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Developing a Triple-Helix of University-Industry-Government Partnership and Linkages in Africa: A Necessary Tool for Translational Research in the 21st Century

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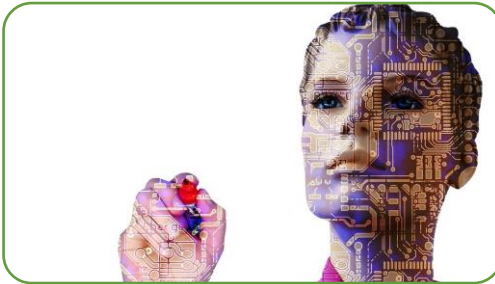


The views in this presentation are **personal** (except otherwise referenced) and not necessarily representative of my institution's views on **the Triple Helix of University-Industry-Government Partnerships and Linkages.**

Triple Helix of University-Industry-Government Partnerships



Triple Helix is a model which has as its basis the potential for innovation and economic development in a knowledge society (Gachie, 2020)

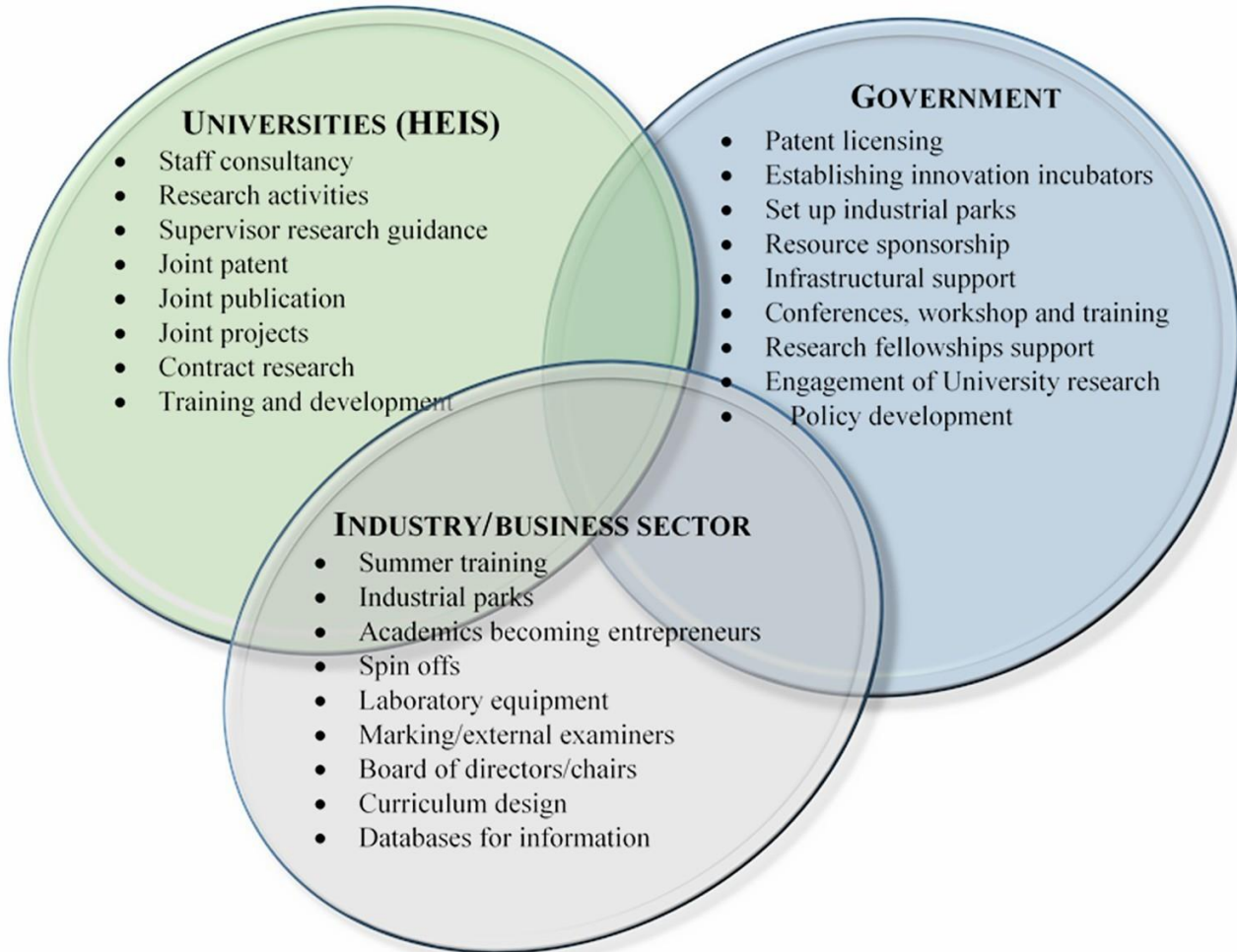


The **4th industrial revolution** championed by digital innovations underpins a knowledge-based economy/ society of the 21st century.



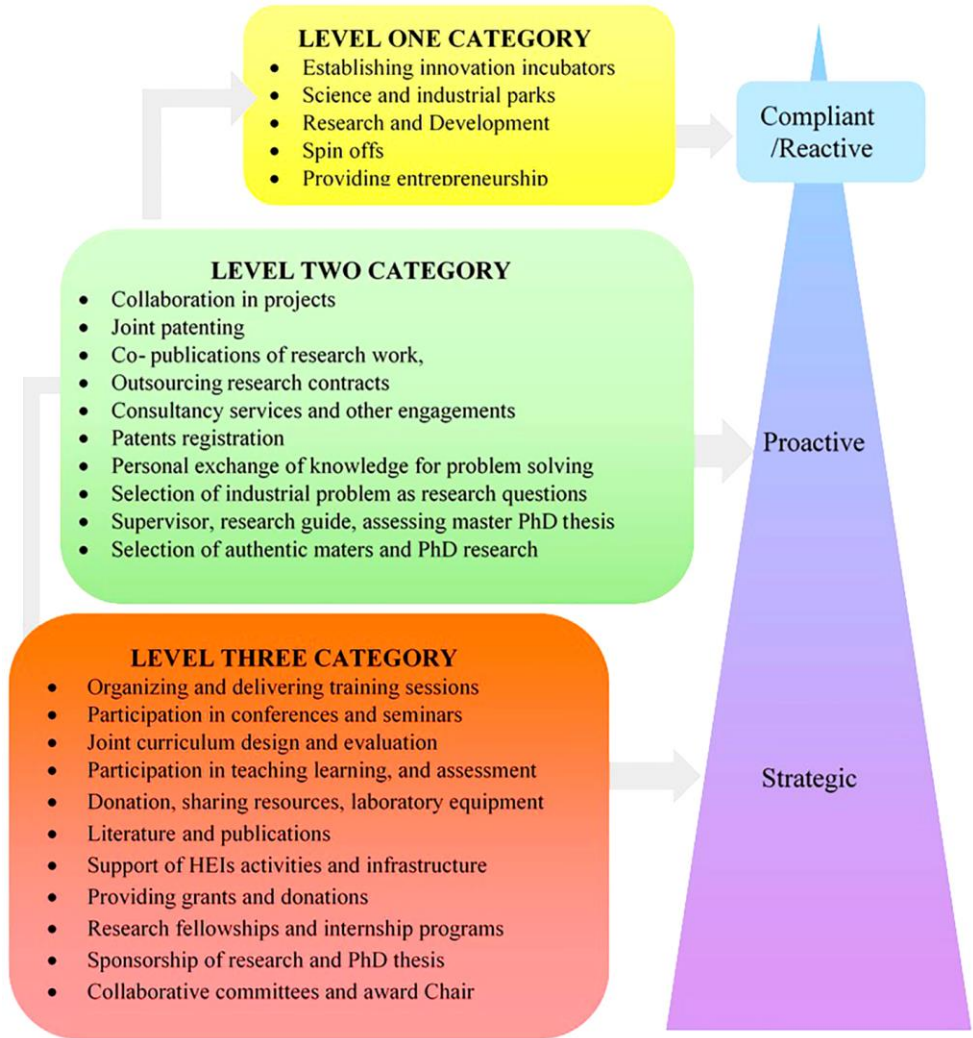
Universities' missions has grown from preservation and **dissemination of knowledge** to production of **new knowledge** to putting the **knowledge to use** (Etzkowitz and Zhou, 2007)

Triple Helix of University-Industry-Government Partnerships, Cont'd



Framework for University-Industry-Government Linkages

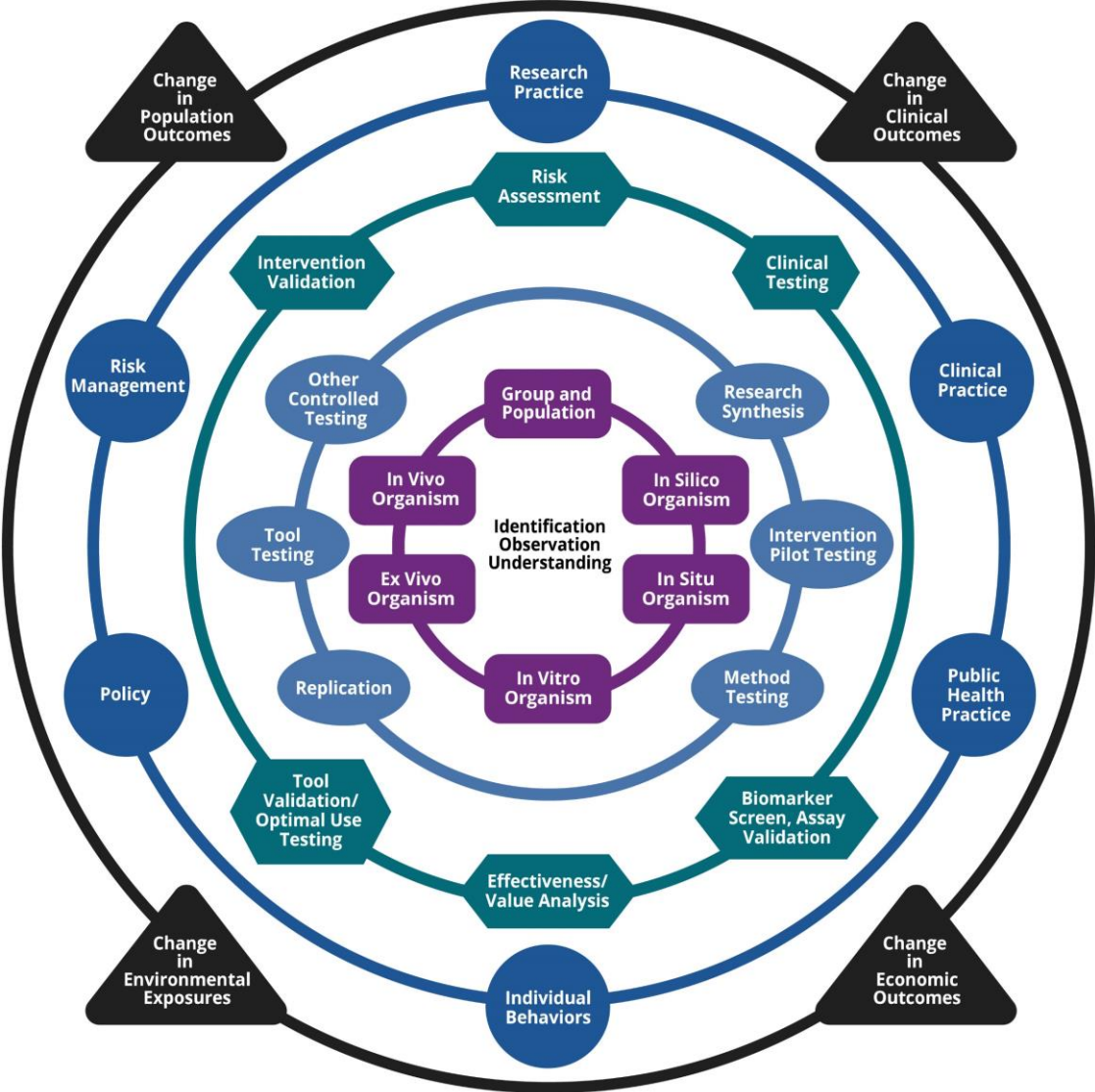
Source: Gachie et al. 2020



Categories of University-Industry-Government Linkages



Translational Research – Focus of University Pedagogy & Outreach



- 1 Fundamental Questions
- 2 Application & Synthesis
- 3 Implementation & Adjustment
- 4 Practice
- 5 Impact

Translational Research as applied to Environmental Health/Clinical Research

source: <https://www.niehs.nih.gov/research/programs/translational/framework-details/index.cfm>



Case Studies of University-Industry-Government Partnership

The Energy Biosciences Institute: A University-Industry-Government Triple Helix November 2007 – 2017 (unless renewed)

The Energy Biosciences Institute (EBI) at the University of California, Berkeley (UC Berkeley) was established with a \$500M funding commitment from BP Technology Ventures, Inc. (BP) to support **alternative energy research** over 10 years.


Berkeley's research partners in this **multi-disciplinary industry/university/government initiative** are the Lawrence Berkeley National Laboratory (LBNL) and the University of Illinois at Urbana-Champaign (UIUC).

The funding has enabled **>350 researchers** across several departments to produce scores of **research publications**, is **training talent for high-tech sector jobs**, enhances **university research facilities**, has produced **dozens of patents and IP agreements**, is **accelerating innovation and catalyzing commercial investment**, and has **engendered additional funding and collaborations**.

<https://energybiosciencesinstitute.org/>




Case Studies of University-Industry-Government Partnership, Cont'd

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University's Waste Pet bottles:

The committee processes the waste pet bottles of the University via collection, sorting and bailing the materials for pickup by Alkem Nigeria Limited and afterward the company will process the payment into the University's waste to wealth account. The account is being managed by the Directorate of Financial Services of the University. This process is in collaboration with the signed MoU between Covenant University and Alkem Limited. The bailing machine was donated to the University in line with the signed MoU and always maintains the equipment whenever there are issues. All the details of payment can be ascertained from DFS office. The bailed materials are moved out via an exeat memo by the company (see attached a copy).



Wastepaper Recycling


In like manner, the wastepaper processing is driven in line with **MoU collaboration with Belpapyrus Limited** that recycled them to tissue papers for usage in the University. The wastepaper is collected and sorted by W2W workers and the company usually comes into the University to pick them up and these are recycled by the company to tissue paper for usage in the University. Since this operation six years (6) years ago, the University has not been spending money on tissue paper purchase; rather has been using the recycled tissue paper. Once the wastepaper is processed to tissues, the company supplies the product, which after auditing, are stored with the storekeeper that disburses the usage to the




Univ.-Ind. Partnership: Covenant University Waste-Wealth Initiative

Source: <https://covenantuniversity.edu.ng/information/more/cu-waste-to-wealth-initiative#details-of-activities>

Transportation of recyclables

 **University Of Lagos**



Source: <https://www.slideshare.net/okabola/mediacenter/turning-waste-to-wealth-waste-to-wealth-path-to-sustainable-secured-future>

Univ.-Ind. Partnership: University of Lagos Waste-Wealth Initiative

Case Studies of University-Industry-Government Partnership, Cont'd



<https://eepon.unilag.edu.ng/>

Who is behind EEPoN?

EEPoN is an innovative project championed by the Evidence Use in Environmental Policymaking in Nigeria (EUEPIN) Project and the Environmental Evidence Synthesis and Knowledge Translation Research Group, TETFUND Centre of Excellence in Biodiversity Conservation and Ecosystem Management (EESKT-TCEBCEM), University of Lagos in partnership with Knowledge Translation Units at Lagos State Ministry of Environment and Water Resources, Federal Ministry of Environment (Lagos Zonal Office), and the Federal Ministry of Science and Technology.

Case Studies of University-Industry-Government Partnership, Cont'd



EUEPIN   

You are cordially invited to a seminar to mark the end of the Evidence Use in Environmental Policy making in Nigeria (EUEPIN) Secondment. Hosted by the Federal Ministry of Science, Technology and Innovation, Abuja, Nigeria.

DR DEO OKUBE
AIR QUALITY SCIENTIST & PROGRAMME MANAGER, SOFTWARE CENTRE, MAKERERE UNIVERSITY, KAMPALA, UGANDA

MR. JOE HOUGHES, CEO OF MANX TECHNOLOGY GROUP, ISLE OF MAN AND SCOTLAND.

DR. ROSE ALANI
SENIOR LECTURER, DEPARTMENT OF CHEMISTRY, UNIVERSITY OF LAGOS, GROUP LEAD, AIR QUALITY MONITORING RESEARCH GROUP, UNILAG

DR. POPOOLA OLALEKAN
CENTRE FOR ATMOSPHERIC SCIENCE, UNIVERSITY OF CAMBRIDGE, UK.

PROMOTION OF IOT USE IN AIR QUALITY MONITORING AND TECHNOLOGY TRANSFER IN DIVERSE AREAS TOWARDS SMART CITY REALIZATION IN NIGERIA.

Date
Thursday, June 16, 2022

Time:
10am prompt

Venue:
Auditorium, Raw Materials Research and Development Council (RMRDC), 17 Aguiyi Ironsi Street, Maitama, Abuja

Presenter:
Dr. Rose Alani
Senior Lecturer, Department of Chemistry, University of Lagos, Group Lead, Air Quality Monitoring Research group, Unilag



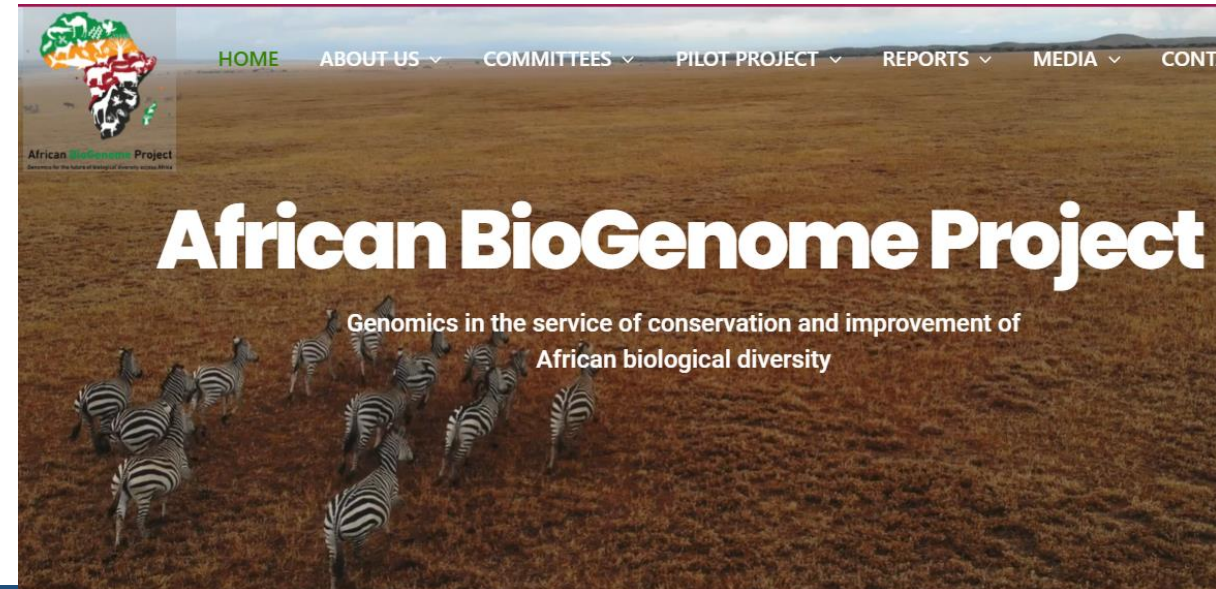
Metrics Task Force: Terms of Reference

Introduction:

In January 2021, The Federal Government of Nigeria joined the World Economic Forum, Global Plastic Action Partnership (GPAP) to advance national efforts to fight plastic pollution.

Co-founded by partners across the public and private sectors, the Global Plastic Action Partnership (GPAP) harnesses the convening power of the World Economic Forum to bring together governments, businesses, and civil society to translate commitments into meaningful action at both the global and national levels.

GPAP has created National Plastic Action Partnerships (NPAPs) with five countries (Indonesia, Ghana, Nigeria, Pakistan, and Viet Nam), bringing together top leaders and decision-makers from government, business, and civil society in a united effort to accelerate the transition to a circular plastics economy in each country.



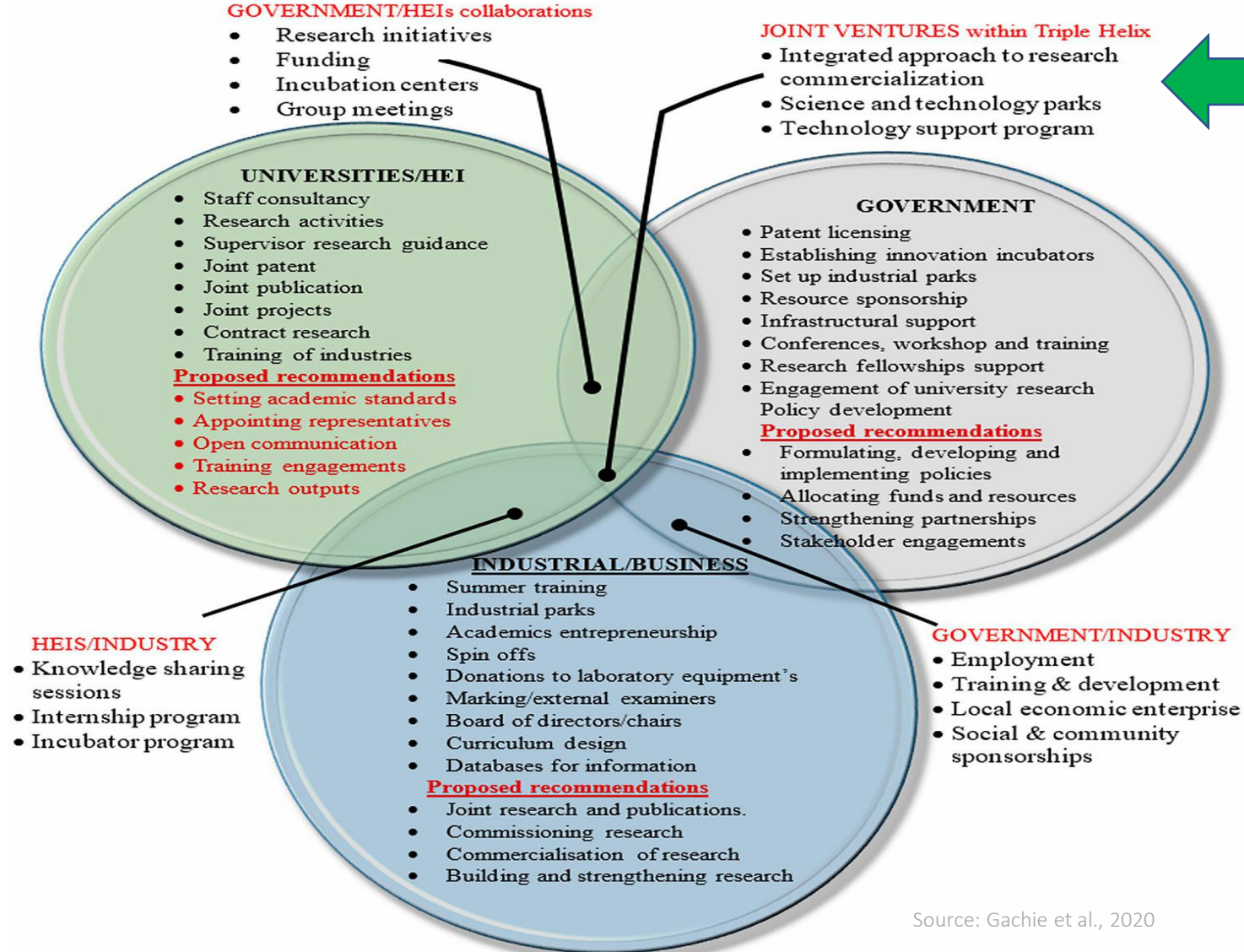
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African BioGenome Project
Genomics in the service of conservation and improvement of African biological diversity

African BioGenome Project



Future Considerations for University-Industry-Government Linkages



References

Etzkowitz, H. and Zhou, C. (2007). Regional innovation initiator: the entrepreneurial university in various triple helix models. *In: Singapore Triple Helix VI conference theme paper* (pp. 1-25).

Gachie, W. (2020). Higher education institutions, private sector and government collaboration for innovation within the framework of the Triple Helix Model. *African journal of science, technology, innovation and development*, **12**(2): 203-215.



Acknowledgements



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