ICT Sector in Zambia | Zambia |
|  | Delegation of the European Union to Zambia | Trade policy facilitation between the EU and Zambia | Zambia |
|  | Delegation of the European Union to Nigeria | Trade policy facilitation between the EU and Nigeria | Nigeria |
|  | The Common Market for Eastern and Southern Africa (COMESA) | Regional common market | Eastern and Southern Africa |
|  | African Continental Free Trade Area (AfCFTA) | Regional body enabling the rise of intra-African trade | Pan-Africa |






Development partners engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|----------------------------------|---|-------------|
|  <small>Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH</small> | Make-IT in Africa | Fostering a business ecosystem conducive for tech-start-ups | Pan-African |
|  <small>Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH</small> | Transport and mobility portfolio | Supporting sustainable and efficient transport and mobility through many different projects | Global |





DHIs and DHI support programmes engaged in the DIGILOGIC visioning process (1)

| | | Focus Area | Country |
|---|---|--|----------------------------|
|  | BongoHive | Africa-wide technology entrepreneur training, funding and incubation | Pan-African |
|  | Meltwater Entrepreneurial School of Technology (MEST) | Africa-wide technology entrepreneur training, funding and incubation | Pan-African |
|  | Impact Hub | Technology entrepreneur training, funding and incubation in Zimbabwe | Zimbabwe |
|  | Southern Africa Innovation Support Programme (SAIS) | Regional initiative that supports the growth of new businesses through strengthening innovation ecosystems | Southern African Region |
|  | iBizAfrica | Business incubator for ICT entrepreneurs | Kenya |
|  | Man Impact Accelerator | Accelerator for social business startups in the field of mobility, transport and logistics | Europe, Brazil, and Africa |

DHIs and DHI support programmes engaged in the DIGILOGIC visioning process (2)

| | | Focus Area | Country |
|---|---|--|-------------|
|  | Seedstars | International investment and education company for change makers | Global |
|  | The Africa-Europe Innovation Partnership (AEIP) | Connecting high-quality tech hubs from both continents | Pan-African |
|  | AEDIB | Strengthen pan-African and African-European digital innovation partnerships for start-ups and SMEs | Pan-African |
|  | AfriConEU | Academy for DIH capacity building | Pan-African |
|  | Hubiquitous | Multi-sector testing box for DIHs | Pan-African |

European DHIs engaged in the DIGILOGIC visioning process

| | | Focus Area | Country |
|---|--|---|---------|
|  | Digital Hub Logistics | Smart logistics | Germany |
|  | VTT Technical Research Centre of Finland Ltd | Smart manufacturing | Finland |
|  | DigitalHub Logistics Hamburg | Digital Supply chain & logistics | Germany |
|  | Friuli Innovazione | Knowledge Intensive Business Support Organization | Italy |