Online Workshop Series: Implementing the AU-EU Innovation Agenda

Report
Intellectual Property Rights

28th November 2023

The African Union (AU)-European Union (EU) Innovation Workshop on Intellectual Property Rights (IPRs) took place on 28 November 2023. It was the first in a series of Virtual Workshops around the theme "Implementing the AU-EU Innovation Agenda" that will stretch through the next three years implementation phase of the short-term actions of the Agenda, with two workshop taking place every year. With over 200 participants, the whole-day event was an indisputable success.

The Workshop was conducted at high-level by the European Commission and the African Union Commission, moderated by the European Commission and the African Union Development Agency (AUDA-NEPAD). It gave an opportunity to take stock of the implementation of the AU-EU Innovation Agenda, contained a Deep Tech Training session on International Property Rights (IPRs) Strategies for Innovation, and ended with a virtual cocktail allowing for networking in three thematic break-out rooms, each of which focused on specific themes of IPRs, like IP regulation, technology transfer and IP commercialisation and licensing.

The Deep Tech Training´s recording and the Workshop's presentations are accessible online, more information can be found on the AU-EU Innovation Interface.

1. Opening remarks

Under the moderation of **Dr Laurent Bochereau**, Science Counsellor at the EU- Delegation to the AU and **Ms Mahlet Teshome**, Development Scientist at the AU Commission, the opening session was launched by **Ms Nienke Buisman**, the European Commission's Deputy Director for International Cooperation in Research and Innovation (R&I). Ms Buisman highlighted the importance of the AU-EU cooperation and its continuity, as illustrated by its role in the EU's Global Approach on R&I (since 2021). She stressed that this Virtual Workshop is the first in a series of bi-annual online workshops organised by the AU and EU to implement the short-term actions of the AU-EU Innovation Agenda. Ms Buisman explained that the Agenda itself is a joint AU-EU initiative for the next decade, aiming to foster the application of research into tangible impacts on the ground. The Agenda is the result of a three-year long discussion and was finally adopted in July 2023 by the AU and EU Commissions. Ms Buisman added that the Workshops are built on a participatory approach of stakeholders, and each of them contains a Deep Tech Training component for capacity building. Stakeholders are encouraged to contribute to the implementation process of the Agenda throughout the Workshops and beyond.

Dr Monica Ebele Idinoba, AU Commission Principal Scientific Officer for the Department of Education, Science, Technology and Innovation, pointed out in her opening speech that the AU's Agenda 2063

represents an effort to spur creativity and innovation. She explained that IPRs enable for innovations' implementation, and that a clear context to protect them is therefore necessary. Moreover, Dr Idinoba stated that, for the future, a platform to facilitate policy-based discussions on Intellectual Property (IP) in the context of the African Continental Free Trade Area (AfCFTA) would also be needed and supported by the AU.

Their remarks were followed by the presentation of **Dr Vincenzo Lorusso**, Policy Officer at the European Commission, DG Research and Innovation (DG RTD) and **Mr Lukovi Seke**, Programme Officer at AUDA-NEPAD. They introduced the main objectives and activities of the AU-EU Innovation Agenda highlighting that it aims at closing the needs' gap in five priority areas: innovation ecosystem; innovation management; knowledge exchange and technology transfer; access to finance; and human capacity development. Dr Lorusso and Mr Seke highlighted that five sectors have been identified for action: Public Health, Green Transition, Innovation & Technology, Capacities for Science and cross-cutting issues, in line with the joint thematic priorities for R&I announced during the First Ministerial Meeting of the AU and EU R&I ministers in July 2020. The Agenda strives to bring together all stakeholders, from institutions to civil society, from Higher Education Institutions (HEIs) and researchers to private sector, in order to make a concrete difference.

The two speakers also took stock of the November 2022 Stakeholder Event in Nairobi, which allowed to discuss on specific stakeholder demands and ideas, and possible implementation routes for the Agenda. The event showcased the AU and EU vibrant innovation ecosystems, as also the June 2023 AU-EU Innovation Festival did. The latter provided a vibrant platform for showcasing and discussing innovations in the context of the joint political priorities and cooperation in the fields of Public Health, Green Transition, Technology and Innovation, and Capacities for Science. The speakers also introduced ENRICH in Africa, a Horizon 2020 funded project that focuses on strengthening and connecting innovation ecosystems in Africa and Europe, and the ENRICH in Africa Centre, based in Cape Town, that allows the initiative to live on as a networking platform. They also presented the AU-EU Innovation Interface that contains all information relating to the Innovation Agenda, notably its Roadmap that presents the Agenda's governance, the monitoring and evaluation framework, the mapping of existing projects, and a toolkit guiding on the identification of initiatives that could potentially support the Agenda's implementation. The platform will also feature a Dashboard that lists main initiatives under the AU-EU Innovation Agenda. Both the Roadmap and the Dashboard are "living documents" that are constantly updated.

2. Experience sharing – Taking stock on the AU-EU Innovation Agenda

This session was designed to allow participants to benefit from experiences that other stakeholders shared regarding the AU-EU Innovation Agenda.

Ms Mélanie Keïta Mariam is the CEO and Co-founder of Melanin Kapital, a company that applies digital technology to foster financial inclusion in the green finance space via a platform that links projects with funds. Melanin Kapital also employs artificial intelligence (AI) to assist in credit scoring and block-chain technologies. Meeting potential investors and clients was one of the main reasons Melanin Kapital joined the AU-EU Innovation Agenda endeavours. The November 2022 Stakeholder Event and the June 2023 Innovation Festival supported Melanin Kapital in finding potential partners and obtaining venture capital investment. Today, Melanin Kapital aims at expanding its activity to new African countries.

Dr Esther Kanduma from the University of Nairobi in Kenya, and **Dr Funmilayo I.D. Afolayan** from the University of Ibadan in Nigeria, are members of the African Schools Outreach program (ASOP). ASOP

was created in 2019: using a lab in a suitcase, it provided science, technology, engineering and mathematics (STEM) experience in schools with the aim to inspire the next generation of African women in science. The project has been implemented in several countries (South Africa, Cameroon, Kenya, Zambia, Nigeria). ASOP joined the AU-EU Innovation Agenda for several reasons, including exploring strategic opportunities, obtaining resources to equip school laboratories with basic scientific tools, and improving international visibility and recognition. Thanks to the Agenda, ASOP was able to build up a network of valuable stakeholders and potential partners, enabling the organisation to invite the Education Service Commission in Nigeria and to expand and launch its activity in Cameroon.

Ms Mark Skjarov, founder and CEO of WasteLocker, introduced his company that provides a complete waste flow monitoring service for businesses, communities and events. It combines sensor module technology, data analysis and assessment of sorting accuracy and container utilisation. The company participated in the AU-EU Innovation Festival in order to better understand the challenges and opportunities on the African market and to build a strong network with stakeholders in both the public and private sector. They could secure wide network of stakeholders and two collaboration projects.

Dr Sergio Occhipinti, CEO and co-founder of NIB biotec SRL, closed the experience-sharing session. NIB biotec successfully developed a rapid test for prostate cancer, for which it received funding from the European Commission. The formula has been patented first in Italy, then in Europe, the US, Canada, China and Japan. The current goal of NIB biotec is the industrialisation and commercialisation of the test. During the AU-EU Innovation Festival, many potential partners signalled their interest, mainly industries and universities in Africa.

3. Deep Tech Training Transformation Scheme"– IPR Strategies for Innovation

This session was planned to provide a capacity building activity during the Workshop to all participants. It started with an introduction to IPRs, followed by a discussion on their importance, their geographical particularities, providing examples from the health sector and best practices by SMEs and start-ups.

3.1. The importance of intellectual property in innovation ecosystems

Prof Alfred Radauer, Head of the Institute of Business Administration and Management at the IMC University of Applied Sciences in Krems, started with the basics of IPRs and explained their different types and uses, emphasising that IPRs are conceived to promote innovations, not to hurdle them. Given that procedures can sometimes be burdensome and costly, he emphasized that innovators do not need to apply for every possible right, as informal protection mechanisms are even more widely used than formal IPRs. These include secrecy, relying on the complexity of the design, and lead time advantages. Innovators must therefore carefully navigate and manage their IP needs, which requires a combination of legal, technical and business skills and takes into consideration their application in a business-industry context. Prof Radauer encouraged all innovators to get involved with IPRs since they are tools to be used contextually and represent an investment for profit in the business model.

The presentation was followed by a short Q&A session. Responding to a question on utility models, Prof Radauer explained that each country should develop their own IP strategies to protect the inventions that are truly valuable and internationally exploitable rather than creating a large number of patents, each of which is of little value in itself. Answering another question, he emphasised that companies should consider protecting their innovations early on in the procedure, for both IPRs and the business model, in order to know how to financially exploit the innovation from the outset.

3.2. IPRs from a regional perspective

Dr Byson C. Sabola from the African Regional Intellectual Property Organization (ARIPO) started with a brief overview of the organisation, explaining the IP registration rules and the advantages of a regional system. ARIPO is an intergovernmental organisation, established in 1976 and mandated by its member states (22) to register intellectual property. The purpose was to pull together the resources of its Member States on IP matters, thus avoiding duplication of financial and human resources. IPRs protect the investments made and ensure that, no matter the outset or the outcome, they can be valued through commerce. Hence, protecting innovations with IPRs is a precondition for successful technology transfer and commercialisation. The sole awareness on the importance of IPRs' value in innovation is insufficient, especially in developing countries where the IP management system is lacking. To promote effective IP management, ARIPO has been undertaking several capacity building activities. Among them, ARIPO developed a master's degree in IP offered in partnership with three universities in Africa.

Mr Carlos Lleo, deputy project lead, and **Ms Nancy Samuriwo,** IPR consultant for the AFRI-PI (Intellectual Property Rights and Innovation in Africa), presented the AFRI-PI initiative, funded and directed by the EU, co-funded and implemented by the EU's Intellectual Property Office (EUIPO). The overall objective of AFRI-PI is to facilitate intra-African trade and African and European investment, in particular to protect, employ, manage and enforce IPRs across Africa, in line with international and European best practices. Covering 54 AU states, AFRI-PI also supports the African Continental Free Trade Area (AfCFTA) and the AU's Agenda 2063. EUIPO, the EU responsible for managing EU trademarks (EUTMs) and registered designs (RCDs) at the EU level, is also the host of the European Observatory on Infringements of IPRs, a network of experts and specialist stakeholders with the aim to protect and promote IPRs and support their enforcement.

3.3. "IP and Deep Tech / Emerging Technologies – what is at stake" in health and other STI sectors in the AU-EU context

Prof Padmashree Gehl Sampath from the African Pharmaceutical Technology Foundation (APTF) talked about access to medication, especially vaccines. She emphasised that the Covid-19 pandemic highlighted that a competitive pharmaceutical sector needs to be built in Africa to move from a fill-and-finish approach to innovation and value added, with a focus on regional security and African epidemic profile. According to Prof Sampath, strategic support needs to be granted to innovation, licensing negotiation, knowledge transfer, financing scaling, and R&D ecosystems. APTF intervenes at the firm, sector and regional level as a facilitator (TA), as a broker (co-financing) and as an investor (in R&D infrastructure). Prof. Sampath concluded by inviting the audience to the upcoming events coordinated by APTF: the International Conference on Innovation, Intellectual Property and Technology Transfer on 25-26 March 2024; the APTF-AVMI Joint Private Sector Workshop on Market Creation for Africa's Vaccines on 27-28 March 2024, the APTF-UNDP Training Series for African Policy makers on Innovation Policy for Africa's Pharmaceutical Sector from February to June 2024; and the APTF Pharmaceutical Technology Marketplace in April 2024.

Prof Laura Magazzini presented a study[1] prepared by the Study Panel for the Future of Science and Technology (STOA) of the European Parliament. It aims at clarifying whether regulation has a positive impact of the inherent nature of innovation, which is mostly driven by market size, and the need for

[1] https://centrejeanmonnet.unimi.it/projects/study-for-panel-for-the-future-of-science-and-technology-stoa-european-parliament/

making new treatments and procedures accessible for all. It examined three different approaches: exclusivities (patents, SPC, market protection, etc.), delinkage models (Transferable Exclusivity Voucher, Subscription Model) and public oriented frameworks (open science, PPPs, public R&D). The study concludes that, despite the negative impact on accessibility, the current regulation is still mostly based on exclusivities. Public oriented frameworks would however encourage innovation without limiting access. Therefore, a comprehensive approach is needed which, in addition to strengthening EU coordination in IPRs and procurement, would also redesign incentives to (i) reduce exclusivities' lengths; (ii) introduce new incentives specific to unmet medical needs and delinked from market size, and (iii) reinforce public R&D infrastructure throughout the whole R&D process in specific areas.

Dr Kostas Glinos, an independent expert, elaborated on the notion of Open Science, characterised by an early on sharing knowledge, data and tools in the research process, in open collaboration with all relevant actors. Dr Glinos emphasised that Open Science is essential for science and innovation as it increases the quality and efficiency of R&I, eventually becoming reproducible. It also fosters creativity and innovation through collective intelligence, enabling risk-taking and cross-disciplinary research. Open Science and IPRs are compatible and synergetic, as the correct definition of the IP framework can be an essential tool for Open Science to stimulate collaboration. The legislative environment, instead of focusing on exclusivity, should strive for balance and enhance mutual reinforcement (data can be open but still protected at the same time). However, Open Science adoption requires reforming the research assessment, starting from the very definition of excellence to the measurement of societal impact, privileging teamwork.

Dr Tshiamo Motshegwa, director of the African Open Science Platform (AOSP) and **Dr Adrian Tiplady** started by stating that Open Science increases research efficiency, as it allows for more research activities with the same data; innovation allowing to reduce delays in re-use of research ensuring quality by greater evaluation and scrutiny; and promoting global collaborative efforts and public engagement. Currently, Africa lacks regulatory framework and infrastructure to benefit from Open Science, but should also increase awareness and historical culture. The AOSP strives to enhance and entrench dialogue on Open Science, skills development, infrastructure, sustainability and resourcing in Africa. It should promote development of interoperable and aligned open science policy frameworks, global standards and community of practice; showcase African Research addressing developmental agenda and societal impacts, and create linkages between open data and Open Science programmes. The two speakers presented a few ongoing initiatives, such as AI helping research in genomics or H3Africa.

Ms Nancy Ngum presented the African Medicines Agency (AMA), established in by a treaty signed in 2019. The Agency aims at building African pharmaceutical manufacturing capacity through regional harmonisation among the 55 countries of Africa. It brings national regulatory bodies together in order to create continental technical standards and procedures that are appropriate for the African market and to reduce trade barriers (AfCFTA). AMA also provides scientific advice and helps countries to access complex medical products. The AMA is governed by the Conference of State Parties (ministers having ratified the treaty), a Governing Board assisted by a Secretariat, and Technical Committees. The AMA is currently providing technical support to member countries via the African Medicine Regulatory Harmonisation initiative and has developed the Regional Centres of Regulatory Excellence (RCOREs).

3.4. IPRs for Private Sector: Startups, SMEs, business support organisations and Corporation

Ms Felista Aku, partnership manager at Afrilabs, started her presentation with a recap of IPRs and highlighted the importance of protecting intellectual property. Startups and SMEs need to have a clear and effective IP strategy to protect their valuable intangible assets and gain a competitive edge in the

market. Ms Aku underlined some tips and resources to help private sectors with their IP strategy and to negotiate IPRs agreements and partnerships. Startups and SMEs should identify their intellectual property clearly, secure their IPRs, monitor and enforce them, and leverage their IP assets. Also, in the negotiation process of IPRs agreements and partnerships, they should clearly define terms, ensuring that both parties benefit from it in the future.

Mr Dominic Muyldermans, from Bayer Crop Science, presented the different forms of IP specifically in in the field of agriculture, where different forms of IP operate jointly. On the one hand, there are patents (on technologies, inventions, etc.), on the other hand, the Plant Variety Protection (PVP) – also called "Plant Breeder's Rights" (PBR) employed to protect plants' variety, which is distinct, uniform and stable. Mr Muyldermans emphasised the importance of IP that leads to a high level of socio-economic benefits, and as such, deserves protection.

Mr José Ricardo Aguilar from Instituto Pedro Nunes, Coimbra, Portugal, was the last speaker. He gave some strategies and practical tips for start-ups and SMEs for the protection of their own IP: to secure information, to take care about your team, to monitor the business environment, and to nominate a Chief Intellectual Property Officer (CIPO). Mr Aguilar also shared short success stories of start-ups that leveraged IPRs to gain a competitive advantage.

4. Closing remarks and next steps

The closing remarks by **Prof Olalekan Akinbo** from AUDA-NEPAD and **Dr Laurent Bochereau** from the European Commission summarised the key findings and takeaways of the Workshop and acknowledged the contributions of the speakers, participants and organisers.

They highlighted that this first edition of the Workshop series on the implementation of the joint AU-EU Innovation Agenda was a positive starting point for the next efforts. Over the next three years, six Workshops will be organised to engage with stakeholders on the actions needed to successfully implement the short-term actions of the Innovation Agenda. The next concrete steps in this regard will be a survey (*password: AUEUInnovation*) that will be shared with all Workshop's participants. The questions are designed to get feedback on how to enhance the set-up for the next Workshop, which will take place in April 2024. In addition, an Innovation Agenda Dashboard of initiatives will be launched soon. Stakeholders are also invited to highlight their contributions to the Innovation Agenda. Regular updates on the next steps would be provided on the newly launched AU-EU Innovation Interface.

5. "Virtual Cocktail" – Matchmaking and Networking Session

5.1. IP Regulation

The discussion on IP regulation in the first break-out room evolved around two main subjects.

The first developed around the question: what should innovators consider when it comes to secure their IP? The participants advised to customise IPRs to suit territorial or regional nuances, considering interoperability of different IPRs to ensure maximum coverage. There are several mandatory regulatory processes at the beginning phase, before launch an IPR protection strategy, such as mandatory IPR recordation, ownership of IPRs, transfer of rights restrictions, regulatory requirements for royalty payments (in and out of a territory), tax requirements, use requirements among others. Participants also advised that investing in a reputable IP agent or attorney who has extensive experience on IP keeps abreast with regulatory evolutions through time.

The second topic centred around the challenges in regulatory processes in IPRs. Some mentioned the bureaucratic and inefficient processes which are ill-suited to new technologies and have a limited lifespan; others complained about the continuous changes in regulatory processes, corruption issues in some territories, weak and inconsistent implementation of regulatory requirements and processes by the judiciary.

5.2. Technology Transfer

With 14 participants, the second break-out room had an interesting discussion started by **Prof Alfred Radauer**'s introductory remarks on patent and licensing, highlighting how successes in this area are sparse, even from a worldwide perspective, and are usually directly related to most credited universities internationally. He noted that institutional discussions are needed regarding how patents can be enforced for technology transfer activities worldwide, for which **Prof Olalekan Akinbo** (Africa Union) agreed. **Mr Simone Ceramicola** (EC) shared the conclusions of a study titled "Knowledge Hub Digital Diagnostic study on the status and needs of technology transfer ecosystems in Africa" carried out in Ivory Coast, Kenya, Tanzania and Mozambique that identified a number of weaknesses with regards to Technology Transfer in Sub-Saharan Africa. **Ms Sara Medina** (Sociedade Portuguesa de Inovação) touched upon the ENRICH in Africa project and the annual congress that occurred in Brussels, Belgium on November 21st 2023 and the AfricArena Summit that will take place in Cape Town, South Africa in the first week of December 2024.

Mr Thomas Kaluvi (NCST Malawi) provided interesting insights on Malawi's situation regarding technology transfer. He mentioned that the country's main challenges are related to the existing gap between researchers, innovators and industry. **Prof Alfred Radauer** proposed that one way to address such issues could be the adaptation of technology developed at an academic level to the industry. He also discussed the importance of collaboration in research funding between organisations and academia, local aid helping in the set-up of collaborative grants, awareness-raising programs regarding IPRs, and the possibility for countries to have structural systems in place to implement IPR rights. **Mr Cherif Chibane** (AuresTech) gave insights from his experience in Nigeria and suggested that the AU should play a more active role in supporting local agendas.

Mr Lukovi Seke (AUDA-NEPAD) closed the session mentioning the existence of several instruments to implement STI projects at a continental level. He also added that, in average, 1% of GDP is used on such projects in Africa since 1980, but that this ratio should grow in the future to align to the vast majority of other countries in the world, which allocate up to 3% of GDP. He noted that a good example to follow in the continent is represented by South Africa, which has a national foundation managing the R&D budget for different ministries.

5.3. IP Commercialisation & Licensing

The discussion started with a leading question to **Mr Dominic Muyldermans**, who emphasised that setting up Technology Transfer Offices (TTO) in higher education institutions is not enough, but also trainings are needed so that the officers are able to implement strategies. **Dr Vincenzo Lorusso** (EU Commission) added that the presence of TTO in universities should not be taken for granted and should be composed by an interdisciplinary staff with background and expertise from other cross-sectoral fields. TTO need to be a separate entity but well integrated in the academic institutions.

Often, higher education institutions protect their knowledge but the added value coming from patents is licensing, despite the high costs of applying for a patent. Securing IP does not entail to create a monopoly but should be addressed as an investment in opportunities that could grow through a

business model. Nevertheless, the lack of common IP regulation makes the commercialisation more difficult. **Mr Muyldermans** explained that IP licensing has different forms, and R&D cooperation enables the developed technology to be applied in another sector, region, or field of expertise to further develop a product. Knowledge exchange, on the other hand is royalty fee. It is crucial to train students, integrate law and IPR in the curricula to complete scientific training from the beginning. **Dr Lorusso** mentioned that a dedicated training on IP use for leveraging traditional / indigenous knowledge and methods in Africa would be an important step to secure crucial know-hows across numerous fields and applications (e.g. health, agriculture, etc.). **Ms Inger Danilda** called to leverage on the joint EU-Africa mechanisms (e.g. Mediterranean Center for Environmental Studies in Spain), the existing platforms and contacts to create collaboration opportunities and foster knowledge exchange.