



CONCEPT NOTE

Innovation and Digitalisation

Introduction

The Fourth Industrial Revolution (4IR) is a global phenomenon, which is a critical step for more international cooperation. Under the umbrella of the 4IR lies an opportunity for further engagement between Africa and Europe. Innovation, Digitalisation and connectivity are key drivers for research community and provides long-term competitiveness in line with sustainable growth.

While some environmental parameters are critical – such as reliable electricity supply and affordable high-speed broadband connectivity – digitalisation and innovation should not be considered as isolated technical issues, but a core contributor to the resolution of urgent matters such as the COVID pandemic and economic recovery, and more widely, as key paying fields for the improvement of people's and citizens' lives, far beyond the digital sector.

Innovation (i.e. the practical application of knowledge and technology for new solutions), is one of the main drivers for a productive, sustainable and resource-efficient economy and for the creation of long-lasting societal impact. Innovation and digitalization are recognized as an integral driver in the new EU Von der Leyen Commission, (Comprehensive Strategy with Africa; March 9, 2020) and it is equally identified as such in the AU's 2063 Strategic Agenda. The Africa-Europe Innovation Partnership (AEIP) was created in December 2018 and launched in September 2019 in Nairobi. In November 2019 the AU-EU HLPD SOM meeting formally decided to create a **Working Group on Innovation** (ongoing) as a crosscutting third pillar for the collaboration between the EU and AU on Science, Technology and Innovation.

Digital innovation should also be placed into the wider context of Africa's long-term strategy to harmless digital technologies and innovation to transform African societies and economies to promote Africa's integration, generate inclusive economic growth, stimulate job creation, break the digital divide, and ownership of modern tools of digital management.. This is in line with the recommendations set out by the African Union Digital Transformation Strategy¹ and the Africa-EU Digital Economy Task Force².

Currently, AEIP, Enrich and ICT 58 Calls already constitute an illustration of best practices and inspiration for future strategy. The call ICT 58 is a follow-up action of the Africa-EU alliance. It is based on the recommendations of the Africa-EU Digital Economy Task Force from June 2019 (the latter having also been adopted by the AUC's Digital Transformation Strategy). The scope of the call was left open, with applications coming from potentially any field.

¹ <https://au.int/en/documents/20200518/digital-transformation-strategy-africa-2020-2030>

² <https://ec.europa.eu/digital-single-market/en/news/new-africa-europe-digital-economy-partnership-report-eu-au-digital-economy-task-force>

COVID effect

COVID-19 has highlighted how international cooperation for innovation on multiple levels is now more important than ever. At the level of individual innovators, there is a high demand for innovative entrepreneurs to come up with tools and solutions that can mitigate both the **short-term** negative health impacts (e.g. new ventilation devices, smart apps for relief allocation, online misinformation management, implementation of interoperable digital health infrastructures) as well as more **medium-term** solutions for the distance economy (e.g. reservation systems for restaurants, digitalised access to shops, improvement and support for distance learning and teleworking, rapid screening technology etc.). In the **long-term**, COVID-19 is expected to lead to a further push for digitalisation and productivity improvement especially towards green transition. This momentum points towards the need for robust digital and entrepreneurial ecosystems that can answer these challenges.

As far as digital tools are concerned, strong communication infrastructures and in particular high-speed telecommunications networks are necessary to enable research institutions to engage in international collaboration and innovation activities.

Similarly, Tech-hubs and Technology Transfer Organisations, are critical. These intermediary organizations play key roles in supporting SMEs and start-ups in both surviving the short-term crisis and supporting and raising innovation capacity. Many tech hubs have responded with innovative online programmes to support their start-ups. Very important was the capability of reorienting existing methodological and technical approaches to the production of new intensive care and protective equipment and more accurate diagnostic tests.

International collaboration is essential for tech-hubs and entrepreneurs. COVID-19 is a uniquely global challenge that is pushing for innovation exchange and speeding up the diffusion of solutions to other countries. This is done through work with local entrepreneurs who adapt products to local contexts and needs, and tech hubs that learn from each other how to best support their entrepreneurs and SMEs through this crisis. The 4th AEIP event will be held next week (23d June 2020) will focus on technologies exchanges, rounding up on the challenges – yet also opportunities – surrounding the new ‘distance economy’.

There is an increasing amount of effort being placed in utilizing knowledge held in universities and research institutes in Africa and Europe through technology transfer and exchange, but that there is a need for improved digital tools to support a stronger partnership and coordination in this space.

However, both entrepreneurs and tech-hubs have been hit hard due to falling incomes and low liquidity, as well as the retrenchment of the private sector. In order to ensure that the pandemic does not set these emergent ecosystems back by a decade, public support in the short term is necessary.

Background of the aforementioned initiative

Innovation is an increasingly important area of international collaboration, that is bringing in new public and private actors into the STI-collaboration domain. Over the past decade, we have seen a revolution in the innovation sectors of both Africa and Europe. New actors, such as tech hubs (incubators, accelerators, fab-labs etc.), tech entrepreneurs, VC-investors, corporate innovators, regional innovation clusters etc., have become key players in the African and European innovation landscapes. Existing research actors, such as RTOs and Universities have set up Technology Transfer Organisations and are exploring new models of technology management & exchange to stimulate the utilization of scientific research for the public. The Africa-Europe Innovation Partnership was launched in September 2019 under the auspices of the High-Level Policy Dialogue to build partnerships between these new & existing actors in Africa and Europe, and together build new

effective pathways for innovation aimed at economic & societal impact. The Programme currently counts 20 active partnerships.

Innovation and digitalization are highly complementary activities. Innovation activities in Africa are highly technology-oriented or technology-enabled. Highly innovative entrepreneurs create new digital services and solutions for local and global markets, spurring a demand for digitalization of our economies. On the other hand, better connectivity and access to new digital technologies are an empowering and fertile ground for new entrepreneurs.

Objectives

The various activities have complementary objectives that fit with the wider policy framework of the AU-EU STI Collaboration. It is important to note that the Innovation pillar is particularly complementary to all highly relevant work in the other pillars of cooperation. This promotes a faster uptake of the knowledge generated through these research programmes by linking directly to the innovation & entrepreneurial ecosystem.

Activity	Objectives	Wider Policy Framework
Tech Hub & Startup ecosystem COVID-19 temporary relief	<ul style="list-style-type: none"> - Ensure the survival of key innovation ecosystem players in Africa - Continue the innovation pipeline as private investors are temporarily withdrawing 	-
Thematic Innovation Co-creation Challenges (see below for a list)	<ul style="list-style-type: none"> - Stimulate the creation of very relevant solutions through co-creation between African and EU tech hubs and/or start-ups (see list of challenges below) - Contribute to immediate COVID-19 mitigation - Link existing research & technology stock between countries and promote technology transfer 	<ul style="list-style-type: none"> - Link to SDG Framework - Thematic challenges should link to science & technology cooperation framework priorities.
Reinforce and Continue Africa-Europe Innovation Partnership	<ul style="list-style-type: none"> - Ensure the presence of networks and partnerships between entrepreneurial ecosystem players - Promote innovation opportunity matching, access to funding, funding-readiness, - Explore new models of technology transfer - Stimulate policy learning and evolution of innovation system frameworks to better support entrepreneurs 	
Extension of the Enrich Network to Africa (call Governance 20-2020)	<ul style="list-style-type: none"> - Development of regional centers of European research & innovation expertise in five African regions - Promoting market knowledge and access for innovative SMEs and entrepreneurs. 	
EC, DG DEVCO	<ul style="list-style-type: none"> - Provide affordable high-band 	Main SDG Goal:

Support to African Research and Education Networks infrastructure	connectivity and value-added services to support collaborative research and innovative learning between African and European knowledge institutions (universities, research centres)	SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" SDG 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"
DG DEVCO	<p>Contribute to a conducive and inclusive environment for Research and Innovation in ACP countries by setting in place an ACP Innovation Fund* with the objectives of:</p> <ul style="list-style-type: none"> i) increasing access to digital literacy, knowledge and use of emerging technologies; ii) strengthening effective links between R&I skills development and labor market demand; iii) synergies in the research and innovation ecosystem, including with the private sector; facilitating conditions for technology transfer; promoting R&I uptake; iv) promoting local and indigenous knowledge. <p><i>*Call for proposal ongoing</i></p>	<p>Main SDG Goal: SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"</p> <p>Secondary SDG Goals: SDG 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" SDG 5 "Achieve gender equality and empower all women and girls" SDG 17 "Strengthen the means of implementation and revitalize the global partnership for sustainable development"</p> <p>The African Union <i>Science, Technology and Innovation Strategy for Africa (STISA 2024)</i></p>
EC, DG DEVCO Smart Development Hack	<p>Thematic Innovation Co-creation Challenges for digital technologies in Africa to fight the COVID-19 pandemic. Five challenges were addressed:</p> <ul style="list-style-type: none"> • WORK AND EMPLOYMENT • LOCAL INNOVATION • EQUAL OPPORTUNITIES • GOOD GOVERNANCE & HUMAN RIGHTS • DATA FOR DEVELOPMENT 	<p>SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"</p> <p>SDG 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"</p> <p>SDG 3: Ensure healthy lives and promote wellbeing for all at all ages</p> <p>SDG 5 "Achieve gender</p>

		equality and empower all women and girls" SDG 17 "Strengthen the means of implementation and revitalize the global partnership for sustainable development"
EC, DG DEVCO	Promote digital transformation and connectivity to fight the COVID-19 pandemic. Innovation in three sectors addressed: Health; Education and MSMEs	SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" SDG 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" SDG 3: Ensure healthy lives and promote wellbeing for all at all ages
EC, DG DEVCO	Data technologies for surveillance and monitoring of health related outbreaks in the IGAD region	SDG 3: Ensure healthy lives and promote wellbeing for all at all ages SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"

Funding

The Table below presents an overview of relevant support actions for the short and medium term. The actions should eventually be governed by the AU-EU HLPD **Working Group on Innovation**, which is currently under development. The AEIP is currently primarily funded through the Service Facility for International Cooperation (running until mid-2021).

Activity	Type of Actions	Timing	Indicative Annual budget
Tech Hub & Startup ecosystem COVID-19 temporary relief	EU Financing Instrument for Tech Hub Continuation & Adaptation	Short-term: 2020/2021	1,000 000€
Thematic Innovation Co-creation Challenges (see below for a list)	Funding Instrument for <ul style="list-style-type: none"> - small consortia of start-ups from EU and Africa - partnerships of EU and African tech 	Short & Medium-term 2020-2024	2,000 000€

	hubs		
Reinforce and Continue Africa-Europe Innovation Partnership	Partnership Platform; Opportunity Recognition & Matching; Building Networks of Multipliers; Capacity Building; Policy Learning; Access to Finance partner; Technology Transfer collaboration promotion	2021-2024	1,500 000€
Extension of the Enrich centres to Africa	Market Access for entrepreneurs & SME, Innovation Promotion, Regional collaboration	2021-2024	0.6 million (Already funded)
EC, DG DEVCO Support to African Research and Education Networks infrastructure	Through AfricaConnect3, support to African R&E Networks	2019-2023	37,500,000 € over 4 years
EC, DG DEVCO	ACP-EU Programme to strengthen Research and Innovation capacity in ACP countries – Innovation Fund component	2020-2024	ACP Innovation Fund total: € 50,400,000 Of which Africa share: € 33,600,000 over 4 years
EC, DG DEVCO	Smart Development Hack to fight COVID-19	2020-2022	Intra-ACP 10,000,000€
EC, DG DEVCO	Digital transformation and connectivity to fight COVID-19	2020-2022	Intra-ACP 15,500,000€ + Regional EA-SA-IO 10,400,000€
EC, DG DEVCO	Data technologies for surveillance and monitoring of health related outbreaks in the IGAD region	2020-2022	Regional EA-SA-IO 7,000,000€

List of possible thematic challenges:

- Short-term contributions of innovation to the economy/society:
 - o Distance Education Technologies accessible to large segments of the population (very important now)
 - o Online/Remote Shopping, including Food & Medicine distribution
 - o High quality and reliable access to news & information and fight against disinformation
 - o Rapid screening techniques
 - o Institutionalized and well-articulated cooperation links between Innovation and Research actors and national health services in order to guarantee fast and agile responses
 - o Support digital transformation of MSMEs (Digital transformation and connectivity DEVCO)
 - o Use of drones to deliver medical supply (Smart Development Hack - DEVCO)

- Use of smart platforms for matching demand and offer for supporting job creation (Smart Development Hack - DEVCO)
 - Data technologies for surveillance of outbreaks
- Mid-term contributions of innovation to the economy/society:
- Support in value chain resilience and stimulating local production
 - Food & Agro conservation / alternative uses (battling food waste due to reduced exports/imports)
 - Support green technologies, circular economy and resources efficiency models
 - Faster digitalisation of economies, remote working technologies etc.
 - Increased need for new models/tools for e-governance, including reliable e-voting etc.
 - Strengthen adaptive capabilities - rapid and accelerating technological change is a central proposition of the 4IR.
 - The 4IR must ultimately be steered towards the improvement of human development. This entails a focus on applications of 4IR technologies that improve human development. This is a cross-cutting principle that applies to the leveraging of technological change, the building of technological capabilities, and the building of economic competitiveness and employment.
 - The innovation system analysis shouldn't be restricted to the formal sector – need to include informal settlements and the informal economy.
 - The technologies of the 4IR could be harnessed to strengthen the capacity of government to provide service delivery.
 - Transforming human settlements: responsive and competitive cities - Innovation policy at the city-level has played a significant role in the public sector's involvement in innovation systems.