

# **ARIPO Director General's Keynote Speech at the Innovation Week of Makerere University Centennial**

November 17, 2022

10.00-10.40 AM

1. The Vice Chancellor of Makerere University Prof. Barnabas Nawangwe
2. Your Excellency the Ambassador of Sweden to the Republic of Uganda, Ms. Maria Hakansson
3. Esteemed Members of the Makerere University Senate here present
4. Members of Parliament Present
5. The Registrar General of the Uganda Registration Services Bureau, Ms. Mercy Kainobwisho
6. Distinguished ladies and gentlemen,

It is a great honor and privilege for me on behalf of the African Regional Intellectual Property Organization (ARIPO) and indeed on my own behalf to address this important gathering marking the official launch of the Sweden-Makerere Days of Excellence as part of Makerere 100 Years Celebration. We remain encouraged and inspired to join these celebrations and send greetings to our fellow alumni, friends, and benefactors joining us on this occasion. I am particularly honored to deliver these remarks, as I attribute my career path to the crucible of Makerere University. Every day, I appreciate my time at Makerere as a law student as having been a worthwhile experience, but it is times like this when we witness the extraordinary impact of Makerere University, that I am most proud to be an alumnus of this outstanding University.

Today, Makerere University's impact spans the whole continent, and beyond. As the students routinely become alumni, they validate the quality of Makerere University academe through the meaningful impact they continue to create; entrepreneurial spirit and professionalism, which have all come to define a Makerere University graduate. This University has indeed affirmed its historical commitment to academic erudition and freedom, as well as open inquiry and moral, ethical values, which have all redounded to it providing transformative and innovative learning and teaching to respond to the dynamic national and global needs.

And to the current leadership, we can only appreciate you and acknowledge your achievements and commitment to this noble enterprise, which is clearly evidenced by your tireless efforts to ensure that Makerere University continues to be the darling of Uganda and the world. It goes without saying that these gains do not happen in a vacuum – there is enabling political support in the backdrop to allow for a hand-in-glove interaction.

*Ladies and Gentlemen,*

The 100 years celebration is not only a positive introspection of the excellent achievements Makerere University has scored over time. It is a further clarion call to action and a commitment to be poised to deliver even better for posterity. From the vantage point of an International Intellectual Property organization that I am privileged to lead I could offer a few areas at which Makerere could train their sights on to remain relevant for another 100 years to come.

Before I do that, allow me to pay a special tribute to the Government of Sweden that has contributed to the success of this event. Sweden has collaborated with Uganda and Makerere University for the past 20 years, marking an era of developmental impact.

During this relationship, many accomplishments have been achieved, especially in the research space. On that note, it is befitting to recognize and celebrate the presence of the Ambassador of Sweden to Uganda. Your Excellency, allow me to thank you in a special way.

The theme of my address today is “Innovation as a Building Block for Inclusive Economic Growth.” Not only is this topic close to my heart, but it also rings relevant because of the inescapable realities coming our way in terms of a population boom and young people seeking employment, women under-representation, the dominance of agro-economies in Africa, and the digital divide as we enter the 4<sup>th</sup> industrial revolution. Underlying all this, and within the context of academia, trust me when I say solutions abound. All it takes is the imperative for a sense of urgency and the foresight to make the necessary choices for the change we need, now. The history of tomorrow will be made today.

I have the privilege of leading an intergovernmental organization called the African Regional Intellectual Property Organisation (ARIPO) which was founded in 1976. It is based in Harare, Zimbabwe, and comprises 22 countries in Africa including Uganda, Kenya, Tanzania, Rwanda, Malawi, Zambia, Zimbabwe, the Gambia, Ghana, Sierra Leone, Liberia, Mozambique, Mauritius, Lesotho, Kingdom of Eswatini, Namibia, Botswana, Cape Verde, Seychelles, Sudan, Somalia and Sao Tome and Principe. ARIPO was formed among others to establish such common services or organs as may be necessary or desirable for the coordination, harmonization and development of the intellectual property activities affecting its members. ARIPO provides intellectual property registration services covering patents, trademarks, industrial designs, traditional knowledge, plant varieties, and soon copyright.

ARIPO addresses one of the main infrastructure bottlenecks for the innovation ecosystem in Africa by facilitating IP rights protection in 22 African countries. Indeed, we cannot talk about innovation, research, and creativity on the continent without talking about intellectual property rights. The traditional factors of production particularly land upon which most of our people's fortunes are vested are finite. Land does not grow even when the number of people living on it is growing. This limits the development potential of a society that only relies on land. On the other hand, human ingenuity and creativity are limitless. Intellectual property refers to the creations of the mind; the application of our thinking faculties to solve problems or create new solutions.

We can all attest that there is no limit on the capacity of individuals to think and innovate. This is our greatest asset and opportunity as Africans since we have a growing young population. Young people are more imaginative and experimental - which traits lend themselves well to innovation and creativity. Yet as a continent we face monumental challenges including high unemployment, food insecurity, health epidemics, climate change, and general under-development in most facets of life. It is always said that the future of every nation is built on the dreams of its young people. In all these things, therefore, the future of our nation lies in harnessing the ingenuity and creativity of our people, and as such intellectual property will play a critical role in how we realize that future.

So, what does this mean for a University like Makerere. I am pleased to learn that you as a university are prioritizing research and innovation.

Firstly, let's consider investment in research. Invariably, institutions that put a premium on research spending have gone on to reap the benefits. To cite an example,

the share of gross expenditure on research and development (GERD) on basic research in some countries is as follows: China (5.5%), Japan (13%), USA (17%), Italy (22%), Switzerland (42%). A clear correlation has been established between Gross Expenditure on Research and Development with the Global Innovation Index. For most African countries, while the African Union as far back as 2006 has set the rate at 1%, we still struggle to reach even half of that, hovering around a median of 0.4%. This is way below the global average of 1.7%. The importance of research cannot be over-emphasized: research can help us find answers to things that are unknown and fill in knowledge gaps. It informs decision-making even in economic models. So it is high time we invested in research according to the set targets to ensure we benefit from its investment.

It is also pragmatic to appreciate some of the challenges of today. During the commodities boom, investment was channeled mainly towards economic expansion, rather than towards reinforcing existing infrastructure or supporting innovation. Since the end of the boom around 2014, stagnant economic growth, coupled with a drop in research spending ensued. Natural resources and industrial exports, which largely drove activity, proved not to be so effective in producing innovations. It is therefore critical that we devise intentional strategies to increase research spending as academic and research institutions in Africa.

The downstream benefits include strong growth in scientific publishing. This was somewhat experienced in the period 2015–2019, particularly in cross-cutting strategic science and technology areas driven by big data analytics vital to tech-based industries such as social media. The mantra of ‘publish or perish’ could be understood in a very meaningful way here. from the standpoint of intellectual property as we have observed that in the rush to publish and avoid perishing, lots of intellectual property is given

away for free. We are informed that low-income countries are publishing much more than the rest of the world, and partly because of the rush to publish, there is not much to show in terms of intellectual property filings. As such, let us work with the intellectual property offices to ensure that strong, yet informed international collaborations that shall enhance the impact factor of our publications are also properly protected domestically. Research leads to innovation, and both have a direct impact on inclusive economic growth if properly harnessed around the need at the grassroots.

*Ladies and gentlemen,*

As we seek to find the right balance on this matter, it is also pertinent to interrogate if, beyond government support, Industry is also financing a substantial share of research. Having traveled across Africa, I must confess that this is not the norm. It is critical to breaking away from relying on government subventions. The triple-helix model of supporting innovation delineates that government should basically create an enabling environment for industry to flourish. Once the industry grows, the same industry would naturally work with universities to provide research problems and finance them, for the universities to provide the solutions to the problems in our societies - and the problems facing our societies are many. Take for example the threat of climate change; it presents an opportunity for research in the area of green and sustainable or renewable energy technologies. Other areas of research include food security, transport, and infrastructure, technologies to bridge the digital divide to mention but a few.

Speaking of food security, this is an area that is hardly ever ordinarily linked to innovation. While agriculture deals with the basic life issues, it is an area that has been identified as an economic driver, and one that is powered by innovative solutions to farming. Little wonder that we have colleges that specifically deal with agriculture,

where there is a lot of research going on. Between the extremes of agricultural research and farmers lies the innovative solutions that improve productivity, increase yield, deal with problems of pests, mitigate the effects of climate change, and many more that ensure the enterprise remains viable.

Agriculture is the main driver of development in most of our countries, especially in the rural hinterland. In the past 30 to 40 years agriculture has been transformed leading to the doubling of agricultural output. Agriculture is a critical factor to jumpstart economic development as it deals in the areas of nutrition, food security, rural development as well as demand for industrial products that enhance farming productivity.

Given that the sub-Saharan African population is projected to double in the next generation, we should brace for pressure on arable land occasioned by human settlement. This is the land that produces food for the population. Despite the rich soils and the vast expanse of arable land, agriculture in Africa has always performed below par. I present this scenario not in a negative light but as an opportunity for growth and full of potential, meaning that it lies untapped and thus not fully harnessed towards inclusive economic development.

Of the 874 million hectares of arable land in Africa, only 43% is used, and largely unmechanized. According to Food and Agriculture Organization (FAO), Africa has immense potential in the sense that the continent operates at 66% below the global average of cereal production. At optimum, Africa does not have to be a net recipient of food aid that it currently is. Climate-ready crops are thus an innovative way to circumvent this impending disaster. The US has managed to increase its cereal output while its acreage shrank. These, distinguished colleagues, are the kind of innovative

solutions that we should promote and capitalize on. It all gets down to protecting the rights of plant breeders, who are leading research to ensure that our seeds are drought resistant, disease resistant, pest-resistant and yield high output.

I know you are well aware of these challenges although steps to innovate solutions have been hampered by a lack of appropriate infrastructure for research. I am aware that in 2020, Africa boasted 744 active technology hubs, 19 of which were then in Uganda. I do believe that if financed and supported appropriately, these might contribute to the global pool of technologies that could benefit humanity in the knowledge economy.

The missing link seems to me to be the commercialization of technologies currently being generated at universities and these innovation hubs. There is very little return on investment for those funding our research which in the long run may cause fatigue for those supporting the University. I know the issue of low return on investment to be a problem because at ARIPO we observe low levels of patent and other IPR protections from our research and development institutions in Africa. Since IP rights secure the value created by innovators by which they are able to take the technology from the lab to the market, the inability to protect IPRs exacerbates the problems facing research in Africa. As Universities, we should, therefore, move away from publish or perish mantra to a more progressive approach of ‘protect, publish and prosper’ by protecting our innovations.

To that end, partnerships will be critical. Partnerships with different stakeholders such as ARIPO and Uganda Registration Services Bureau (URSB) on intellectual property matters; partnerships with development organizations the Swedish International Development Agency; and partnerships with entities that share in Makerere



University's vision should be enhanced. Partners are change makers enabling the University to leverage the strength of these partners to meet the lofty goals of providing solutions to our societies. I am still a firm believer in the fact that the solutions for Africa lie with Africans but on this journey to the Africa we want, you have willing backers including ARIPO.

You have already registered success in pursuing African solutions for African problems by nurturing electric motor vehicle production that has grown into a growing start up now called Kiira Motors that will transform mobility in Africa and beyond.

*Ladies and Gentlemen,*

The overarching aim of the Sustainable Development Goals is to leave no one behind as we pursue our development agenda. Attention should therefore be paid to neglected but critical sectors of the population namely women and youth.

According to the UNESCO Institute of Statistics (2021), in academia, female researchers have shorter, less well-paid careers. Their work is underrepresented in high-profile journals, and they obtain less research funding than men. This translates to low levels of patents and trademarks registered in the names of women. This cannot stay unchecked as it robs our economies of productivity from 50% of the population namely women.

On the other hand, Africa is experiencing a youth dividend. According to the *Economist*, the youth in Sub-Saharan Africa, are not only experiencing population growth, but they are becoming better educated than ever before. However, when they leave the gates of our universities, the reality is that few can find employment and those that manage to get jobs find that the jobs neither correlate with their skills nor do

they fulfill their potential. There is a disconnect between the education experience and commensurate employment opportunities. The knowledge and skills needed for the knowledge economy, the capacity for student to find their standing and voice in a fast-changing environment and the structures and support needed for them to imagine and birth the future is woefully inadequate. Overall, education frequently fails to deliver skills important for employment.

We need youth who are creative, innovative, diligent, and engaged in taking charge of their own futures. We need to prepare our students for a future in which they must look for and chase after the opportunities which are abundant in a continent that faces a multitude of challenges if they have to make a difference. This starts with what they are learning at university and other institutions of higher learning. During my time at Makerere, intellectual property was only taught in the Law School yet engineers, agriculturalists, medical students, environmental scientists, chemists, biologists, and even literary and artistic disciplines such as visual arts, music, drama, writers, etcetera are creating intellectual property. The education experience, is, however, not preparing them on managing their creativity and innovativeness leave alone being aware of it. Intellectual property must therefore be taught in all faculties and disciplines at the University.

Swedish statistician Hans Rosling has mapped Africa's youth population growth and found that it will experience a wave that follows what Europe, the Americas, and then Asia went through. The future is therefore in Africa and the future of every country is built on the dreams of its young people. The youth are dreaming, let Universities let cooperating partners ensure that their dreams become a reality. Intellectual property rights registration offers a good gauge of the innovative potential of the youth and women. Let us protect their IP rights.

In the same vein, I want to connect the contribution of the youth to the Start-up Economy. A start-up refers to a company in the first stages of operations. Startups are founded by one or more entrepreneurs who want to develop a product or service for which they believe there is demand. In the information age, start-ups have become a catalyst for economic growth. They create jobs, which means more economic activity. They solve problems no other sector is addressing with innovative thinking while pushing society forward, stimulating the economy, and attracting foreign direct investment. They also develop solutions in the areas relevant to the prioritized sectors of the economy such as agriculture, manufacturing, health, energy, and finance. The bulk of these start-ups are owned by the youth and within this demographic, there is still male domination. That is not the only challenge to be addressed with start-ups: their innovations are not protected, and they lack funding to scale up to foreign markets. With their potential, it is critical that start-ups owned by the youth are identified, assisted, and given the platform to contribute to the national and global economy.

Ladies and Gentleman,

As I conclude, the 4<sup>th</sup> industrial revolution is here with us. You have heard before, that data is the new oil. This is true; data drives the knowledge economy in which we now live. Suffice it to say that whereas information flow is globalized, data generation and consumption are localized. Africa, therefore, has an opportunity to find its place in the 4<sup>th</sup> industrial revolution by leveraging on the knowledge, information, and other data that are unique to the continent. Universities and other institutions of higher learning present a perfect place in which to incubate and nurture technologies for the knowledge economy such as artificial intelligence, blockchain, the internet of things, autonomous vehicles, robotics, genetic engineering, and cloud computing among

others. We need technologies made by Africans, in Africa, and for Africa to stake our claim in the age of the knowledge economy. After all, the problems we find in agriculture such as low productivity; the issues with rapid urbanization in most of our cities; the unpredictable weather wrought on by climate change; the deficiencies in amenities such as electricity, clean water, medical treatment, good roads, among others affect us as Africans first. It is, therefore, not just a duty but also a responsibility that we who have access to knowledge and information in this knowledge economy must find the solutions to the challenges of our times. Finding solutions includes supporting others to find the solutions, in this case, youth, women, those living with disabilities, and others.

Intellectual property rights will continue to act as a catalyst for innovation and creativity in the 4<sup>th</sup> industrial revolution by rewarding those who create new solutions and those who solve the problems of the day. Intellectual property is a powerful incentive upon which most modern economies have been built.

At ARIPO we are committed to supporting our African people to leverage this tool to meet their development goals. We have together with our partners at the World Intellectual Property Organisation (WIPO) established a Masters in IP program at various Universities across the continent. I hope that in time we will consider establishing the same at Makerere with its storied history. Further through this partnership with WIPO, we promote the establishment of Technology and Innovation Support Centers (TISCs) for which the Registrar General URSB as the national coordinator will be able to elaborate more on. But briefly, TISCs provide access to high-quality scientific publications and patent databases. Intriguingly unbelievable but true, patent databases contain more than 80% of all technical information worldwide.

This information is never published in any other form. I am aware that a TISC was established here at Makerere.

In the area of technology transfer, we have set up various programs to build the capacity of our people to use the patent system from training interventions on patent drafting, all the way to designing and implementing effective institutional intellectual property policies. These mechanisms are a critical ingredient in the ability of an institution like Makerere to move ideas from the lab to products in the market.

ARIPO also provides a gateway for protecting your research outputs in most markets around the world through the various patent and trademark treaties that we are party to. We are proud to be a member of the global IP system that enables us to provide our clients such as yourselves a reliable pathway to produce locally and market globally.

I look forward to a day when Makerere University can finance its activities from the financial endowments of its inventors and creators who have successfully licensed their IP in the global market.

*Distinguished participants,*

Allow me to conclude my remarks with a word of encouragement. As we go along this journey to create value for our economies, there will be failures, there will be setbacks and there will be obstacles. When ARIPO started, coincidentally led by a Ugandan - the late Justice Herbert Ntabgoba, he was one man against insurmountable odds but like any good innovator, he understood that failure only shows a way in which your invention does not work. He in a manner, experimented with where to be hosted starting in Nairobi, Kenya and later settling in Harare, Zimbabwe. He like this University had partners like United Nations Economic Commission for Africa

(UNECA) as well as the World Intellectual Property Organization to support him along the journey but most importantly, he had the mandate of Africans when they signed the Lusaka Agreement that established ARIPO to establish the aforesaid common services or organs as may be necessary or desirable for the coordination, harmonization, and development of the intellectual property activities affecting ARIPO members.

Ladies and Gentlemen,

We have a mandate as Africans to build the Africa we want as set out in Agenda 2063 of the African Union and at our national level, we have vision 2040 and National Development Plans geared towards transforming our country into a middle-income economy. Let us today, sow the seeds for the harvest we want to reap in the future. I say this with conviction because I know that through the integration of Intellectual Property in all facets of the Universities work as well as fields of study, a new dawn will shine upon our countries and we will be able to harness the power of human ingenuity and creativity that today lies in waiting to be unleashed in our ivory tower.

Finally, I wish to reiterate my sincere gratitude to the Swedish Embassy, the Vice Chancellor; University Council members; institutions and organizations; alumni and current students and their leadership; the committed rank and file that continue to make this University an incredibly successful institution. We cannot thank them enough.

With these few remarks Vice Chancellor, allow me to underscore that in this relay race, it is now our challenge, our opportunity, and our blessing to lead this grand university into its 22<sup>nd</sup> century, whereupon the bicentennial in the Year 2122 our great grandchildren shall be able to say whether or not we acquitted ourselves well with

discernible impact. I say this fondly recalling that all what we think as modern today will surely be primitive in the next celebration of another 100.

**I THANK YOU ALL FOR YOUR KIND ATTENTION**