

## Recommendations for Strengthening African Research Universities



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# Recommendations for Strengthening African Research Universities

## Introduction

The African Research Universities Alliance (ARUA) and The Guild of European Research-Intensive Universities (The Guild) jointly request investing €1bn per annum in African research universities by the African Union (AU) and the European Union (EU) as part of the renewed Africa-EU partnership. This is necessary to address the profound demographic, social and environmental changes facing both continents. Investing in research and innovation would have a significant impact in addressing these challenges in both continents.

The Political Guidelines 2019-2024 of the new European Commission and the AU's Agenda 2063 have both identified science as a key means of delivering inclusive and sustainable economic growth to address climate change and other challenges identified by the UN's Sustainable Development Goals (SDGs). The

renewed Africa-EU strategic partnership should be distinguished by the creation of new knowledge and innovation for the benefit of society.

Recent years have seen the emergence of new initiatives in research and innovation and greater investment in education and skills development, through the Abidjan Declaration on Investing in Youth<sup>1</sup> and the Africa-Europe Alliance for Sustainable Investment and Jobs<sup>2</sup>. Important steps in improving the quality of African higher education system have also been implemented through initiatives such as Tuning Africa and Harmonisation of African Higher Education Quality Assurance and Accreditation (HAQAA). However, the scale of the common challenges we face, and the opportunities opened up through scientific and educational collaboration require a new level of investment

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<sup>1</sup> African Union – European Union Summit 2017, Abidjan Declaration on Investing in Youth, November 2017, <https://www.consilium.europa.eu/media/31991/33454-pr-final-declaration-au-eu-summit.pdf>.

<sup>2</sup> European Commission, Strengthening the EU's partnership with Africa: A new Africa-Europe Alliance for Sustainable Investment and Jobs, 12 September 2018, [https://ec.europa.eu/commission/sites/beta-political/files/soteu2018-fact-sheet-africa-europe\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/soteu2018-fact-sheet-africa-europe_en.pdf).

which goes well beyond existing collaboration in Horizon 2020 and Erasmus+ programmes.

## Towards a new ambition for African universities

As demonstrated in the The Guild Insight paper 'Developing equal, mutually beneficial partnerships with African universities. Recommendations for a new European collaboration strategy'<sup>3</sup>, fully endorsed by ARUA, African universities have a central role in national research output, accounting for up to 95% of research output in Sub-Saharan Africa<sup>4</sup>. A new, ambitious initiative for African universities is needed that focuses on long-term capacity building to enable them to address dramatic demographic, social and environmental changes. This requires a step-change, a scaling up of political ambition to ensure that universities in Africa will meet the fast-changing needs of African societies. Due to the interlinked nature of the continents and the global challenges affecting them, this is in the interest of Africa and Europe.

Most of the least developed countries of the Global South are in Africa, whilst it is here that the demand for education at all levels – including in higher education – will increase the most owing to a doubling of the population to 2.4bn in 2050, and to 4.1bn by 2100. The European Union is connected to Africa through the Mediterranean Sea, which has been not only a geographical border, but also a space of common cultural, economic, and environmental interests. When it comes to the research capacity of Africa, there is a growing share of African research publications in the total number of publications over the past 10 years (it has increased from around 1.5% to 3%), but the total number

of research publications remains low. The need to increase dramatically the numbers of people in higher education, and for Africa to expand its role in global knowledge production, requires a transformative increase in the continent's research, teaching, and knowledge transfer capacities. The AU and the EU must spearhead this change by making research and innovation a core feature of the special AU-EU partnership they seek to establish.

Investment needs to help strengthen the core research capacity of African universities. This is key to extending access to higher education, creating the conditions for long-term knowledge-creation, and establishing sustainable and mutual research partnerships. It is crucial to acknowledge that strong African research universities are essential not just for Africa's future, but for global science.

## Core conditions for strengthening African research and innovation, in partnership with Europe

The higher education landscape in Africa is changing, but not fast enough to turn around the development fortunes of the region in the short to medium term. There is evidence of increased vibrancy in the higher education sector as institutions respond to changing global trends by seeking to make themselves more relevant to their environment. Growth in demand for university places has forced universities to consider expansion in infrastructure, for both academic and residential use. African universities are under pressure to consider new ways of financing higher education to meet the growing demand from low-income households. The search for policy solutions to the development challenges by African governments

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<sup>3</sup> Maassen, P. (2020). Developing equal, mutually beneficial partnerships with African universities. Recommendations for a new European collaboration strategy (The Guild Insight Paper No. 1). Retrieved from The Guild of European Research-Intensive

Universities' website: <https://www.the-guild.eu/publications/insight-paper-one>.

<sup>4</sup> Please refer to page 24 of the above-mentioned document.

puts leading African universities under pressure to undertake the essential research that will provide solutions. As new universities emerge on the horizon in response to the growing demand, the added pressure on research-intensive universities to produce highly qualified researchers who can also teach in these universities is growing daily. In effect, the leading institutions in the region are being called upon to lead a transformation for which they will need to be equipped properly.

The two networks make the following recommendations for a new, ambitious EU-AU agenda for research and innovation:

- Funding should be allocated to challenge-based collaborative research. These challenges must be identified in collaboration between the AU and the EU, in response to clear societal needs.
- Ambitious EU investment must trigger substantially enhanced, and aligned, national investment amongst European member states: scaling up European investment is as important as ensuring that national priorities do not conflict with one another, or with those of the EU.
- The EU and national research funders must be open to new ideas generated 'bottom-up' to meet challenges specific to Africa, identified by relevant African stakeholders, providing maximum flexibility in the funding instruments provided.
- Investment in universities must be strategic and long term. It must also ensure that universities are able to manage investment effectively. For this reason, it is essential that funds spent on the AU-EU partnership in research and innovation carry an

overhead of 25%, whose use must be justified by the receiving university.

- Funds dedicated to research and innovation must be allocated on the basis of scientific excellence, through international peer-review, to maximise the effectiveness and long-term sustainability of spending.

In order to build a partnership based on mutual commitment, it is critical that African governments prioritise investment in research and innovation, whilst respecting the following principles:

- Demonstrate their commitment to investing in research, education and innovation through long-term, ambitious co-funding.
- Involve universities in regional development to ensure that investment in research, innovation and education are aligned with development funding and other policies.
- Ensure that the economy is based on a demand for university graduates, and that universities can provide the salaries necessary to keep young aspiring scholars in the sector, to ensure enhanced capacities in research and innovation, and to prevent brain drain.

**Whilst continuing the successful collaborations through the Horizon Europe and Erasmus+ programmes, an ambitious new initiative for Africa's universities should encompass the following actions:**

1. **The creation of a substantial fund for research collaboration between African and European universities, to tackle urgent challenges faced by both continents**

Collaboration in research is needed to address areas of mutual interest, as articulated by the political leaders of the AU and the EU. These could include areas such as climate change, renewable energy, inequality and migration, public health, and digitalisation. In addition, we advocate a strand for bottom-up calls on fundamental collaborative research bringing together scientists from both continents, to enable us to address the critical challenges of tomorrow. To ensure that these common challenges are addressed in an equitable way, research consortia should be composed through a system that ensures geographical balance between participants from different parts of Africa.

2. **The creation of accessible world-class infrastructure in Africa**

African researchers need access to state-of-the-art equipment in their continent, which can also be shared with collaborating research teams from Europe and elsewhere. This infrastructure must be integrated in research universities, strengthening existing centres of research excellence.

3. **The establishment of an African Research Council, to help African universities attract and retain world-class researchers**

An African Research Council, modelled on the European Research Council, may be distinctive in a number of respects (for instance in relation to the greater heterogeneity of research systems across Africa). However, its independence must be guaranteed by the primacy of science, guaranteed by a Scientific Council composed of internationally renowned scientists.

4. **The creation of doctoral schools, to help significantly increase the number of top-quality scientists that will enable the strengthening of African universities in a sustainable way**

We propose the creation of 20 doctoral schools, for up to 100 doctoral candidates per year, to be established through the AU-EU partnership. African universities would apply for one doctoral school each, outlining an effective strategy for how the doctoral school would be embedded and sustained within the university, and how world-class training would be assured. It is important that the enhanced PhD training programmes provide adequately to support the proper engagement of post-doctoral fellows in African university environments through mentorship and other related arrangements. The doctoral schools could also be shared between two or more institutions in Africa. To ensure doctoral students are part of international networks, they would be given the opportunity to partner with one or more European institutions, enabling each doctoral candidate to spend up to 12 months at the European partner university in the second year of their degree.

5. **The provision of co-funding to ensure early-career researchers can develop world-leading research agendas in the first years of their appointment**

At present, many researchers are hired with teaching commitments that make the development of a strong, internationally competitive research record impossible. We propose the creation of 5-year postdoctorate 'top-ups' for early-career faculty positions. This would mean up to 50% of the post is supported by the EU-AU fund, and this budget would guarantee research time, including time spent in a European university. A model for this type of support could be the Canada Research Chairs (Tier 2), where institutions are supported to

strengthen the research record of promising postdoctoral faculty members.

#### 6. Strengthening the capacities of African Universities through bespoke training and investment in systems appropriate to their needs

To ensure that African universities can embrace the demographic, educational and scientific challenges ahead, it is important that they receive appropriate, context-specific support. We advocate the provision of leadership and administrative training, at all levels of university governance – not by exporting existing models developed in different contexts, but by providing bespoke training

opportunities appropriate for the particular context of African universities. For example, research offices could be supported to assist researchers with activities such as sourcing and publicising research funding opportunities, negotiating contracts with sponsors, raising awareness among researchers, management and reporting on grants, knowledge transfer and commercialisation, etc. Another aspect of capacity building should involve participation in short courses in appropriate institutions. Finally, it is important to improve knowledge in how to extend the dissemination activities for research projects to cover regular dialogue with national governments on what new research implies for national development.

### About The African Research Universities Alliance (ARUA):

Composed of 16 leading universities in Africa, ARUA aims to enhance research and graduate training in member universities through a number of channels, including the setting up of Centres of Excellence (CoEs) at its member universities. Addressing key challenges of Africa's sustainable development, ARUA CoEs are intended to be focal points for aggregating world-class researchers from member universities and elsewhere to undertake collaborative research in priority thematic areas while providing opportunities for graduate students from the region and elsewhere to work with the researchers.

### About The Guild of European Research-Intensive Universities:

Founded in 2016, the Guild comprises 19 of Europe's most distinguished research-intensive universities in 14 countries and is dedicated to enhancing the voice of academic institutions, their researchers and their students. The Guild is committed to the pursuit of excellence, the importance of truth-seeking and trust-building as the foundation of public life, and the creation of new knowledge for the benefit of society, culture, and economic growth.



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