



From Learning to Launching

IAU Enterprise and Innovation Challenge

Foreword

Bringing Young Africans Closer to Their Dreams

The British Council has long supported individuals and communities across Sub-Saharan Africa to expand their horizons and unlock new opportunities. This book shines a light on a new generation of African innovators - students, graduates, and entrepreneurs who are not only imagining the future, but actively building it.

Their journeys reflect the growing importance of enterprise, creativity, and problem-solving in shaping the continent's future.

From developing technology-driven solutions to addressing environmental and social challenges, to creating ventures that generate livelihoods and strengthen communities, the stories within these pages demonstrate the power of innovation when talent is nurtured and connected across borders. They are a testament to what is possible when higher education,

industry, and international partnerships come together to equip young people with the skills, confidence, and networks to thrive.

The British Council's work in Sub-Saharan Africa continues to build bridges, foster collaboration, and create pathways for young people to turn ideas into impact.

Through initiatives such as these, we are helping to shape a more innovative, inclusive, and entrepreneurial future for the continent. This book captures just a part of that journey, and the promise it holds.



Lucy Pearson
Director,
Americas and Sub-Saharan Africa

‘We’ve started a fire...’

Introducing the IAU Enterprise and Innovation Challenge

Accelerating student-led innovations and enterprises

In Sub-Saharan Africa, there is an urgent need for Higher Education Institutions to enable youth employability and become catalysts for entrepreneurship and innovation.

The Innovation for African Universities (IAU) programme is part of the British Council’s Going Global Partnerships initiative and a response to an increasing population of youth across the continent, most of whom are either unemployed or underemployed.

The IAU programme began in 2021 with a focus on collaboration. Sub-Saharan African universities partnered with UK universities, and through these relationships, African academics gained skills and knowledge about entrepreneurship and innovation. Following this capacity-strengthening, institutions were awarded grants to identify real problems within their universities and communities. Working with their UK partners, they

developed joint initiatives to address the gaps in their entrepreneurship ecosystems.

In 2023, the IAU programme deepened and consolidated its work. The regional community of practice was launched in 2024 across Ghana, Kenya, Nigeria and South Africa to sustain community engagement and support the integration of enterprise and innovation in higher education.

Starting in 2026, IAU has shifted focus from institutions to students and introduced the Innovation and Enterprise Challenge. Building on the foundation laid, student teams in Ghana, Kenya, Nigeria, and South Africa have been invited to advance solutions to priority issues within their communities.



This new phase brings together two ecosystem consortia in the UK and Sub-Saharan Africa to support the participating students. Kenya and South Africa have formed a consortium with the Imperial College London, Strathmore University, and Circle Innovation. Nigeria and Ghana are working with the University of Lincoln, Kumasi Technical University, and hapaSpace. The industry or ecosystem partner within each enterprise consortium plays a vital role, strengthening the connection between academia and industry.

The consortia are delivering tailored mentorship and capacity-building programmes to 37 grantees with a focus on digital, green, and/or social innovation. This book showcases these student teams, their diverse projects, and their efforts to address the UN Sustainable Development Goals.

Through the ecosystem support and the mentorship platform provided by the ecosystem partners, the youth-led initiatives aim to develop commercially sustainable enterprises. The consortia interventions are enhancing the student teams' ability to structure their ventures, validate their ideas, and initiate market entry.

Since its inception, the IAU programme has had 15,000 direct participants, and over 130 student-led ventures and innovations have been created or supported. There have also been 33 curricular and industry-academia partnerships, and 24 incubation or innovation hubs have been established. The demand to deepen and scale the IAU programme is, however, great.

We are seeking like-minded partners to join us as this journey continues. As Meekness Lunga, Regional Director for Higher Education in Sub-Saharan Africa at the British Council, says:

'We've started a fire here, but we need to sustain it and keep the flame burning. We are actively seeking new partnerships to scale this and replicate our model in other countries.'



The IAU Enterprise and Innovation Challenge and the United Nations Sustainable Development Goals

The Innovation for African Universities (IAU) initiative is delivered through the British Council's Going Global Partnerships programme. IAU supports higher education institutions and students by strengthening entrepreneurial ecosystems across Sub-Saharan Africa and the UK. The initiative supports curricula reforms, industry partnerships, innovation and incubation hubs, and student enterprise development. The current phase of the programme focuses on supporting 37 university student-led enterprises and innovations across Ghana, Kenya, Nigeria, and South Africa through an Enterprise and Innovation Challenge.

Some of the enterprises profiled in this book focus on green, digital, and social innovation and are strongly aligned with the UN Sustainable Development Goals.

The British Council has partnered with the following Africa: UK consortia to support these innovations by providing enterprise support, mentorship, and pathways towards

commercialisation and investor readiness:

- A partnership between Imperial College London, Strathmore University, Kenya and Circle Innovation which supports innovations from Kenya and South Africa.
- A partnership between the University of Lincoln, Kumasi Technical University, Ghana, HapaSpace Innovation Hub, PCS Global Ltd, South Ormsby Estate and Community Energy Social Enterprise, which supports projects from Nigeria and Ghana.

Together, the enterprises and innovations featured in this book demonstrate the important role that partnerships between higher education institutions, industry, and entrepreneurship ecosystem actors can play in supporting young people to build solutions that respond to local challenges while strengthening their capacity to become future job creators.



SUSTAINABLE DEVELOPMENT GOALS



GREEN

The green agenda is crucial for our long-term economic stability and survival. We need to take urgent action on climate change and manage the Earth's natural resources sustainably. Wasteful economic models must be transformed into sustainable systems that foster job creation, protect public health, reduce pollution, and safeguard natural ecosystems.

Electric Bicycle and Scooter Initiative

- Akenten Appiah Menkah University, Ghana

The Electric Bicycle and Scooter Initiative offers students affordable, eco-friendly transport. Solar-powered docking and charging stations enhance mobility, save time, and promote sustainability. A mobile app and USSD platform are integrated with student IDs, enabling registration, booking, and flexible payment options.



Sustainable Neonatal Incubator

- Kwame Nkrumah University of Science and Technology, Ghana

The Sustainable Neonatal Incubator delivers reliable neonatal thermal care by combining a beeswax thermal storage module with sensor-guided heating and cooling. It maintains safe temperatures during power interruptions, prioritises infant temperature, and uses locally serviceable components to provide affordable, resilient care.





SmartNitro

- Kwame Nkrumah University of Science and Technology, Ghana

SmartNitro is an AI-enabled drone nitrogen-monitoring system supporting climate-smart farming in Ghana. The project delivers accurate, affordable, and farmer-friendly fertiliser guidance. Drone imagery, AI models, and farmer engagement can increase yields by 30%, reduce waste, and strengthen Ghana's agricultural future.



“Based on the analysis that has been done so far, if this is employed by a farmer, it’s going to save them approximately 30% reduction of wastage.”

Albert Kwame Tchalla – Research Assistant





JOOUST ROYAL All-Purpose Cleanser

- Jaramogi Oginga Odinga University of Science and Technology, Kenya

JOOUST ROYAL All-Purpose Cleanser is a powerful antifungal/antibacterial solution made from indigenous plant extracts. Research is also currently exploring its use as a remedy for stomach disorders, diarrhea, skin problems, and ringworm. The cleanser is affordable and biodegradable, reducing waste accumulation, soil and water pollution, and landfill overload.

EcoGlass Kenya

- Riara University, Kenya

EcoGlass Kenya recycles glass waste into high-quality reusable products, reducing landfill pollution and fostering a circular economy in Nairobi. A fully operational glass recycling facility on campus serves as a practical training and production hub. The project trains and employs youth in recycling and entrepreneurship, and partnerships with local industries to ensure lasting impact.



8 DECENT WORK AND
ECONOMIC GROWTH



Stackable Smart Battery Packs from Reused Cells for Field Power Units

- Strathmore University, Kenya

The project repurposes batteries from electronics and EVs into modular, stackable power units for field applications. A software-defined battery management system ensures safety, reliability, and extended life, and transforms e-waste into affordable clean-energy solutions. Training, technical documentation, and design guidelines ensure the safe collection, testing, and integration of reused batteries.

7 AFFORDABLE AND
CLEAN ENERGY



Youth Entrepreneurship Resource Hub

- KCA University, Kenya

The Youth Entrepreneurship Resource Hub is a KCAU digital platform that leverages technology to provide mentorship, resources and marketplace opportunities, empowering young innovators to scale their ventures. It also offers learning materials and modules to build entrepreneurial skills, digital bootcamps to provide practical experience and a networking platform that connects youth with peers, mentors and industry partners.



Mega Gas

- [Kenyatta University](#), [Kenya](#)

Mega Gas enables low-income communities to access clean cooking energy. Waste and renewable resources – plastic-to-gas, organic waste, solar, and wind energy – are converted into affordable fuel for community kitchens. The project reduces emissions, improves health, creates green jobs, and advances climate resilience in Africa.



“This community has embraced ‘home’ with their kitchen because this is where they gather and socialise, so it brings unity to the community. And at the same time, it empowers women... They cook, and then they take it back to the community to sell.”

Eunice Wangeci - Community Kitchen Manager





EcoScriber

- Afe Babalola University, Nigeria

EcoScriber is a paperless university admin toolkit and AI-powered skills development platform. It digitises memos and meetings, and offers training for administrators and university staff in digital record-keeping, e-signatures, workflow automation, data protection, and environmentally friendly workplace operations. EcoScriber tracks impact in real time, showing paper saved, estimated CO2 reductions, and tree-equivalent preservation.

ASTIC: AgroSolar Technopreneurship and Innovation Centre

- University of Uyo, Nigeria

ASTIC supports students to become adaptive technopreneurs through partnerships with industry and diverse stakeholders. The project enables innovative agricultural produce processing and solar energy technologies to be converted into sustainable, commercially viable start-ups, improving graduate employability and accelerating economic growth.





EcoHarvest

- University of Zululand, South Africa

EcoHarvest addresses global food insecurity through smart urban farming technology that makes fresh, nutritious food accessible to communities. AI-powered vertical farming systems grow food with 95% less water, eliminating transportation barriers and nutrient loss. The innovation combines hardware, mobile apps, and educational curriculum to democratise sustainable agriculture and build food-resilient communities.

SOLTECH Hub Project

- University of Abuja, Nigeria

SOLTECH Hub Project provides off-grid cold-chain services to fresh fruit and vegetable growers, market women, and traders. SOLTECH enables users to benefit from 100% green, cheaper, and affordable services. The project builds capacity to use technology and reduce food losses and wastage.





Batho Pele Bio-Loop Africa Farm

- Nelson Mandela University, South Africa

Batho Pele Bio-Loop Africa Farm is a community-based, eco-sustainable farming initiative that applies a 'people first' principle to agriculture, food security, and community upliftment. This includes developing an insect-based bio-composting system to produce bio-fertiliser, a water-storage system derived from plant transpiration, and an AI-based growth-monitoring procedure.



“When it comes to AI and algorithms... That’s where everything changes. Every day we are learning a new thing. So, it’s excitement all the way.”

Maghawe Dube – Student



DIGITAL

Digital transformation is a powerful catalyst for economic development. Automation and data analytics allow businesses to do more with fewer resources, increasing overall economic output. E-commerce platforms and digital marketplaces empower local producers and artisans to bypass middlemen and sell directly to consumers. Businesses can be freed from infrastructure constraints and geographic boundaries, allowing them to tap directly into regional and global value chains.

ANET

- Kwame Nkrumah University of Science and Technology, Ghana

ANET is a novel, low-cost neonatal medical device that automates the process of exchange transfusion, a life-saving procedure for newborns with severe jaundice. ANET delivers precision-controlled transfusions while minimising risk and reliance on expensive infrastructure.







AgroTrace

- Kwame Nkrumah University of Science and Technology, Ghana

AgroTrace is a blockchain-based food traceability system. The initiative traces grains from source to consumer, ensuring that contaminated or unsafe produce can be quickly identified and removed. This improves public health outcomes and builds trust in local food systems through safer, more transparent supply chains.





Emergency Response Assistant (ERA)

- Akenten Appiah Menkah University, Ghana

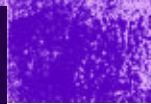
ERA is a mobile-first system for one-click emergency reporting. Offline services are available to low-connectivity areas, and the platform supports photos, videos, voice notes, and real-time chat/VoIP with dispatchers and officers. ERA delivers health tips and first-aid guidance and generates data analytics for planning and national preparedness.



HealthBud

- Accra Technical University, Ghana

HealthBud aims to address the rising burden of diabetes in Ghana by providing an affordable, locally tailored digital health platform. The app enables users to track their glucose and blood pressure levels, receive personalised alerts, and follow culturally relevant dietary and lifestyle recommendations.



MkulimaNet

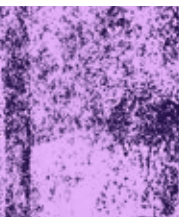
- Egerton University, Kenya

MkulimaNet is a digital platform that empowers Kenyan farmers with tools that enhance productivity, market access, and financial inclusion. It integrates USSD for feature phone users and a mobile app with real-time information about the weather, credit access, direct market linkages, and AI-driven responses to agricultural challenges.

NeoMotion

- University of Kabianga, Kenya

NeoMotion is an AI-powered, non-invasive wearable device designed to monitor maternal and fetal health during pregnancy. It uses smart biosensors and predictive analytics to detect early warning signs and enable interventions for complications such as preeclampsia, fetal distress, and preterm labour.





Pollen Patrollers

- Kenyatta University, Kenya

Pollen Patrollers combats bee colony collapse and strengthens food security through IoT-enabled smart hives, AI-powered precision pollination, and inclusive farmer training. The project bridges the gap between technology and higher education by embedding pollination science, IoT, and AI into curricula and research, equipping youth and women with skills for sustainable agriculture.



“

Pollen Patrollers is an all-women-founded startup that leverages technology and AI to help beekeepers keep healthy bees. We also offer pollination to small-scale farmers.

”

Margaret Wanjiku - Founder and CEO



Plastic Waste Collection and Incentivised Recycling

- Chukwuemeka Odumegwu Ojukwu University, Nigeria

This project integrates an incentive-based digital platform and smart waste collection infrastructure to promote plastic waste collection and recycling. The platform connects users with recyclers and offers digital incentives (airtime, mobile money) or cash rewards. The initiative engages youth and low-income residents in circular economy practices.



Smart Mobile Soil Scout

- Obafemi Awolowo University, Nigeria

Smallholder farmers are empowered with a solar-powered, 3D-printed soil scout that provides real-time soil insights via simple digital platforms. Locally fabricated and repairable, it reduces waste, boosts yields, and ensures sustainability. The 3D printer has a lasting impact on digital agriculture and rural livelihoods by supporting a university makerspace, enabling student learning, and community repair services.



StaffRoom

- Nigeria

StaffRoom is a specialised digital platform dedicated to teaching jobs and career growth in Nigeria. The innovation connects unemployed, qualified, and aspiring individuals to verified teaching opportunities that other job platforms have neglected. A notification dashboard includes scholarships, professional growth opportunities, and digital resources to support teacher development.





Scanning Electron Microscope

- Obafemi Awolowo University, Nigeria

This project democratises access to advanced imaging technology by prototyping a low-cost portable scanning electron microscope designed for Sub-Saharan Africa. By making high-resolution microscopy affordable and accessible, the innovation seeks to strengthen STEM education, empower research, clinical diagnostics, and drive industrial innovation in resource-limited contexts.



“The Innovation for African Universities grant gave us the funding to prototype locally. And it allowed us to participate in an entrepreneurship programme to make sure the prototype is eventually commercialised.”

Dr. Olusoji Ilori - Senior Lecturer





YouMeta

- University of the Witwatersrand, South Africa

YouMeta is a GPS that connects learners to careers in renewable energy, climate adaptation, and green technology. The project bridges the gap between secondary schools, higher education, and industry and enables young people to make informed subject and career choices. With tailored AI-driven pathways, it benchmarks readiness against real opportunities, transforming career identification into a measurable engine of employability, equity, and sustainability.



“YouMeta is a career GPS for young people that guides them from confusion to clarity in the evolving world of work. We look at who you are currently and where you are, and we benchmark that against where you are going.”

Nthabiseng Msingata – Founder and CEO



SOCIAL

We need to make the world free of poverty, hunger, and disease. All people should enjoy physical, mental, and social well-being and be free from fear and violence. Everyone should have access to quality education, health care, and social protection. Everybody should also have access to safe drinking water and sanitation, as well as affordable, reliable, and sustainable energy. Human rights must be enjoyed by all, including gender equality and the empowerment of all women and girls.

EZYTHERM

- Kwame Nkrumah University of Science and Technology, Ghana

EZYTHERM is a solar-powered thermometer that recognises dangerous fevers in children. A colour-coded display and voice feedback is specially designed for illiterate caregivers in Ghanaian households. By making temperature readings simple, accessible, and actionable, the innovation prevents life-threatening complications such as seizures and shock.

3 GOOD HEALTH
AND WELL-BEING



HerdWatch

- Kwame Nkrumah University of Science and Technology, Ghana

HerdWatch is a smart cattle-monitoring system that gives Ghanaian farmers real-time updates on animal health and location. Using GPS, heartbeat, temperature, and motion sensors the innovation improves animal welfare, prevents crop destruction and reduces disputes between herders and farmers.



BanPass

- Dedan Kimathi University of Technology, Kenya

BanPass transforms banana passion fruits into high-quality, preservative-free jams and concentrates. The initiative reduces post-harvest losses and empowers farmers through eco-friendly practices. BanPass provides an affordable, natural alternative for health-conscious consumers, enhances community wellbeing, and drives economic growth.





GalamSense

- Kwame Nkrumah University of Science and Technology, Ghana

GalamSense addresses the public health crisis caused by illegal mining in Ghana. A low-cost, autonomous IoT network offers real-time detection of specific heavy metals in remote rivers. Immediate, empirical data empowers authorities to pinpoint pollution sources and drive rapid intervention. GalamSense prevents birth defects and maternal deaths in vulnerable, rural communities.



“GalamSense helps us to detect – in real time – the pollution that is ongoing in our water bodies. It’s gathering data, sending it wirelessly, so that here in the lab we can see what is happening on the river body within seconds.”

Nathaniel Klobodu – Student Researcher





Deaf Entrepreneurship and Innovation Hub

- Bayero University, Nigeria

The Deaf Entrepreneurship and Innovation Hub breaks down the barriers preventing deaf people from creating sustainable businesses. The project provides resources about green entrepreneurship, and climate education and training for deaf students and graduates. Small-scale green enterprises develop practical experience and demonstrate innovation and learning.

Sauti Salama

- Jaramogi Oginga Odinga University of Science and Technology, Kenya

Sauti Salama is a low-cost SMS/USSD platform that transforms how rural communities in Africa understand and access mental health support. Trained peer champions provide first-line guidance, reduce stigma, and link individuals to care. Sauti Salama combines technology and community engagement to deliver an accessible, scalable, and sustainable mental wellness solution for undeveloped African contexts.





NIHEAL: Nigeria's Innovative Health Entrepreneurship, Access and Linked ICT

- Dennis Osadebay University, Nigeria

NIHEAL transforms healthcare access in Nigeria through a unified digital platform that enables faster, more efficient doctor-patient interaction, emergency response, and health information management. NIHEAL bridges gaps in medical service delivery and fosters employment for health professionals.

FarmToHo

- Elizade University, Nigeria

FarmToHo connects women farmers with urban consumers via a tech-enabled logistics network. A mobile app integrates with a logistics tracking dashboard, and community kiosks enable the collection, grading, tagging, and packing of produce. The project enhances economic opportunities for women farmers and micro-entrepreneurs and provides convenient, fresh produce to urban working women at their workplaces or through a 'shop for me' service.





ShopOkoa

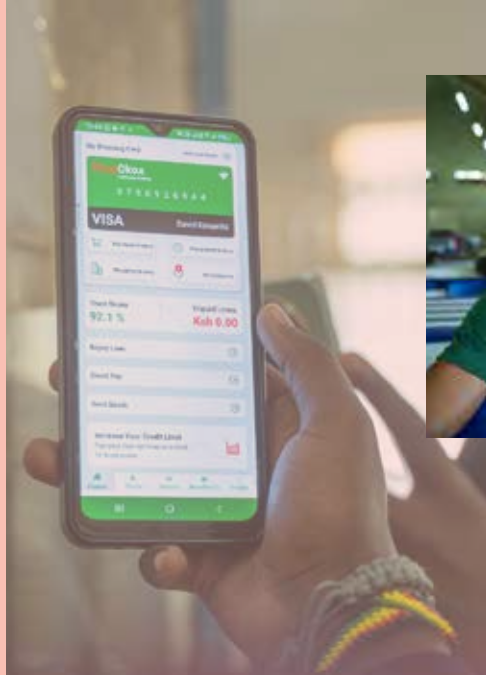
- **Kenyatta University**, Kenya

ShopOkoa operates Food for Comrades, an AI-powered meal subsidy and voucher infrastructure. The model is purpose-built to enable governments, NGOs, corporates, and higher education systems to work together and assist food-insecure students. ShopOkoa gives students reliable access to affordable meals and hygiene products, enhancing their health, dignity, and ability to remain in higher education.



“We came up with the idea together... We observed that campus hunger was a silent crisis taking over most campuses in Kenya. And as a result, students either drop out of school or end up neglecting their academics so that they can find jobs to survive.”

David Kimani – Programme
Manager of Food for Comrades





THRIVE

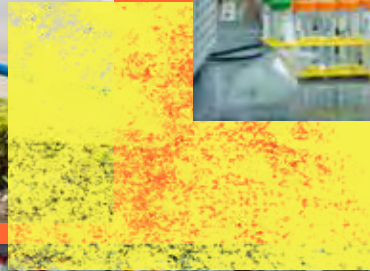
- **Kenyatta University**, Kenya

THRIVE transforms African higher education into inclusive, innovation-driven ecosystems. The project embeds student-led enterprise within locally grounded STEM learning and expands its impact through strategic partnerships across institutions. THRIVE positions universities as catalysts for opportunity, creativity, and sustainable development in diverse communities.



“The youth can think outside of the box. They’re able to come up with new solutions, not just for current issues, but also for the future... They’re the stakeholders of the future.”

Dr Susan Mason – Director of the Innovation and Incubation Centre





Resavation

- Obafemi Awolowo University, Nigeria

Resavation uses digital technology to tackle student housing challenges. The platform reduces fraud, increases access to affordable housing, and supports inclusivity with roommate matching. Focusing on student needs, the project creates a safe and transparent rental system that helps students to live securely, study effectively, and become part of supportive communities.



“The first thing every student wants to put in place is accommodation. We help students to find safe and secure apartments off campus in Nigeria.”

Stephen Adeyemo - Founder and Lead Developer





Eden AI

- Nelson Mandela University, South Africa

Eden AI improves agricultural practices in rural areas by providing offline, voice-guided assistance for crop management, soil monitoring, and irrigation scheduling. Farmers have access to real-time, actionable insights delivered through smart sensor integration, enabling more efficient use of water and fertilisers, and improving crop yields and overall farm productivity.





Join us in supporting the next generation of African innovators and entrepreneurs!

Across Sub-Saharan Africa, university students are responding to some of the continent's most urgent challenges with curiosity, creativity, and problem-solving. The Innovation for African Universities (IAU) programme demonstrates how Higher Education Institutions are increasingly becoming spaces where young people are not only pursuing qualifications, but also developing as innovators, entrepreneurs, and job creators.

The enterprises and innovations featured in this book demonstrate the important role that partnerships between universities, industry, and innovation ecosystems across the UK and Sub-Saharan Africa can play in supporting students to develop ideas and solutions that are responsive to local issues. Students are solving pressing local challenges by creating solutions with the potential for global impact.

From climate-smart agriculture to clean energy technologies, digital health platforms and inclusive education tools, these SDG-aligned, student-led innovations reflect the growing importance of green, social and digital innovations in shaping Africa's future. These sectors are increasingly recognised as important drivers of sustainable development, economic inclusion, job creation, and climate resilience. The **World Economic Forum's Future of Jobs Report 2025** identifies digital transformation and the green transition as key drivers shaping labour markets, emerging industries, and workforce transformation globally.



Strengthening institutions for innovation and entrepreneurship

The IAU initiative, which forms part of the British Council's Going Global Partnerships programme, has evolved significantly since it began in 2021. The earlier phases of the programme focused on strengthening the capacity of participating higher education institutions across four countries in Sub-Saharan Africa (Ghana, Kenya, Nigeria and South Africa) to participate as meaningful contributors within entrepreneurship ecosystems.

Through collaboration with UK universities and ecosystem partners, institutions developed curricula and industry partnerships, established innovation hubs and incubation spaces, and created stronger foundations for effective enterprise development. UNESCO's recent publication on Transforming Higher Education, similarly highlights the importance of higher education's growing role in fostering innovation, entrepreneurship, sustainability, and cross-sector collaboration to prepare young people for rapidly changing social and economic realities.

Since its inception, the IAU programme has engaged more than 15,000 direct participants, supported over 130 student-led ventures and innovations, established 24 incubation and innovation hubs, and facilitated 33 curricular developments and revisions and industry partnerships.

From institutional strengthening to student enterprise impact

This latest phase of the programme, the Enterprise and Innovation Challenge is an important next step in this journey. The challenge is building on this foundation, shifting the focus towards directly supporting student-led enterprises and innovations with the potential for real-world impact and commercial growth. By combining strengthened university ecosystems with mentorship, industry engagement, and tailored enterprise support, the programme is helping these young innovators to move towards commercialisation and investor readiness to sustain and grow their enterprises.

We are now supporting student innovators more directly as they develop ventures with the potential for commercialisation, investment, and long-term sustainability. The ambition is not only to support enterprise development, but also to enable young people to grow and sustain viable ventures that can create jobs, solve Africa's pressing challenges, and contribute to future economic growth.

Join us

The innovations featured in this book remind us that the future of African innovation is already being built by young people across the continent.

We would like to expand this model so that more young people across universities on the continent can access the networks, mentorship, funding opportunities, and ecosystem support needed to scale their ideas into sustainable businesses.

This work cannot be done by universities alone. It requires continued collaboration, shared investment, and a collective commitment to supporting the next generation of African innovators and entrepreneurs.

We invite interested partners to join us in shaping the next phase of this journey.

Meekness Lunga



