



Kenya Innovation Week 2022

THEME

Connecting
Innovations **G**Locally

📅 06th – 08th December, 2022

📍 Sarit Expo Centre, Nairobi

 kenyainnovationweek.com





Foreword

The Kenya Innovation Week (KIW) 2022 was a great success for the Kenya National Innovation Agency (KeNIA) and the national innovation ecosystem. KIW is a flagship innovation forum for the country run by KeNIA, seeking to showcase the innovativeness of Kenyans under which the national priorities of Vision 2030 are advanced. KIW champions relevant policy engagements on innovations within institutions while promoting practical skills necessary to create innovations that impact people and the environment. Additionally, Kenya Innovation Week strengthens the research and commercialisation practices for greater socio-economic impact. To achieve its objectives, KeNIA held the second KIW 2022 on 5 at Sarit Expo Centre, in Nairobi which attracted different players in the innovation system both nationally and internationally. In a bid to paint a vivid picture of the country's strengths, gaps and recommendations, the event ran six interconnected thematic summits led by speakers drawn from various networks. These included: the Skills and Talent for Innovation summit, which focuses on capacities that ought to be developed from an innovator's formative years to adult learning. Secondly, the Fourth Industrial Revolution (4IR) and Digital Transformation summit highlighted tools that ease innovation. Thirdly, the Commercialisation summit focused on methodologies that drive ideas and research to impactful solutions. Lastly, the Startup Kenya and the Innovations in Public Sector summit highlighted the growth of enterprises to attract investments to help scale. During the Startup summit, upcoming businesses pitched their ideas to relevant stakeholders, showcasing the strengths which the country would continually leverage. KIW 2022 had exhibitors from local and international fora who displayed their innovations, products, and services at the pavilions.

KIW will continue to create synergies in the innovation ecosystem and with the Government's support and suitable players, this will be achievable.

As coordinators of KIW, KeNIA will ensure the resolutions and recommendations arrived at during the event are actualised as the team envisions KIW 2023, which will be bigger and better.



DR. TONNY OMWANSA
Chief Executive Officer,
Kenya National Innovation Agency



About KeNIA

The Kenya National Innovation Agency (KeNIA) is a State Corporation established under the Science, Technology, and Innovation (STI) Act, No. 28 of 2013. The Agency's core mandate is to develop, manage, coordinate, promote and regulate the National Innovation System.

Working with partners, KeNIA strengthens interrelationships between actors to promote innovation and enterprise development out of research and ideas. This spans from supporting the identification, recording and protection of innovative ideas to coordinating the establishment and implementation of appropriate policies, standards, processes, infrastructure, and partnerships. The Agency also works with partners to ensure appropriate prioritisation, relevant capacity development, innovation recognition and publication.

Contact Information

Website: innovationagency.go.ke

Email: info@innovationagency.go.ke

Email: ceo@innovationagency.go.ke

Phone: +254-792 446 976

Twitter: @KENIAUpdates

Acronyms

4IR	Fourth Industrial Revolution	KSG	Kenya School of Government
ACIH	Association of Countrywide Innovation Hubs	KTN	Knowledge Transfer Network
ACTS	African Centre for Technology Studies	LREB	Lake Region Economic Bloc
ADC	Africa Development Centre	LTD	Limited
AFDB	African Development Bank	MARPs	Most at Risk Populations
AI	Artificial Intelligence	MDFESA	MDF Training and Consultancy Eastern and Southern Africa
AFOSI	Action for Sustainability Initiative	MIT	Massachusetts Institute of Technology
AfOx	Africa Oxford Initiative	MSMEs	Micro, Small and Medium Enterprises
ANDE	ASPEN Network of Development Entrepreneurs	MVP	Minimum Viable Products
ASALS	Arid and Semi-Arid Lands	MWD	Mifuko Women's Development CBO
ASL	American Sign Language	NACONEK	National Council for Nomadic Education in Kenya
ASSEK	Association of Startup and SMES Enablers of Kenya	NACOSTI	National Commission for Science Technology and Innovation
ASU	Arizona State University	NCPB	National Cereals and Produce Board
ATIP	Africa Technology and Innovation Partnerships	NFT	Non Fungible Tokens
AVPA	African Venture Philanthropy Alliance	NGO	Non Governmental Organisation
AWS	Amazon Web Services	NIA	National Innovation Awards
AYuTe	Agriculture, Youth, and Technology	NITA	National Industrial Training Authority
BBC	British Broadcasting Corporation	NOREB	North Rift Economic Bloc
CBC	Competency-Based Curriculum	NRF	National Research Fund
CBO	Community-Based Organisations	ODA	Official Development Assistance
CEIL	Commercialisation and Entrepreneurial Institutions Leaders	PAUSTI	Pan African University Institute for Basic Sciences Technology and Innovation
CEO	Chief Executive Officer	PSI	Population Services International
CPSI	Centre for Public Service Innovations	PPI	Producer Price Index
CPST	Centre for Parliamentary Studies and Training	PTSD	Post Traumatic Stress Disorder
DSTI	Division of Science, Technology, and Innovation	PWD	Persons with Disability
DVC	Deputy Vice-Chancellor	R&D	Research and Development
EADD	East Africa Dairy Development	R2C	Research to Commercialisation
EO	Earth Observation	RAEng	Royal Academy of Engineering
ESOs	Enterprise Support Organisations	RDTs	Rapid Diagnostic Tests
FCDC	Frontier Counties Development Council	RISAS	Research and Innovation Systems for Africa
FCDO	Foreign, Commonwealth and Development Office	SAGAs	Semi Autonomous Government Agencies
FINGO	Finnish Development NGOs	SAIS	Scaling Digital Agriculture Innovations through Startups
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	SDG	Sustainable Development Goals
GoK	Government of Kenya	SME	Small Market Enterprise
GPS	Global Positioning System	SMS	Short Message Service
GTM	Go to Market	ST&I	Science Technology and Innovation
HEIs	Higher Education Institutions	STEM	Science, Technology, Engineering and Mathematics
ICIPE	International Centre of Insect Physiology and Ecology	STI	Sexually Transmitted Infections
ICL	I Choose Life	TIA	Technology Innovation Agency
ICT	Information Communication Technology	TTA	Talent to Transform Africa
ICTA	Information and Communication Technology Authority	TUM	Technical University of Mombasa
ICT4D	ICT for Development	TVET	Technical and Vocational Education and Training
ID	Identification Document	UAV	Unnamed Aerial Vehicles
IDIA	International Development Innovation Alliance	UF	Universities Fund
IP	Intellectual Property	UK	United Kingdom
IRR	Internal Rate of Return	UN	United Nations
JICA	Japan International Cooperation Agency	UNDP	United Nations Development Programme
JOOUST	Jaramogi Oginga Odinga University of Science and Technology	UNEP	United Nations Environment Programme
KBA	Kenya Bankers Association	UNICEF	United Nations Children's Fund
KeNIA	Kenya National Innovation Agency	USSD	Unstructured Supplementary Service Data
KEPHIS	Kenya Plant Health Inspectorate Service	UTI	Urinary Tract Infection
KenTrade	Kenya Trade Network Agency	VAT	Value Added Tax
KICD	Kenya Institute of Curriculum Development	WEF	World Economic Forum
KIPI	Kenya Industrial Property Institute	WFP	World Food Programme
KIO	Kenya Innovation Outlook	YSK	Young Scientists Kenya
KIW	Kenya Innovation Week		
KSA	Kenya Space Agency		



Working Definitions

Commercialisation: The process by which any Intellectual Property (IP) assets may be adapted or used for any purpose that may benefit society or commercial use on reasonable terms. It includes assignment, licensing, and establishment of spin-offs to offer the Intellectual Property as a product or service.

GLocally: Tailoring bally available products and services to local markets and creating global thinking perspectives while acting on locally incubated ideas.

Incubator: A program or facility that helps startups in their infancy succeed by providing workspace, seed funding, mentoring, and training, among other support services.

Innovation: Implementing a new or significantly improved product (good or service), process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.

Innovation ecosystem: Complex network of people, organisations, institutions, government policies and regulations that support and promote innovation. It includes the interactions between people to take an idea and turn it into a marketable process, product, or service.

Innovation system: A set of interconnected and interdependent elements that work together to promote innovation within a particular sector or economy.

Innovator: A person who transforms ideas into practical reality through products, processes, or services.

Intellectual Property (IP): Creations of the mind such as inventions; literary and artistic works; and symbols, names and images used in commerce for which proprietary rights may be obtained or enforced by law.

Patent: An exclusive right granted for an invention which provides the inventor with the exclusive right to prevent others from possessing, using, selling, manufacturing, and importing the patented design or offering to do any of these things within a definite geographical area. In Kenya, a patent is granted by the Kenya Industrial Property Institute for 20 years from the application's filing date.

Royalties: Revenue received by an institution from a third-party exploiting university IP right through licensing agreements.

Spinoff: A new company established because of the separation of a part of an existing institution's operations or assets.

Startup: An innovative business entity scalable by design and based on innovations developed to solve an identified societal challenge.

Startup accelerator: An organisation that offers mentorship, capital, and connections to investors and business partners. It is designed for select startups with promising minimum viable products (MVPs) that have the potential to scale rapidly.

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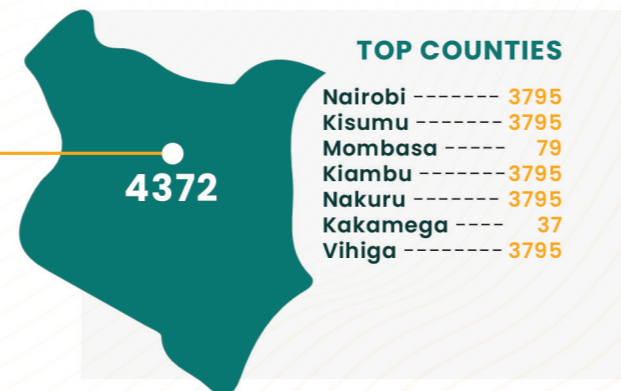
The Numbers at KIW

The Kenya Innovation Week (KIW) 2022 was a great success for the Kenya National Innovation Agency (KeNIA) and the national innovation ecosystem.



4900+
ATTENDEES

The Kenya Innovation Week (KIW) 2022 was a great success for the Kenya National Innovation Agency (KeNIA) and the national innovation ecosystem.



KIW in the Press

- 46 Media Publications
- TV Coverage from 7 Stations
- 3 Newspaper Coverages
- 24 Blog Publications
- 12 Digital Media Publications

kenyainnovationweek.com

93+
Partners

200+
Startups

36+
Academia



62% | 3082
Male Audience



0.3% | 15
PWDs

95% | 4732
Local

05% | 240
International

38% | 1890
Female Audience

03
DAYS

06
SUMMITS

64
SESSIONS

150
SPEAKERS

To meet the urgent demand of our time, we must do things better: We must do old things in new ways and pursue new things. This calls for a new mindset, stronger focus, greater dedication, and readiness to embrace a new operational paradigm.

H.E. William S. Ruto, Phd., C.G.H - President, Republic Of Kenya



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KIW Sponsors

Discover our esteemed sponsors who made Kenya Innovation Week 2022 a resounding success



KIW Partners

Discover our esteemed partners who made Kenya Innovation Week 2022 a resounding success



The Commonwealth



KIW 2022

The Kenyan government initiated the Kenya Innovation Week (KIW) to pull together stakeholders to improve coordination, synergy, and collaboration. By doing so, the government can listen, learn and provide effective leadership that supports the growing innovation system. KIW convenes yearly to celebrate innovation efforts throughout the year and ambitiously project the way forward for the subsequent years.

The Kenya National Innovation Agency (KeNIA) organised the inaugural KIW from 8th to 9th December 2021 at the Kenya School of Government in Kabete. The event focused on skills for innovation, startups, commercialisation, and the fourth industrial revolution. The event was a breath of fresh air as Kenyans from all walks of life either exhibited creative innovations or served as consumers, forging new networks that would take the various products and services to scale.

Based on the resolutions of KIW 2021, the Kenya National Innovation Agency themed KIW 2022: **'Connecting Innovations GLocally'**, aiming at creating global thinking perspectives while acting on locally incubated ideas. The event held at Sarit Expo Centre

from 5th to 8th December created a platform for displaying an array of innovations and a rich pool of experts, fostering knowledge transfer among delegates from Africa, Europe, America, and Asia. Consequently, these efforts unfolding in Nairobi spurred collaboration and growth at global scales. Thought-provoking speeches, interactive dialogues, captivating pitches, power talks, product launches, award ceremonies and side events from various innovators, sponsors, partners, researchers, and government representatives, among others, spruced up the six interconnected summits: Skills and Talent for Innovation, the Fourth Industrial Revolution and Digital Transformation, Commercialisation, Startup Kenya, Innovation in the Public Sector, and Students' Innovations.



Objectives

To champion relevant policy engagements on innovations within institutions while promoting practical skills necessary to create innovations that impact people.

To strengthen the research and commercialisation practices for a more significant socio-economic impact.

ns GLocally



Remarks by

H.E. William Samoei Ruto, PhD., C.G.H President Of The Republic Of Kenya & Commander-in-Chief of The Defence Forces

I am honoured to be part of this timely event of tremendous importance for our country's journey to economic transformation, industrialisation, and competitive productivity. The pursuit of shared prosperity and the enhanced well-being of our people requires us to urgently devise strategies that meet the urgency of our time. Such strategies will maximise the return on each factor of production, propel our economy into new domains of high productivity and accelerate economic growth into exponential rates. To meet the urgent demand of our time, therefore, we must do things better: We must do old things in new ways and pursue new things. This calls for a new mindset, stronger focus, greater dedication, and readiness to embrace a new operational paradigm. This is the essence of innovation. The stewardship of every sphere of human endeavour, and every sector of economic activity, requires innovation to navigate beyond the waters of stagnation and inertia into the exciting frontiers of discovery and abundance. Although innovation is frequently associated with rapid advances in the hi-tech sector that have transformed how we live, it extends into every quest to do more, go farther, and rise higher.

The government is mandated to achieve the socio-economic transformation of this country. We have pledged to invest in agricultural transformation, promote micro, small and medium enterprises, stimulate the expansion of urban housing, deliver universal healthcare, and galvanise the digital and creative economy. This mandate must be delivered in the context of tremendous economic challenges and severe resource limitations. Continuous innovation is, therefore, required to keep us alert to novel opportunities. It is in this spirit that I have been greatly inspired to see the innovative concepts and creations exhibited at this Expo. I look forward to visiting more displays at the KICC later in the week. I believe that, by embracing innovation, we can re-imagine and overhaul our economy into a modern, high-tech one serviced by highly skilled citizens who enjoy a high quality of life. It is my contention that innovation brings us closer to sustainable development goals and our Vision2030 by catalysing productivity, increasing high-quality jobs, reducing unemployment, and creating wealth. The government is, therefore, committed to mainstreaming innovation into a way of life in the public as well as private sectors.



You will, therefore, be seeing more, not fewer forums, platforms, and events like these, as well as other avenues to recognise innovations by young people, promote startups locally and internationally, strengthen research, commercialise innovations and enhance the uptake of emerging technologies. To further underscore the critical importance of innovation, I would like to share with you my intention to sustain this week's focus so that it culminates in the celebration of our national holiday, Jamhuri Day. The Ministry of Youth Affairs and the Kenya National Innovation Agency have, therefore, set a brilliant pace for our broader agenda.

The stage is now set for the steadfast entrenchment of a culture of innovation throughout government in visible, effective, and measurable ways. It is time for every ministry to domesticate a strategy for continuous innovation. Beyond national activity, the government intends to elevate this forum into an international innovations festival which attracts global participants to facilitate the exponential enhancement of Kenya's capacity for transformative innovations. The partnership among various stakeholders, which has made this event possible, strongly indicates the shape of future collaboration between organisations and actors in government, academia, and industry. The Kenya National Innovations Agency must now initiate and develop appropriate policies to promote collaborations and mobilise resources to support innovators. Similarly, organisations representing commerce and industry, like the Kenya Association of Manufacturers and the Kenya Private Sector Alliance, must be encouraged to participate in these opportunities, especially in scouting for innovations that deserve support from the industry. Government is committed to doing its part. First, we shall continue to support the development of necessary skills for developing demand-driven innovations which are globally competitive. Second, we shall enhance policy to secure innovation, especially through the protection of intellectual property. Third, tertiary education institutions shall focus on business modelling, the creation of enterprises and the commercialisation of research outputs through joint ventures, spin-offs and startups that create jobs, enhance incomes, and accelerate national development. We also have provided more than 500 facilities across Kenya to domicile innovation and incubation in TVETs, universities, private hubs, and donor-supported centres. What is needed is a strong coordinating mechanism, and I encourage the Kenya National Innovations Agency to move with speed and make this opportunity a reality. In fact, the agency and the Ministry of Youth must now go ahead and curate an ecosystem that efficiently converts every viable innovation into an enterprise, and create mechanisms to provide support for risky, yet high-potential enterprises. Now, the Global Innovation Index ranks Kenya at position 87. We are determined to work smart and make Kenya the cradle of innovative technologies in all sectors. This will maximise our potential to realise sustainable development through shared prosperity and radical socio-economic transformation. Today is a day of great promise. It is the beginning of our journey to transform Kenya into a globally competitive, modern, and industrialised economy. The Kenya Innovations Week will anchor continuous discussion and robust engagements that will guide the development of innovation policies in our organisations. We, therefore, look forward to the growth of a robust national innovation system. Your presence here matters, and your participation is essential.

The theme of Kenya Innovation Week, Connect, Innovate, and Inspire, truly captures the journey we have embarked on the transformation of our country. Not even the sky is the limit.

A photograph of Rt. Honourable Patricia Scotland, KC, is shown in the background. She is a woman with short dark hair, wearing glasses, a dark blazer over a patterned top, and a pearl necklace. She is speaking into a microphone at a podium. The background is a stage setting with blue curtains and a green plant.

Remarks by
Rt. Honourable Patricia Scotland, KC
Secretary-General, The Commonwealth
Secretariat

Rt. Honourable Patricia Scotland, Secretary-General of the Commonwealth Secretariat, expressed her gratitude to the Government of Kenya for the opportunity to speak at the Kenya Innovation Week. She commended President William Ruto for his leadership in promoting Kenya's innovation agenda and praised the National Innovation Agency of Kenya for its efforts in transforming the innovation landscape. She highlighted the importance of innovation in building prosperous and resilient societies and emphasized the need for collaboration and partnership among various stakeholders.

Scotland emphasized the significance of Kenya's role in the Commonwealth and its potential to contribute to a more innovative and connected partnership. She stressed the importance of building an enabling innovation ecosystem that involves government, regulators, academia, industry, and other stakeholders working together towards shared goals. Scotland mentioned the Commonwealth Innovation Ecosystem Programme and its focus on converting science, technology, innovation, and data science into drivers of social and economic progress.

The Secretary-General highlighted the challenges faced by many Commonwealth countries, particularly in Africa, in terms of data availability and capacity for innovation. She emphasized the importance of data in driving innovation and decision-making, especially in the face of crises like the COVID-19 pandemic. Scotland mentioned the Commonwealth's efforts in providing data dashboards and tracking tools to support member countries during the pandemic.


Scotland also discussed the Commonwealth's initiatives related to climate action and sustainable development. She mentioned the Commonwealth Blue Charter, which promotes cooperation among member countries for sustainable ocean development, and the Commonwealth Living Lands Charter, which focuses on addressing climate change, land degradation, and biodiversity loss. She highlighted the Commonwealth Climate Finance Access Hub and the Commonwealth Sustainable Energy Transition Agenda as key programs supporting climate action and renewable energy development.

The Secretary-General acknowledged Kenya's progress in innovation, as reflected in its ranking on the Global Innovation Index. However, she also highlighted the need for more data and insights to fully leverage the potential of new technologies. Scotland emphasized the Commonwealth's commitment to supporting member countries in their innovation journey, including partnerships with organizations like the International Trade Centre, UN agencies, the World Trade Organization, and the African Development Bank.

Scotland stressed the importance of investing in youth development and digital skills, given Africa's young population and its potential for innovation. She commended initiatives like the Startup Kenya Summit for nurturing the innovation ecosystem and highlighted the success of Kenyan innovation, such as M-Pesa, in transforming mobile money transfer services.

In conclusion, the Secretary-General expressed her support for innovators and announced the establishment of the Commonwealth Secretary-General's Innovation for Sustainable Development Awards to celebrate their achievements and provide them with mentoring and support. She shared examples of Kenyan innovators who have made significant contributions in areas such as biofuel manufacturing, food security, and integrating smallholder farmers into supply chains.

Scotland reaffirmed the Commonwealth's commitment to partnering with member countries, including Kenya, to accelerate progress towards the Sustainable Development Goals and to build back better from the COVID-19 pandemic. She emphasized the need for innovation to create a better and fairer world for all.



A practical 'innovation ecosystem' requires multiple stakeholders – the government, regulators, innovation promotion agencies, academia, industry, international and regional development partners, knowledge and technology partners, civil society, grassroots innovators, and entrepreneurs – to collaborate to achieve shared goals and objectives.

– Rt. Hon. Patricia Scotland, KC

PARTNER REMARKS

The Kenya Innovation Week 2022 attracted 34 sponsors and partners who shared invaluable contributions and perspectives during the event. This section showcases the insightful remarks, observations, and experiences expressed by partner representatives, key stakeholders, including government officials, industry leaders, entrepreneurs, and academics. These partner remarks serve as a testament to the collaborative spirit, innovative ideas, and commitment to driving Kenya's innovation ecosystem.



Esta Kamau
Country Director,
Heifer International

In 2021, Heifer International surveyed more than 30,000 youth in Africa, including smallholder farmers and agricultural organisations, among many others. This move was to delve deeper into the issues that have led to decreased farming productivity, dwindling income for smallholder farmers, and the barriers to adopting technology and youth innovations.

Each year Heifer International invests more than \$1.5 million to accelerate digital agriculture entrepreneurship in Africa. In 2022, the challenge included competitors from Ethiopia, Kenya, Nigeria, Rwanda, Senegal, and Uganda.



Lauren Landis
Country Director,
World Food Program (WFP), Kenya Country Office

WFP, in partnership with the government and KeNIA, have supported innovation in the field by forging partnerships with the Kenya Private Sector Alliance, the Mastercard Foundation, and sister UN agencies in innovation. This aims to bridge the gaps between skills and opportunities, particularly for the youth.

Taking it a notch higher, WFP, UNDP the Kenya School of Government in Isiolo are running County Innovation Centres to stimulate innovation in the ASALs and marginalised communities. These hubs of excellence will attract innovators, entrepreneurs, and investors worldwide and reveal how innovations can scale from the field to Nairobi and worldwide.



PARTNER REMARKS

There is an innovation angle to every 'aspect' of the economy and development and an innovation angle in agriculture, healthcare, arts, and sports. ”

Hon. Ababu Namwamba, EGH – CS, Ministry of Youth Affairs, The Arts and Sports



Hon. Ababu Namwamba, EGH
Cabinet Secretary,
Ministry of Youth Affairs, The Arts and Sports

KIW is a true testament to the importance of innovation at the heart of global partnerships. Suppose we are to achieve goal 9 of the SDGs (Sustainable Development Goals), which seeks to build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. In that case, we will unleash the dynamic and competitive economic forces that create employment and income.



Ismail Maalim Madey
Principal Secretary,
State Department for Youth Affairs, and The Arts

The KIW is a brilliant idea as it brings to the fore untapped talents and ensures they are generated and linked to the market with the help of various stakeholders. There are many innovation agencies in the country: government departments, and institutions, the private sector, but the State Department noted the siloed nature in which the institutions operate.

The government pledges to create a policy framework to guide, regulate, and standardise operations for all innovation agencies under one umbrella, i.e., KeNIA. This will bring to light current innovations and the best ways to grow them and remain suitable for ideal markets. Additionally, the government is looking to hold such forums frequently to enable real-time reporting on innovations.



PARTNER REMARKS

KIW presented an opportunity for JICA to exhibit the various startups it has supported within the East African region and hold conversations on how to keep a borderless startup ecosystem. ”

Hajime Iwama - Chief Representative, Japan International Cooperation Agency (JICA) Kenya



Hajime Iwama
Chief Representative,
Japan International Cooperation Agency (JICA) Kenya

At the onset of Covid-19, JICA formed an initiative that would bring to the fore innovations not only in Kenya but Africa as well, and so far, 20 countries and 100 businesses have joined. Kenya alone boasts 20 companies. Additionally, several partnerships have been forged, thus enabling funding opportunities and other forms of support to members.

KIW presented an opportunity for JICA to exhibit the various startups it has supported within the East African region and hold conversations on how to keep a borderless startup ecosystem. JICA endeavours to collaborate with the Kenyan government to strengthen the innovation ecosystem.



Eng. John Tanui, MBS
Principal Secretary,
State Department for ICT and Digital Economy

The government is keen to learn and adopt tools, applications, and technologies from the Commonwealth. Therefore, it has set a clear agenda concerning building digital infrastructure in intelligent and affordable devices, from the submarine cables and terrestrial connectivity to the end user. The Government is also moving its services online, graduating from the current 15% to 80% and in addition to other efforts, it will bring vibrancy to the innovation sector.



PARTNER REMARKS

The KIW is an excellent opportunity to share learnings and reflections on what contributes to success, drawn from past experiences and partnerships.

”

Prof. Charlotte Watts – Chief Scientific Advisor, Research and Evidence Directorate, FCDO



Prof. Charlotte Watts
Chief Scientific Advisor,
Research and Evidence Directorate, FCDO

Kenya has diverse and fresh innovations, for instance, a solar milk cooler, which is a simple application but helps reduce immense wastage. This is a true testament to the ingenuity and energy of Kenyan researchers, innovators, and public authorities.

This demonstrates that Kenya is an international trailblazer. She creates an environment where experimentation and innovation are permitted, nurtured, and promoted for their enormous potential to support the country's development and prosperity.



Fionnuala Quinlan
Ambassador of Ireland to Kenya,
Department of Foreign Affairs and Trade

Investing in innovation and embracing diversity and inclusion is essential in supporting the enterprising and thriving economy to achieve the SDGs.

Kenya and Ireland have a very close relationship, championing various innovative initiatives in Kenya, such as the Young Scientist Programme, among others, geared towards achieving the SDGs. Through this collaboration, over 200,000 youths from the 47 counties have gotten a platform to showcase their scientific talents and have benefited from mentorship to spur innovations that solve societal problems.

Launch of the Kenya Innovation Outlook Report

The Kenya Innovation Outlook (KIO) was officially launched by the Head of State, Hon. President William Ruto at KIW 2022. KIO was developed by KeNIA in partnership with the UK government and the United Nations Development Programme (UNDP) with two objectives. Firstly, to demystify the national innovation system and provide an overview of the successes, enablers, barriers, and opportunities in the Kenya innovation system. Secondly, to highlight the background of the national innovation system, the current situation, the commercialisation prospects and progress, and the startup ecosystem.

Through KIO, Kenya can measure the progress and performance of its innovation ecosystem and assess where to target resources and investments to grow the startup ecosystem in the country. Plans can also be devised to decentralise innovations to all counties nationwide.

The specific recommendations that would shape the next phase of the national innovation system include:

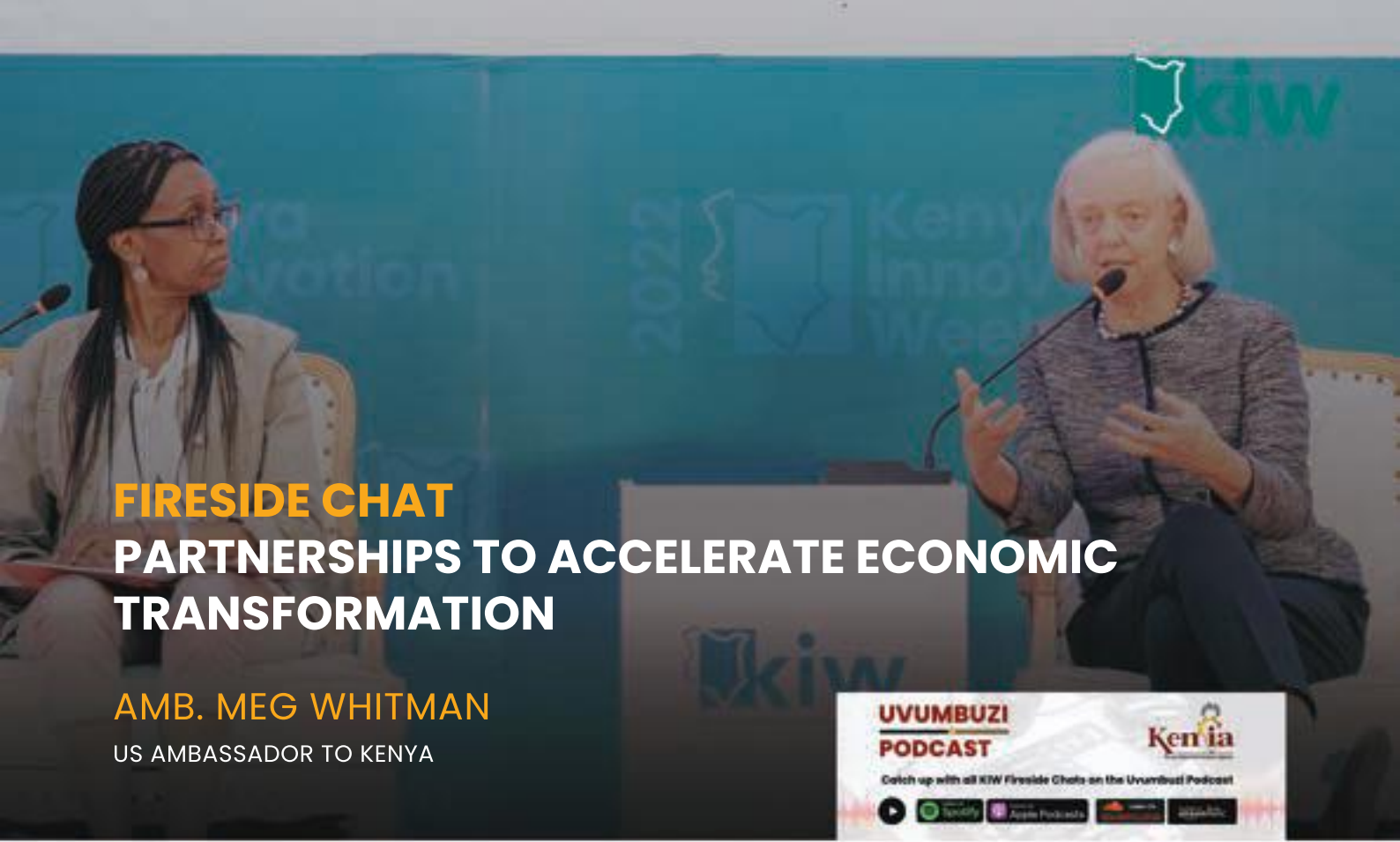
- Developing a 10-year master plan and roadmap that would support directing and consolidating national efforts towards set goals and targets.
- Developing a National Intellectual Policy and Innovation Policy to unlock multiple efforts by numerous institutions and build solid and effective IPs.
- Ensuring proactive coordination of the national innovation system.
- Developing a National Commercialisation Policy/Strategy to provide guidance and strategic direction with significant attention to universities, research institutions and TVETs.
- Coordinating innovation hubs, incubation centres and youth centres, thus ensuring standardisation and decentralisation to enhance easy access to quality services across the country.
- Overseeing the national innovation fund that would enable funding for the establishment/enhancement of innovations and incubation hubs.
- Providing incentives for research and innovation or acquiring equipment and machinery to promote innovations.

Access the full report on the KeNIA Website



KIW EXHIBITION 2022





FIRESIDE CHAT PARTNERSHIPS TO ACCELERATE ECONOMIC TRANSFORMATION

AMB. MEG WHITMAN

US AMBASSADOR TO KENYA

There are two kinds of innovations: disruptive and evolutionary. A disruptive innovator creates an entirely new concept and marketplace, for instance, entrepreneurs who founded MPesa, eBay, Uber, PayPal, and many others. An evolutionary innovator revamps an existing innovation with the vision of the public and the product's life cycle. The revisions can be weekly, monthly, quarterly, or annually, for example, the incremental changes made to the computer since its invention. It is essential to build an innovation ecosystem that thrives, and the non-negotiables that enable a dynamic process are:

- a) Ensuring as many people as possible in the country are connected to the internet.
- b) Having tech companies training the next generation of entrepreneurs, marketers, and digital enthusiasts, for instance, anchoring on Safaricom and Microsoft.
- c) Liaising with a group of investors willing to fund new startups given that Kenya has the second highest level of venture capital investments, with Nigeria in the lead.
- d) Running institutions that train young scientists, engineers etc., competitively for students to match global standards like Harvard, Yale, Stanford, etc.

Venture capital in Kenya focuses on late-stage ventures. But there are alternative options for small to medium businesses, like angel or seed investors or crowdsourcing. However, to get ahead, small businesses should have solid business plans and strong management since investors are also keen on products or services that are fit for the market. Also, a point of reference for investors is showcasing a product or service with a solid customer base or its suitability for end users.

Africa, specifically Kenya, is not top of mind for many investors. Therefore, relevant stakeholders in the innovation ecosystem must tell stories more compellingly and consistently than the country has before. Also, the country needs small to mid-sized companies that either go public or opt to be bought by one of the big corporations. This way, the country will get more investors on board.

FIRESIDE CHAT

ENVISIONING OPPORTUNITIES OF TOMORROW IN A PAN-AFRICAN CONTEXT

PATRICK KRAPPIE

CEO, TECHNOLOGY INNOVATION AGENCY (TIA)
SOUTH AFRICA

SUZANNE AMBETSA

PRINCIPAL RESEARCH OFFICER,
MoIEI, SEYCHELLES

The panellists discussed emerging areas of support to startups beyond traditional aid, including creating job opportunities, solutions to social challenges, and radical evolution through local innovations. They further articulated the need for support by development organisations and other ecosystem players to startups at early/seed stages to multiply investment opportunities for them. For example, offering venture capital support by connecting startups with opportunities for investment and technical cooperation, thus adding value. Other key takeaways from the session were:

- The individual elements in the innovation ecosystem affect the interactive process and the efficiency of everything else from the initial to final stages. The rest of the system will perform optimally if these issues are refined.
- There is much research being carried out, but they're failing to address some of the challenges innovators are trying to solve.
- There is a need to enhance socialisation efforts to either counter the impatience that comes with failed startups or those that are yet to kick off in specified timelines set out by the innovators. Socialisation will also create a broader understanding of the ins and outs of the ecosystem, influencing informed decisions in the future.
- The Kenyan and South African governments, in liaison with PSI, are scheduled to sign an institutional memorandum of understanding that grants startups access to PSI's laborious facilities, which will translate to comprehensive and sound research outputs and innovations.
- There is a need to look for insights from knowledgeable parties that can help address societal gaps and that of partners.
- There is a need for startups to create employment opportunities as this will address one of the most significant challenge communities faces.

FIRESIDE CHAT

EXPERIENCES OF STARTUPS FROM MARKETFORCE AND KIDATO

TESH MBAABU

CEO AND CO-FOUNDER, MARKETFORCE

Sam and Tesh unpacked the startup development process, successes, sustainability, and contextual factors constituting a regional entrepreneurship ecosystem. Kicking off the discussions was an overview of each institution as follows:

MarketForce digitises informal retail distribution for emerging markets by enabling consumer brands to manage their field sale activities and grow their African distribution channels. Courtesy of this platform, users can source, order, and pay for inventory anytime via interactive mobile channels and deliver it directly to their store by the nearest distributor within hours.

MarketForce also enables merchants to earn more by making them a one-stop-shop for popular digital financial services like buying airtime, paying water and electricity bills and banking and insurance services.

Kidato unlocks the potential of every family with a holistic online education or one-on-one tutoring. The institution provides globally recognised qualifications and enriching experiences right at the fingertips of African students and families. Kidato's teaching methods are child-driven, skill-based and focused on the overall development of each child. This way, the users enjoy a safe, healthy, and encouraging learning environment that prepares children for the global demands of tomorrow.

The conversation by the two startups founders (Sam Gichuru – Kidato and Tesh Mbaabu – Market Force) identified government issues, such as tax incentives and acceleration of starting procedures, availability of funding opportunities, connectivity of stakeholders, entrepreneurship education, previous startup experience, incubator support, and mentoring, as the most significant issues affecting the successful development of startups. As highlighted below, several issues require consideration from the policy and regulatory perspective for successful startup growth.

FIRESIDE CHAT

EXPERIENCES OF STARTUPS FROM MARKETFORCE AND KIDATO

SAM GICHURU

FOUNDER AND CEO, KIDATO

Gaps for successful startup growth

- a) Some industries must have a physical location to register a business, which leaves out those operating virtually for one reason or another.
- b) High tax rates and double taxation for startups.
- c) No source of capital for startups because of the risks involved. Most capital is foreign capital which is not domiciled in Kenya.
- d) Delayed implementation of some policies.
- e) Ineffective transport system.
- f) Difficulties in access to markets.

Recommendations

- a) Introduction of research and development tax incentive shifts that support smaller, more innovative businesses, including those in tax losses, thereby focusing support where, arguably, it will spark the most additional innovation activity.
- b) Different tax brackets to cater for tech startups.
- c) Value Added Tax (VAT) exemptions for startups.
- d) Tax rebates for expatriates who assist startups to scale.
- e) Retain more earnings for the business when selling shares.
- f) Introducing an enterprise development policy that caters for a range of small business initiatives, like instant asset write-offs, that will free up capital for alternative investment, including innovation.
- g) Adding value to existing innovations to have an impact on a global scale.





FIRESIDE CHAT

CREATING JOBS OF THE FUTURE – NEW EMERGING OPPORTUNITIES, TRENDS AND TECHNOLOGIES

BRIG. HILLARY KIPKOSGEY

AG. DIRECTOR GENERAL,
KENYA SPACE AGENCY (KSA)

SHEENA RAIKUNDALIA

COUNTRY DIRECTOR,
UK- KENYA TECH HUB

The big question to creating enterprises and commercialising was whether there would continually be a paradigm shift from traditional jobs. The idea that a person can stay in one career their whole life will also be questioned thanks to technological changes.

A close look at the Space Agency is that Kenya will launch its satellite in the future, thus the need to build, operate and maintain machines in space. A lot of data will be generated from the satellites, and there is a need to harness this data for “Wanjiku” to use gainfully.

Most professional jobs will be automated, and for people to fit in the job market, they must be highly skilled and flexible in skills that machines cannot undertake. A person will have to be multiskilled to undertake their job. A speaker observed that the job market has shifted from the conventional mode since:

- In the first industrial revolution that began in the 18th century, the steam engine was invented.
- In the second industrial revolution in the 19th century (1870) and the first two decades of the 20th century, electricity was created for mass production.
- The third industrial revolution occurred in 1950 and 69, characterised by the internet, communication technologies and the digitisation of everything. Electronics and information technology were used to automate production.
- The fourth industry is a fusion of technologies blurring the lines between the physical, digital, and biological spheres, collectively called a cyber-physical system (2011). The fourth industry is characterised by digitisation, integration, smartisation, virtualisation and designation.

The trend around integration requires a person to have multiple skills to survive the market. Freelancing will be a natural trend that has already picked up since the traditional 8 am to 5 pm jobs will not be necessary. People are taking up more roles and making more money, even with their primary jobs in place. There is and will be a change with the traditional workspaces where after Covid-19, people have been working from home, using co-working spaces and coffee places to conduct business.



FIRESIDE CHAT

CREATING JOBS OF THE FUTURE – NEW EMERGING OPPORTUNITIES, TRENDS AND TECHNOLOGIES

PHILIP THIGO

EXECUTIVE DIRECTOR FOR AFRICA,
THUNDERBIRD SCHOOL OF GLOBAL MANAGEMENT

HARRY HARE

CHAIRMAN AND PUBLISHER,
dx5ve (Formerly CIO Africa)

52% of jobs in Kenya are repetitive and automatable and will be extinct as jobs in the future, such as data entry clerks, accounting, payroll, administrative secretaries, factory assembly jobs, client information and customer service, business services, auditing, and general operation managers, to mention some.

JOBS OF THE FUTURE

- Data analyst and scientist.
- AI and machine learning specialists.
- General and operative managers.
- Software application developers and analysts.
- Sales and marketing professionals.
- Big data specialists.
- Digital transformation specialists.
- New technology specialists.
- Organisation specialists.
- Information technology specialists.

52%

Jobs in Kenya are repetitive and automatable and will be extinct as jobs in the future.

There is hope, however, as people will have to continually learn new skills as they go on in life and the job market. There is a need to change the attitude and structure of universities to look at the changing market and tweak the courses offered for market suitability. Traditional jobs will be slowly phased out, and other versatile skills will become vital in retaining and creating jobs, thus the need for a change in society. The plenary session noted that the youth should be encouraged to develop innovative startups, and parents should support their initiatives. Additionally, preparing for a future that is already unfolding will need:

- An early start in raising inquisitive children.
- Review the current curriculum to equip youths with the necessary skills, thus creating future jobs and skills needed for those jobs.





FIRESIDE CHAT BUILDING NETWORKS TO SUPPORT INNOVATIONS AND STARTUPS

MERCY KIMALAT

CEO, ASSOCIATION OF STARTUP AND
SMES ENABLERS OF KENYA (ASSEK)

MAGDALINE CHEPKEMOI

CHAIRPERSON, ASSOCIATION OF COUNTRYWIDE
INNOVATION HUBS (ACIH)

NEE-JOO TEH

HEAD OF INTERNATIONAL AND DEVELOPMENT,
KNOWLEDGE TRANSFER NETWORK (KTN)

This session explored perspectives from the panellists on how the organisations they represent build networks to support innovations and startups in the ecosystem.

The Association of Countrywide Innovation Hubs (ACIH) is a network formed to collaborate and leverage each other's strengths to grow the innovation stakeholders. The association's main aim is to strengthen innovation hubs outside Nairobi, build their capacity, push for policies at local and national levels, and bring together academia and the private sector to partner with the hubs. The Knowledge Transfer Network (KTN, otherwise known as Innovate UK) drives science research and innovation in the country with three main objectives:

- To grow the long-term economy of the UK.
- To mobilise UK research and innovation efforts tackling social and global challenges.
- To support the eight objectives of the UK.

The organisation is currently implementing its activities in Kenya, Nigeria, and South Africa, aiming at bridging the connection between business, academia and business, innovators, funders, and partner countries. Some challenges tackled are net zero, food security, water and sanitation and energy transitions. It was agreeable that synergies amongst the institutions present would be required to:

- a) Foster innovations in rural areas and create an enabling environment for them to accelerate.
- b) Foster collaboration among different stakeholders for startups to scale up.
- c) Build the capacity of innovation hubs across the board.
- d) Tap into the diaspora remittance programme.
- e) Ensure intentionality by all institutions to enhance the innovation ecosystem.
- f) Identify innovation needs and commercialisation from grassroots to national levels.

KIW 2022 SUMMITS



KIW 2022 ran in six thematic areas championed by strategic KIW partners and culminated in high-profile summits





SUMMIT
STUDENTS' INNOVATIONS

17 SPEAKERS
202 ATTENDEES

This track focused on various efforts by students to create products and enterprises that address challenges in society. When well guided, students in high school and college, have potential to create user-centered, disruptive innovations that have the potential to impact people and society. This summit included partner organisations that support students' innovations, faculty and teachers and the actual innovators. Selected students had opportunities to pitch their work and be inspired by industry leading experts and partners.



THEMATIC TRACK LEADER



Eric Nyamwaro
 Partnerships and Linkages
 Advisor, STEM Impact Center
 Kenya

KEYNOTE SPEECH

THE DOMAINS OF THE YOUTH ENTREPRENEURSHIP ECOSYSTEM AND STUDENTS' INNOVATIONS



Eng. Mike Mutungi

Founder and Chief Executive Officer,
I Choose Life-Africa

Entrepreneurship is the critical determinant for economic growth because it maximises the nation's wealth by creating new businesses based on innovation and disruptive ideas. The success of an entrepreneurial venture, especially for students' innovations, relies on the proper understanding of its ecosystem, i.e. various elements or factors associated with entrepreneurship.

This summit focused on various student efforts to create disruptive and user-centred innovations with the potential to impact people and society. Therefore, the objective of this session was to lay the ground on the importance of students' innovations from an ecosystem perspective, a detailed panel discussion, virtual interactions, and questions and answers, and this took the nature of sub-sessions as expounded below.

The session attracted students from primary, and secondary schools and institutions of higher learning, supporters of the students' innovations such as academia, the private sector, CSOs and the government.



PANEL SESSION

CELEBRATING KENYA TO THE WORLD

This session was aimed at appreciating the role of students' innovations that have taken Kenya to the global space. It was a keynote inspiration address by a representative of The Kenya Private Sector Alliance and a panel discussion by students who have led innovations that have won. The panellists gave a brief overview of their journey, from ideation to the competition stage, and tips innovators can bank on.

Panellists



EcoBana
2022 HUR Prize
Winner



Kenyatta University
Huawei 6th Global
ICT Competition
Winner



Saniwise Toilet
ImaGen Ventures
2022 Winner



**David Kamau
Kimani**
2022 Startup
Africa Winner



Collins Kathuli
Founder KYANDA
Africa



Mercy Wanderi
Technovation
Challenge



**Aquaculture
Barn Limited**
2022 Agribusiness
Winner

PITCHFEST

NIA STUDENTPRENEUR EDITION WINNERS

This session had top national innovation award pitches covering concepts in universal health coverage, food security and nutrition, manufacturing, and affordable housing. Students from high schools also got an opportunity to pitch ideas to inculcate an innovation culture from primary education to higher learning institutions.



nia | 2022/2023 WINNERS

Manufacturing

1. HyaPak
2. Multi-Purpose Modern Jiko

Food Security

1. Rongel Solar Pendulum Irrigation Pump
2. Household Manual Fodder Baler
3. Small-scale Maize Crop Mapping using AI & ML

Affordable Health

1. Bag Valve Mask Medical Ventilator
2. Kiwa Kosmetiks

nia.innovationagency.go.ke

PRESENTATION

INTELLECTUAL PROPERTY AWARENESS

Generally, Intellectual Property (IP) awareness and knowledge are deficient among students. This presentation on IP awareness was aimed at equipping the audience with an understanding of how student innovators can protect their inventions/innovations and designs and to know more about IP rules and rights.

Presenter



Rahab Mureithi

Partnerships and Resource Mobilisation Officer,
Konza Technopolis Development Authority

WORKSHOP

MULTI-DISCIPLINARY DESIGN THINKING

Students from different universities pitched their innovations to award the winning team who would get funding to actualise the idea. This approach promotes the multidisciplinary approach in learning and helps build core competencies of collaboration, communication, and practical problem-solving, amongst others.

Moderator



Eng. Mike Mutungi
 Founder and Chief Executive Officer,
 I Choose Life-Africa

PANEL DISCUSSION

STUDENT ENTREPRENEURSHIP SUPPORT PROGRAMS IN KENYA

The sub-session paved the way for students' presentations on their innovations while entrepreneurs in the ecosystem shared about their programs. On the other hand, the panellists shared wisdom nuggets while responding to questions generated throughout the session.

Panellists



Monica Blagescu
 Head of
 Programmes,
 Higher Education -
 British Council



Mike Mutungi
 Founder and CEO
 - I Choose Life
 Africa



Brian Keya
 Yunitak Manager -
 UNICEF Kenya



Evans Njoro
 National Director -
 Young Scientists
 Kenya



John Wall
 Executive Director
 - Junior
 Achievement
 Kenya

CELEBRATION

This was the time to honour and celebrate excellence in the students' innovation. The NIA awards were presented to the top teams by KeNIA. I Choose Life Africa conferred the design challenge pitches, and the high school students were awarded by STEM Impact Centre Kenya. After that, there was a celebration of entrepreneurs undergoing mentorship by I Choose Life Africa.

Moderators



Shadrack Biwott
 Founder,
 Afrisatisfaction Solution



Brenda Owiny
 Program Support,
 AFOSI

**STUDENTS'
INNOVATIONS SUMMIT**

**05TH
DEC
2022**





SUMMIT 4IR & DIGITAL TRANSFORMATION

16 SPEAKERS
67 ATTENDEES

The 4th Industrial Revolution, driven by a range of powerful technologies, offers unprecedented opportunities as well as significant risks to global, regional and national socio-economic development. Africa and the world are experiencing unprecedented digital transformation, where the Fourth Industrial Revolution and advancements in Artificial Intelligence, robotics, the Internet of Things, 3D printing, genetic engineering, quantum computing and other technologies, are rapidly transforming how we live, communicate, learn and work.



THEMATIC TRACK LEADER



Philip Thigo

Executive Director for Africa,
Thunderbird School of Global
Management



KEYNOTE SPEECH

EMERGING TERRAIN IN THE 4TH INDUSTRIAL REVOLUTION



Philip Thigo

Executive Director for Africa,
Thunderbird School of Global Management

The Fourth Industrial Revolution rapidly transforms how we live, learn, work, and communicate. These emerging technologies are constantly changing and evolving. Artificial Intelligence (AI), Block Chain, Cryptocurrency and Non-Fungible Tokens (NFTs) are emerging as areas of experimentation and application in real-world situations. The metaverse had been called the union of all advances in technology. A shared virtual space where people worldwide could interact with one another using immersive and emerging technology. According to Travis Cloyd, a Global Futurist and Professor at Thunderbird School of Global Management, the Metaverse is an ecosystem where digital and physical worlds collide. It is a realm where people can be anything they want, and the world is a place where we can create people can create their own digital identities. The metaverse will blur the lines between the "real" and "virtual" worlds in the not-so-distant future. In the context of the metaverse, cryptocurrencies and NFTs serve as tools that make transactions authentic. With blockchain technology, metaverse developer can create their cryptocurrency and NFTs. Many metaverses have incorporated cryptos and NFTs as cornerstones of their project or platform, creating a self-contained payment system and virtual marketplace with supply and demand economics. Recently, Ghanaian dancing pallbearers bagged \$1 million after selling memes as an NFT, paid through Ethereum Cryptocurrency. Christie's Auction House in London sold a digital collage of images called "Everydays–The First 5,000 Days" for an astounding 69.3 million.

HIGH-LEVEL PANEL

AGILE GOVERNANCE – GOVERNING IN THE ERA OF UNCERTAINTY

The session explored threats, challenges and prospects of agile governance and ways stakeholders can re-imagine governance in this era of uncertainty through a multistakeholder approach. It was highlighted that emerging technologies shifted power away from governments towards companies and nonstate actors, challenging the traditional governance model. The World Economic Forum (WEF) noted that changes are so profound that, from the perspective of human history, there has never been a time of greater promise or potential peril. Decision-makers are too often caught in traditional, linear (and non-disruptive) thinking or too absorbed by immediate concerns to think strategically about the forces of disruption and innovations shaping our future. Companies with agile or less bureaucratic processes mainly drive the shift. On the other hand, governments and policymakers are increasingly constrained to just being reactive to the speed of technological innovation. This linearity means that the sector or silo approach to solving human developmental challenges by the current policy praxis requires a different approach, tempered by deliberate collaboration and co-creation between the private sector, governments, civil society, and citizens. World over, the response to the 'unknown' power of technology and its influence has been met with various responses from government and regulatory authorities. In Africa, internet shutdowns have become the new normal.

According to the British Broadcasting Corporation (BBC), there were 25 documented instances of partial or total internet shutdowns, compared to 20 in 2018 and 12 in 2017. These have connected to some form of democratic expression – elections, protests, or dissent. The economic costs of these 2019 shutdowns are estimated at \$2.2 billion, according to Global Risk.

Panellists



Caroline Gaita
CEO, Mzalendo
Trust



Alessandra Casazza
Manager, UNDP
Resilience Hub for
Africa



Robertson Kabucho
Head of
Programmes,
Kenya & Ethiopia
at Hanns Seidel
Foundation



Prof. Nyokabi Kamau
Executive Director,
The Centre for
Parliamentary
Studies & Training



Philip Thigo
Executive Director
for Africa,
Thunderbird
School of Global
Management

DEBATE

PUBLIC SERVICE LEADERSHIP AND INNOVATION IN THE AGE OF 4IR

The session opened a debate on the future of government and innovation in public service, reality, myths an opportunity for public service innovation leadership and action. The Centre for Public Service Innovations, South Africa, defines innovation as *‘The process of transforming an idea, generally generated through research and development into a new or improved product, service, process or approach, which relates to the mandate of the government and the real needs of society, and which involves scientific, technological, organisational, or business activities. Innovation is increasingly viewed as the heart of good public administration globally and regionally’*. Public service organisations worldwide are turning to innovation as an effective means of modernising their operations and breaking new frontiers to improve service delivery. It was noted that innovation potential in public service in Africa is far more significant than has been realised. However, over the years, observations highlight some innovations’ failure to stir significant improvement in service delivery. Innovation in public service is perceived as ad hoc rather than ongoing or planned. There is also a perceived lack of opportunity and support for creativity and innovation, where the public sector has been unable to attract or retain young innovative talent. At the onset, citizens further question whether public service can innovate. In addition, there has yet to be a systemic approach to recording and evaluating innovative methods or sharing relevant knowledge and learning across public service. There is, therefore, a need for a paradigm shift to a new vision and broader agenda for strengthening a culture of innovation in the public sector, informed by an appreciation of the actual situation and reality of citizens.

Panellists



Harry Mwangi
Deputy Director
ICT, Public Service
Commission



Phyllis Wakiaga
Senior Private
Sector
Development
Advisor, Tony Blair
Institute for Global
Change



Fred Gachoka
Global Account
Director, SAP



Nyasha Mutsekwa
Regional
Executive, AdaptIT

PANEL DISCUSSION

INFRASTRUCTURE OF THE FOURTH INDUSTRIAL REVOLUTION

This session explored how internet infrastructure had been developed to enhance value-added services beyond connectivity. It also showcased examples of gamification, scaling online education, and connecting hard-to-reach communities with knowledge services. The World Economic Forum defines infrastructure 4IR as a "forward-looking infrastructure that leverages technology and information to provide high-quality environmental, economic, and social outcomes and functions as a system within broader human and natural systems. In re-imagining infrastructure in the Fourth Industrial Revolution, digital infrastructure must be defined with a purpose: that it is inclusive, enhances human interaction and supports access to opportunity within planetary boundaries. Reimagining infrastructure in this era anticipates the development of digital infrastructure, not as discrete projects, or assets but as operational and enabling systems that deliver social, economic, and environmental services. In this paradigm, digital infrastructure encourages innovation in organisations on how knowledge is diffused, services are enhanced, data is used to achieve new efficiencies, access is ensured, and performance is improved.

Recommendations

- 1 Laws should be passed in an agile manner to encourage healthy governance.
- 2 Technology should not be viewed as a digital divide but rather the future the government needs.
- 3 There is a need to have the government abandon 19th-century solutions and embrace those of the 21st century.
- 4 There is a need to embrace working in blockchains leading to co-relations.
- 5 Access to funds is still a challenge; there is a need for proper structures.
- 6 There is a need to encourage collaboration between private and public sectors.
- 7 Inclusivity of women and People with Disabilities (PWDs).
- 8 There is a need to maintain the standards and embrace technologies.
- 9 There is a need for more high-level roundtable meetings.
- 10 Parliament needs to take ownership of the process and act with haste.

Panellists



Helinna Ayalew
Head of Innovation Partnerships, Liquid Intelligent Technologies



James Turuthi
C Level Executive - Frontier Optical Network



Steven Gemmiti
Director of Online Programs, ASU-Thunderbird



Niraj Shah
Director Business Development and Sales, K Africa Data Centre



Bernard Chiira
Director, Innovate Now



Jay Shapiro
Founder & CEO, Usiku Games



Josephine Ndambuki
Chief Manager, Business Development & Innovation, KoTDA



**4IR & DIGITAL
TRANSFORMATION
SUMMIT**

07TH

DEC

2022





SUMMIT

SKILLS AND TALENT FOR INNOVATION

15 SPEAKERS
52 ATTENDEES

Innovation Skills are vital, as the basic input to the diverse national innovation system. The summit focuses diagnosing the efforts and successes in diffusing the right skills including competence based curriculum, problem based approaches, design thinking, digital skills, innovation leadership, talent development, futuristics skills, the future of work and talent mobility. In addition, the summit explores mechanisms to breaking silos and building bridges between academia and private sector, Government, academia and informal sector.



THEMATIC TRACK LEADER



Sheena Raikundalia
Director,
UK-Kenya Tech Hub

TEDTALK

INNOVATIVE JOB CREATION OPPORTUNITIES

Uwazi gave an overview of their business, which deals with bodaboda, mechanics, and fishermen. Their mission is to create one million jobs while transforming lives through changes in behaviour and forms of messaging through technology.

HIGH-LEVEL PANEL

THE RACE FOR TECH TALENT: THE EFFECT OF BIG TECH ON THE KENYAN DIGITAL ECONOMY

A few entrepreneur founders shed light on what they deal with as follows:

Digital Divide Data Limited runs 50 digitals in Kenya, aiming at reaching the target of 600 digital cities while democratising access to various opportunities. They built a proven work-study methodology to train, support and employ talented individuals worldwide, providing customers with high-quality, competitively-priced services.

ALX transforms Africa by developing future leaders and exporting their talent globally. ALX members under various training acquire academic and digital skilling translating to job creation.

Microsoft has an engineering hub which they primarily use for digital scaling for graduates from higher learning institutions. Embracing technological training at an early age equips the youth with the necessary skills that set them apart when pursuing innovative opportunities.

Huawei partners with universities and TVETs to upgrade skills supporting industries and startups. Building solid digital foundations will be critical to the country's long-term success in harnessing the potential of the digital economy as a driver of its economic growth, job creation and service delivery. In this regard, Huawei involves secondary schools as this will advance the curriculum to reflect the broader vision of innovations at national and global scales.

Google is working on exporting talents outside Africa to improve entrepreneurship and be viewed as a role model in technology advancements. With the advancements in digitisation, it is crucial to help companies use technology to modernise, scale, and reach their customers' needs.

Recommendations

- 1 Encourage innovators and entrepreneurs by giving stories of people who made it in digital areas, especially in rural areas.
- 2 Curriculum should be based on solving a problem, and students should be equipped with technological, digital and social skills, e.g., using mobile phones, tablets, computers etc.
- 3 Improve accessibility to rural areas to re-invent the community and the country.
- 4 Encourage collaborations between different experts for better outcomes in the innovation ecosystem.

Panellists



Jack Ngare
Technical Director,
Google Cloud



Catherine Muruga
Managing
Director, Microsoft
ADC



Fred Swaniker
Founder & CEO,
African Leadership
Group



Tania Ngima
Managing
Director, Digital
Centers (Digital
Divide Data)



Maureen Mwaniki
Vice Director,
Programs
Management at
Huawei
Technologies



Dr. Shikoh Gitau
Co-Founder and
CEO, Qhola
Limited
Moderator

DEBATE

UNIVERSITIES ARE NO LONGER RELEVANT AND SHOULD BE ABOLISHED

Prof Omwenga, in support of the motion, stated that universities offer skills and knowledge which move the innovations agenda forward through research and development. Kenya has ready skills set needed for the market, courtesy of the universities' efforts. Through internship programs, the government equips graduates further, making them suitable candidates in the market.

Moringa, a vocational training institution, empowers students to be tech-savvy in their career paths. Through a 3 to 20-week training program, depending on what potential employers need, students are privileged to be under the 80% bracket and assured of placements in the job market. Moringa University also offers internship opportunities to their students, narrowing the gap graduates face in search of jobs.

Lauren, representing the opposing side, informed the audience that Future Females trains female entrepreneurs, thus creating job opportunities for them. However, universities end their role at instilling knowledge and never a step further on how to utilise the same. She reiterated that universities train on skills which are not needed in future, translating to students pursuing courses that have no guarantee of suitability for the job market.

In closing the debate, the Director of University Education said that all panellists are graduates from various institutions of higher learning. As a result, they acquired the necessary skills to shape their day-to-day engagements in their respective lines of work. The Director also noted the value that institutions such as Future Females added in bridging various gaps and addressing several challenges.

Recommendation

- 1 Universities play a significant role, but each should change its training model to be market oriented. Relevant stakeholders should think of how to improve universities going forward.

Debaters



Prof. Elijah Omwenga
DVC, Academics and Student Affairs, University of Kabanga



Snehar Shah
CEO, Moringa School



Dr. Watu Wamae
Lead, Health Innovation Platform at the Africa Oxford Initiative, University of Oxford



Lauren Dallas
CEO, Future Females



Sheena Raikundalia
Director, UK-Kenya Tech Hub Moderator

PANEL DISCUSSION

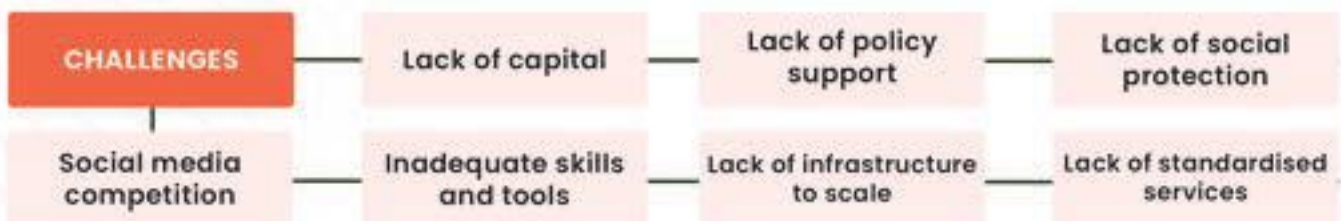
JUAKALI ON STEROIDS: GIG WORK DRIVING THE DIGITAL ECONOMY

The speakers shed light on their respective institutional objectives in innovations as follows:

Job Tech Alliance refers to digital platforms which connect people to job opportunities that transform livelihoods. It is an NGO operating globally in 40+ countries, and its initiative is to increase jobs in Africa, but the challenge is the sustainability of scale in Kenya.

Gearbox connects universities to the innovation industry by training members on making machines for the local market and, as a result, creating job opportunities for small companies. The organisation deals with people talented in engineering and those in Juakali (an expression for the Kenyan informal sector). The Gearbox is in liaison with the National Industrial Training Authority under the Ministry of Labour to empower people with skills relevant to the market.

NITA is also working with the Ministry of Education, especially TVETs, to close the bridge between academia and industry. Also, using the Kenya Labour Market Information Systems in the Ministry of Labour to understand where the gaps are and what to do.



Recommendations

- 1 The government needs to put a policy on marketing local machines locally and globally.
- 2 The government should introduce policies that ensure a seamless link to markets to foster job opportunities.
- 3 Persons in juakali should be trained on how to standardise their products.
- 4 There is a need to bridge the gap between academia and the industry.
- 5 There is a need to introduce training on 3D printing in TVETs.
- 6 There is a need to create enabling environments for informal workers to grow.
- 7 There is a need to decentralise finance.

Panellists



Samuel Karanja
CEO, Micro Small and Medium Enterprise Alliance



Mercy Mangeni
Senior Venture Building Manager, Jobtech Alliance



Wangui Karanja
CEO, Peris



Dr Kamau Gachigi
Director, Gearbox



Tamara Cook
CEO, Financial Sector Deepening Kenya Moderator



SKILLS & TALENT FOR INNOVATION SUMMIT

07TH
DEC
2022





Kenia



2022 Commercialisation Summit

SUMMIT COMMERCIALISATION

15 SPEAKERS
50 DELEGATES

This track focuses on strengthening best practices and systems for good research and commercialisation, ranging from national guidelines, institutions systems and programs as well as individual capacities and resources. Research to Commercialisation requires a wide range of skills and partnerships. The summit attempts to bring the players together and expose the various linkages that make commercialisation thrive. This is part of the ST&I, research as well as higher education sectors reform trajectory to exploit research and intangible assets as a substantive alternative source of revenue.



THEMATIC TRACK LEADER



Agnes Tsuma
Manager, Innovation
Commercialisation,
Kenia



KEYNOTE SPEECH

PARTNERSHIPS & POLICIES FOR RESEARCH AND INNOVATION: GLOBAL CONTEXT.



Sian Rasdale

Head of Global Science-Deputy Director,
Foreign Commonwealth and Development Office

The keynote speech was given by Sian Rasdale, Head of Global Science at the Foreign Commonwealth and Development Office (FCDO). She was concerned that for every 20 ideas conceptualised, only one made it to scale, meaning that 19 brilliant ideas never saw the light of day. This begs the question of what could stop the 19 from making money or social change. Her recommendations for curbing the problem were:

Providing startups with access to the capital early on in their journey. For instance, the UKAid has assisted programs such as the Africa Technology and Innovation Partnerships (ATIP) and the Global Innovation Fund.

Creating a connective environment to unite all skills, such as peer-to-peer learning or exchange programs.

Creating a favourable policy and regulatory environment as getting the right mix is essential for successful commercialisation.

Sian commended KeNIA for hosting the commercialisation summit and the Kenya Innovation Week, as this initiative is one way of solving the challenges highlighted above.

CASE PRESENTATION

COMMERCIALISATION CASE FOR UK & SOUTH AFRICA

The session goal was to draw lessons from the UK and South Africa regarding the successful commercialisation of innovations. Christian Ziar from the University of St. Andrews gave his perspective from an academic angle. In contrast, Dr. Vuyisile from the Technology Innovation Agency in South Africa presented from a government angle.

Christian informed the delegates that commercialisation is essential in universities as it enables them to diversify funds, create social impact and increase the number of staff. However, they identified limited funding, slow growth rate and poor linkage between the university and the industry as the significant challenges hindering commercialisation.

He emphasised that commercialisation comes in many forms, such as licensing agreements, creating startups/spinouts and forging strategic partnerships. They implored universities to actively conduct research and evaluate their value propositions, comprehensively protect their IPs, develop innovations, and explore ways of making money from the inventions for research outputs to be successfully commercialised.

Dr Vuyisile, on the other hand, gave a background of TIA as a national public entity offering both monetary and non-monetary support and serving as the critical institutional intervention bridging the innovation chasm between research and development from higher education institutions, science councils, public entities, the private sector, and commercialisation.

The speakers urged institutions to conduct due diligence before carrying out their research to know what already exists in the market and avoid making similar innovations, invest in research and development and have an IP policy to guide their commercialisation efforts.

Presenters



Christian Ziar
Head of
Technology
Transfer,
University of St.
Andrews



**Dr. Vuyisile
Phehane**
Executive,
Bio-economy,
Technology
Innovation Agency



**Dr. Emmeline
Skinner**
Evidence,
Innovation and
Inclusion Adviser,
East Africa
Research and
Innovation Hub,
ICDO
Moderator

HIGH-LEVEL PANEL

COMMERCIALISING INNOVATIVE RESEARCH AND DEVELOPMENT OUTPUTS FOR JOB CREATION

The high-level panel comprised academia, industry players and researchers discussing 'Commercialising innovative R&D output for job creation'. Dr Muchiri and Watiri, who represented academia, stated that policies to facilitate innovations are present in their institutions, but funding remains a big challenge.

Dr. Ecuru representing research centres stated that systems to support innovations are in place but begs the question if they are working. He emphasised the need for scientists to liaise with industry experts to build trust.

Dr. Karanja and Yvonne spoke on behalf of the industry. Yvonne believed the private sector is profitably oriented; therefore, she will only invest where the innovation looks profitable and sustainable. She added that innovations should only sometimes concentrate on the end user but look at the best place to commercialise. Dr. Karanja, on his end, viewed innovation hubs as the best way to create synergies between the industry players and assist startups in getting all the expertise they need to scale up their innovations.

Each panellist gave various innovations that have been successful or failed. Dr. Ecuru's example of a failed commercialisation venture was a real eye-opener as it showed that the procurement department is essential; thus, lacking trust and many players can undermine commercialisation. He emphasises that partnerships should not be a matter of convenience but of trust among players requiring testing and failure.

Panellists



Prof. Peter Muchiri
DVC Academic
Affairs & Research,
DeKUT



Watiri Kiragu
Deputy Principal,
Kabete National
Polytechnic



Dr. Julius Ecuru
Head, Biomovate
Africa, ICIPE



Dr. Robert Karanja
Co-founder,
Vilgro Africa



Yvonne Njeri
Director, Product
Communications
& Packaging,
Mastercard



Dr. Emmy Chirchir
Director, Product
Communications
& Packaging,
Mastercard
Moderator

CASE PRESENTATIONS FROM LAB TO MARKET

Norah Magero, an alumnus of the Africa Innovation Prize, shared her commercialisation journey regarding her innovation, a portable solar refrigerator. The refrigerator, named Vaccibox, was developed to help children in rural communities access vaccines. She stated that the innovation journey is long; therefore, innovators should be patient with themselves and the process. Further, she urged innovators to get mentors who will offer guidance, motivation, support, and invaluable life lessons from research to commercialisation.

Faith Wambui from the Pan African University Institute of Basic Sciences Technology and Innovation gave her perspective on the importance of innovation hubs and their critical role in helping students at the university. She encouraged universities to have hubs or innovation centres to enable them to commercialise their research outputs.

Dorah Momanyi, an alumnus of BioInnovate Africa, gave her journey on how she came up with sorghum pops from her master's thesis. She described her journey as a gradual process that began at the university and is currently an independent startup. Further, she encouraged the delegates present not to be afraid to start the innovation journey, and however, they should be patient with themselves and the process.

Dr Anncarol from the R2C cohort got the opportunity to pitch her innovation that focuses on microorganisms rapidly shrinking waste in septic tanks and pit latrines, thereby reducing the rapid emptying of these latrines and sewage disposal in Kenya. She highlighted the need for more funds as the main challenge prohibiting her from scaling up her innovation. She encouraged academia to encourage students to research to address given challenges in Kenya.



Recommendations

- 1 Funds for innovations from the government or the private sector should be readily available and accessible.
- 2 Academics, researchers and stakeholders in the industry should approach each other with trust to further innovations.
- 3 A favourable policy and regulatory environment are critical for the successful commercialisation of innovations.
- 4 Commercialisation takes various forms. Therefore, innovators should be open to diverse options for taking their research to the market.

Presenters



Norah Magero
Founder, Vaccibox



Dorah Momanyi
Founder and CEO,
IPoP Africa



Faith Wambui
Centre and
Community
Manager, PAUSTI-
Hub



**Dr. Anncarol
Karanja**
Research Fellow,
R2C Accelerator



Eva Kimani
Project Manager
Enterprise
Development,
MDF-ESA
Moderator



**COMMERCIALISATION
SUMMIT
07TH
DEC
2022**





SUMMIT
INNOVATIONS IN PUBLIC SECTOR

15 SPEAKERS
 50 DELEGATES

The Innovations in public sector summit demonstrates the KIW's team appreciation that just as it is with private sector, innovation can be a major booster for productivity, improvements and cost savings in public sector. Innovating in public sector is seen as a critical element of economy-wide innovation performance. The summit will demonstrate examples of opportunities to develop stronger innovation policies and strategies relating to the public sector, the institutional conditions necessary for generating innovations and cases of innovations that are thriving in the sector. KIW hosted the Innovations in Public Sector Summit for the first time. The rationale of the summit was that, just as in the private sector, innovation can be a significant booster for productivity, improvements, and cost savings in the public sector. The programme was designed to feature three significant areas of; How the government and its institution are enabling innovations for public service; Collaboration to further innovations in the public sector and data for sustainable governance and Challenges and opportunities for innovators in the public sector



THEMATIC TRACK LEADER



Nekesa Were
 Director of Community,
 Medic

KEYNOTE SPEECH

PRACTICAL REALITIES OF INTRODUCING & DEPLOYING INNOVATIONS IN PUBLIC SECTOR REFORMS



Sen. Crystal Asige

Nominated Senator

The Senate of the Republic of Kenya

Senator Crystal Asige gave her inspirational speech on “Disability driving Innovation” through an online video. In her speech, the senator affirmed that disability presents an opportunity to innovate. She said that for people living with disability in Kenya, surviving in a disabling environment is the most challenging thing.

“If all you see is what you see, then you don’t see all there seems to be seen,” said Senator Asige to prove that disability drives innovation. She was inspired by curiosity and creativity after the gradual loss of her eyesight caused by glaucoma while in high school; she has proven that visual impairment and disability are different. Her personality and exposure merged to drive her to success. Crystal reiterated that if one can’t change their circumstances, then change should be in how one looks at the circumstance.

She called on innovators to innovate for people living with disabilities and to ensure they include them in their teams so they can get innovative with a universal perspective.

She stated, *“Reform means to change something, and if our public sector remains stuck in tradition, then we shall not experience change. Don’t leave any stone unturned and be sure to ask questions. Innovation without a purpose is nothing.”*

CASE PRESENTATION

GOVERNMENT EFFORTS TO SPUR KENYA’S COMPETITIVENESS THROUGH TOP-NOTCH INNOVATION IN THE PUBLIC SECTOR

The Kenya Trade Network Agency deals with the processing of permits in partnership with the Kenya Ports Authority, Kenya Revenue Authority, the Kenya Plant Health Inspectorate Service (KEPHIS), The Tea Authority and other government agencies. The institution houses a portal containing information on trade matters, step-by-step procedures for navigating the ecosystem, and human resources to guide consultation processes at each stage. The portal operates on a single window system which brings all processes together when one logs in, ensuring predictability and accountability.

The Kenya Innovations Unit at WFP has integrated Human Centred Design (HCD) through the County Innovation Centres. It operates mainly in the arid and semi-arid parts of Kenya, and the aim is to support the Kenyan government and its partners in answering the following questions:

- What challenges exist?
- Are we solving the right problems in daily life and respective contexts?
- Are we mirroring the existing reality which defines, designs, evaluates, empathises and is ideal?
- Solutions can not come without partners, the government, the community, Private Sector, Academia, and Universities coming together.

Kenya Space Agency was established as a government agency in 2017 and has made history in Kenya's space program, the space sector value chain, and earth observation and is operating stack services in applications, data, insights, and infrastructure. The gaps realised were access to data, incomplete development of the data portal, lack of centralised data, and agriculture decision support, including climate, crop, drought, weather, land, and geospatial data from space.

Communication Authority of Kenya (CA), was represented by Gilbert Mugeni who highlighted its strategic plan, access, and market development, enabling environment, regulations that support innovation and investment, capacity building and laws that support ICT. The key statistics as of September 2022 were given as follows:

65M mobile phone subscriptions	1.43M machine to machine usage	54M (30%) smartphone penetration	148.38M data and internet subscriptions	31.82M broadband subscriptions
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The regulatory actions to promote innovation include cyber security, universal services, research and development, community development, mobile broadband, and shared spectrum. The successes recorded include e-commerce support, e-education connecting schools, and access to ICT. The challenges experienced were resistance to adopting new systems such as online services, lack of the right infrastructure and equipment, e.g., laptops, lack of internet connectivity e.g., Wi-Fi, change management and cybersecurity.

Panellists



David Ngarama
Ag. CEO, Kenya Trade Network Agency



Andrea Kobor
Senior Innovation Manager, WFP Kenya



Charles Mwangi
Ag. Director, Space Sector & Technology Development, Kenya Space Agency



Dr. Gilbert Mugeni
Director of Research, Innovation and Knowledge Management, Communications Authority



Nekesa Wera
Director of Strategy, Kribia Ambassador

PANEL DISCUSSION

TOWARDS DATA-DRIVEN GOVERNANCE

H.E. Dr Yulita Mitei – Deputy Governor, County Government of Nandi

Nandi County has adopted data-driven governance; there is a call centre for citizens and air concerns, queries, and comments. Data is regularly updated for relevance, and citizens are sensitised through various platforms. Data availability has enabled development in formerly neglected areas across the county.

Boniface Akuku – Director ICT AT KALRO

Boniface tabled a concern that despite having a well-thought-out platform, farmers and other users need help accessing data on climate change, for example, which is integral to their day-to-day. In addition, he raised a call for social innovation to The Kenya Agricultural Platform to advise farmers on suitable crops to grow.

Florian Marcus – Project Manager at Proud Engineers

In Estonia, 99% of government services are digitised, e.g., children’s birth documents and other benefits. Schools are also reserved for children at birth, lessening the nightmare when they are of age. Electronic identification documents (IDs) are provided for all citizens simplifying the ecosystem process as various services can be procured or are availed through one card. Florian emphasised the importance of sensitising citizens on withholding data, e.g., through vernacular radio stations and politicians.

Charlene Migwe – Programme Manager at Development Gateway

In answering the question, ‘What stops people from using available data?’ Charlene answered that people need a mindset change and that the services should be turned into data. Furthermore, issues around fertiliser, food security and understanding procurement laws and data should be addressed.

Panellists



H.E. Dr. Yulita Mitel
Deputy Governor,
County Government of
Nandi



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Director of ICT,
KALRO



Florian Marcus
Project Manager,
Proud Engineers



Charlene Migwe-Kagume
Regional Program
Lead for East
Africa,
Development
Gateway



Al Kags
Co-Founder &
CEO, The Open
Institute
Moderator

PANEL DISCUSSION

THE FUTURE OF PUBLIC SECTOR INNOVATION

A futuristic look at innovative governance and discuss some solutions that the public sector could look at to ensure sustainable futures for the citizenry anchored in innovation.

Panellists



Dr. Michael Nzungi
Manager, Public
Sector Scaling
Action Lab, East
Africa, Results for
Development



Baimoi Abe
Founder, Mamba
Heritage



John Kamara
Founder,
Afyarekad

INNOVATIONS IN THE
PUBLIC SECTOR
SUMMIT

07TH
DEC
2022





SUMMIT STARTUP KENYA

15 SPEAKERS
50 DELEGATES

This track focused on startups from across the country, aiming to link the most promising startups to investors and funders. There are multiple support programs rolled out by Government, private sector and partners. Associations also provide coordination and support mechanisms. The Startup Kenya summit brings together all these relevant stakeholders to strengthen the startup movement. This is in line with KeNIA's mandate of developing and managing the national innovation system.



THEMATIC TRACK LEADER



Florence Kimata, HSC
Enterprise Development and SME Financing Policy Advisor

KEYNOTE SPEECH

STARTUP INDIA STRATEGIES WHICH HAVE ENABLED THE ESTABLISHMENT OF HIGH-POTENTIAL STARTUPS



Rohit Vadhwa

Deputy High Commissioner and DPR to UNEP and UN-Habitat,
High Commission of India, Nairobi

Startup India is a flagship programme for the government which was launched on 16th January 2016. The initiative aims to provide a conducive environment for startups in India to thrive and grow.

Eligible companies can get recognised as startups by the Department for Promotion of Industry and Internal Trade (DPIIT) and avail various benefits such as fast acquisition of IPs, fast patent registration, tax relief and exemptions, access to national startup funds, relaxed public procurement norms and access to the innovation ecosystem hub.

PANEL DISCUSSION

ENSURING AN ENABLING ENVIRONMENT FOR THE STARTUP ECOSYSTEM

In 2021 venture capital Africa startup closed 650 deals in Africa.

Panellists



Hilda Moraa
Founder & CEO,
Pezesha



Victor Agallo
Managing
Director, Vity
Consult
Moderator

KEYNOTE PRESENTATION

IMPLEMENTATION OF THE KENYA INTEGRATED NATIONAL FINANCING FRAMEWORK

The session brought out the following:

Implementation of the Kenya National Integrated Financing Framework is in place.

Policy interventions have been implemented for the Producer Price Index (PPI).

Private sector innovations can help the public sector to scale up.

Leveraging on PPIs fuels economic growth and aligns projects to SDGs.

PPI thrives where there is certainty; hence, we have PPI Act 2021, which is operational and focuses on the local context.

Panellists



**Treasury
Representative**



**Florence
Kimata, HSC**
Enterprise
Development and
SME Financing
Policy Advisor
Moderator

HIGH-LEVEL PANEL

UNLOCKING UNCONVENTIONAL FUNDING OPPORTUNITIES FOR STARTUPS

Each speaker gave a detailed analysis of how their organisation supports innovations and startups, and the following conclusions were drawn from these presentations. Firstly, the need to build capacity and sensitise angel and potential investors, as well as create incentives for them like tax reductions or holiday giveaways. Secondly is reducing risks of investing in startups by amending policies that warrant government support. Additionally, the speakers highlighted the need to build processes and tools that reduce deal costs and have regional clubs and hubs for investors. It was also noted the importance of focusing on catalytic philanthropy, creating a pool of funds for funders, and venturing into new funding areas like Islamic and diaspora financing.

Panellists



Stephen Gugu
Director, Viktoria
Ventures



**Dr. Frank
Aswani**
CEO, African
Venture
Philanthropy
Alliance



Esther Ndeti
Investment
Principal,
Unconventional
Capital



Jonas Tesfu
Director Business
Development and
Partnerships,
Pangea Trust



**Florence
Kimota, HSC**
Enterprise
Development and
SME Financing
Policy Advisor
Moderator

PANEL DISCUSSION

SUPPORTING INNOVATIONS AT THE COUNTY LEVEL

Esta Kamau, Country Director at Heifer International, informed delegates that Heifer International is working with twelve counties in Kenya, their fundamental principle being: sustainability skills and permanence of impact and partnership. In liaison with the county governments, Heifer International has created sustainable environments. There is need to create a framework that channels how all institutions in the innovation ecosystem work, table the available resources and have seamless synergies across the board. Additionally, more effort is needed to reach the grassroots, thus building from the ground up, not only from the policy side but visibility.

Jeremy Riro, Treasurer at ACIH, noted that country-wide innovation hubs proactively make innovations visible at the county level to strategic partners. Regional innovation weeks across the country provide a larger platform for young innovators. So far, ten regional innovation weeks have taken place across different counties, bringing to the limelight 150 scalable innovations that wouldn't have otherwise been known. The selected innovators then undergo an accelerator program to refine their ideas further and build their capacities. Furthermore, the Association conducts innovative competitive challenges where winners are awarded small grants from development partners. All the above is done in close collaboration with the county-level governments. One of the lessons learnt is that there are many opportunities at the grassroots level, and forged partnerships significantly contribute to advancing the same. Secondly, there is a need to increase the innovativeness and productivity at country and county-level hubs to build sustainable and scalable businesses.

Florian Marcus – Project Manager at Proud Engineers

In Estonia, 99% of government services are digitised, e.g., children’s birth documents and other benefits. Schools are also reserved for children at birth, lessening the nightmare when they are of age. Electronic identification documents (IDs) are provided for all citizens simplifying the ecosystem process as various services can be procured or are availed through one card. Florian emphasised the importance of sensitising citizens on withholding data, e.g., through vernacular radio stations and politicians.

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In answering the question, ‘What stops people from using available data?’ Charlene answered that people need a mindset change and that the services should be turned into data. Furthermore, issues around fertiliser, food security and understanding procurement laws and data should be addressed.

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PANEL DISCUSSION

THE FUTURE OF PUBLIC SECTOR INNOVATION

A futuristic look at innovative governance and discuss some solutions that the public sector could look at to ensure sustainable futures for the citizenry anchored in innovation.

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Manager, Public
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Founder,
Afyarekad



Connecting Innovations Locally




STARTUP KENYA
SUMMIT

07TH
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2022



KIW 2022 PRE & SIDE EVENTS

A woman with her hair in a high ponytail, wearing a black top and a white lanyard with the "kiw Kenya Innovation Week" logo, is leaning over a table. She is looking at a stack of documents. A man in a grey suit, white shirt, and patterned tie, wearing glasses, is seated at the table. He is looking down at the documents and has his hands clasped together. The background is a blurred indoor event space with other people and blue and white decor.

During KIW 2022, a total of 8 partner - led pre and side events ran parallel to the thematic summits.

COMMERCIALISATION AND ENTREPRENEURIAL INSTITUTIONS LEADERS (CEIL) SUMMIT

The 2nd CEIL Summit During the summit the institutions were able to share the success and challenges of commercialization as well as the business models working in their institutions. The summit brought together delegates from academia, research, government, private sector, and international partners who were able to form strong linkages to enhance commercialisation in their institutions.

KeNIA articulated its various initiatives geared towards institutional commercialization particularly the innovation bridge, R2C and KIW commercialisation summit. The summit provided a great platform to the 1st cohort R2C graduates who pitched their innovations to potential funders and investors. During CEIL 2021 one of the resolutions was for KeNIA to launch and disseminate the commercialization guidelines. KeNIA is delighted to report that during the CEIL summit 2022 the commercialization guidelines, which are designed to help academic and research institutions successfully commercialise their innovations, were launched.

At the end of the CEIL summit, the following resolutions were made:

01

Drawing lessons from the South African Entrepreneurship Development in Higher Education (EDHE) network, that a Kenya Network of Entrepreneurial Institutions' Leaders (KNEIL) is formed. The network will consist of Universities Fund, National Research Fund, Kenya National Innovation Agency, Commission for University Education, and Higher Education Institutions. The aim of the network will be establishing best practices, knowledge sharing, sourcing for funding opportunities, and carrying out self-evaluations to create a strong national innovation system.

02 Any feedback regarding the Commercialisation Guidelines should be received by 4th December 2022 to enable the guidelines to be released to the public on the 8th December 2022 and subsequently availed to institutions in February 2023.

03

That the Kenya Innovation Bridge will be a digital marketplace for innovations & commercialisable projects with an integrated real time national innovation & commercialisation information system.

04 That the Ministry will champion the development of a policy to set up Technology Transfer and Commercialisation Offices (TTCOs).

05

An Entrepreneurial Institutions' Maturity Framework (EIMF) be established as a mechanism for self-evaluation and piloting of the same be done in 2023.



AFRICA EARTH OBSERVATION CHALLENGE

The Africa Earth Observation Challenge sought to identify some of Africa's most innovative downstream applications of space technology and geospatial intelligence. It also aimed at improving various industries, such as agriculture and food security, smart cities, and logistics. The challenge was open to participants from across the continent and became a success, with 80 relevant submissions received from 25 different African countries.

The Africa Earth Observation Challenge winners were:

1. AgriBora (Kenya)
2. AgroXchange (Nigeria)
3. Kombuta (South Africa)

The challenge winners received access to prizes including technical support services, funding, data packages, incubation, and media publicity.



AGRITECH CONNECT: JOURNEY OF AN AGRI-TECH ENTREPRENEUR

The AgriTech connect event focused on the journey of an agri-techpreneur where the alumni of the AYuTe Africa Challenge gave their experiences regarding their commercialisation journey.

The Agri-tech connect side event was set to ensure a beneficial impact by recapping events on the training and competition offering to coach aspiring innovators. Its objectives were:

1. To understand the innovation ideation process.
2. To clearly understand some of the opportunities for agri-tech funding and the challenges of an agri-techpreneur.
3. To understand how pitching and mentorship incubation are essential for a startup.

During the event, the The AYuTe Africa Challenge Kenya 2023 was also announced.



JICA MASTERCLASS: NAVIGATING A THRIVING AND BORDERLESS STARTUP ECOSYSTEM

This was a discussion where key ecosystem players discussed steps to strengthen the startup ecosystem in the regional context. The key thematic areas were regulatory framework, startup skill gaps, enablers (accelerator/incubator), investments, and borderless expansion/regional integration.

Three masterclass sessions were also held. The first one was about the landscape of the Kenyan startup ecosystem focusing on the challenges facing the startups in the EAC region.

The second one was centred around Global Startup Center Japan and the benefits they can offer startups, from issuing visas to Japan, matching businesses, offering office and housing and fundraising. The third one focused on building a thriving innovation ecosystem.



VILLGRO AFRICA INVESTMENT ENGAGEMENT

In the first session, six innovators pitched their healthcare solutions to the audience and a jury panel, who subsequently questioned the innovators on various issues. The pitching and judging session gave rise to the following three leading innovations.

1. Ujuzi Fursa Africa
2. Lishe Living Nutritional Clinics
3. Diabetes Management Medical Centre

The pitch fest was followed by a mini speed dating where innovators from Kenya, Uganda and Nigeria got to pitch their innovations to various investors present and create networks. A representative from the Palladium Group later gave tips and tricks to attract funding for innovations.



INNOVATIONS THROUGH PARTNERSHIPS

The Finnish Non-Governmental Organisation (FINGO) in Kenya hosted a side event attracting participants from the startup ecosystem, investor companies, Enterprise Support Organisations (ESOs), the private sector and development partners in Kenya. FINGO hosts several projects like Fingo Powerbank, which was established with the deliberate effort to support development NGOs in innovations, technology solutions and private sector collaboration.

Three innovators from tuiFUND, Hearing CBC and Paimapper had the opportunity to pitch their ideas, highlighting the problems their innovations seek to solve and the support they require from investors.

Lastly, the CEO of Innovate Now talked about how to use technology for disability inclusion.

The CEO of Innovate Now talked about how to use technology for disability inclusion.



5G INNOVATION INITIATIVE

The HUAWEI 5G side event featured speakers from government, health industry, agriculture and the private sector where discussions on leveraging HUAWEI's 5G network were held.

AAR Healthcare explained how the 5G ambulance can enable a doctor sitting in the hospital to provide remote support to patients in the ambulance by viewing ultra-high definition video footage as well as patient's vital data.

A case was also presented for use of 5G network in industrial drones to help with spraying of farms, mapping of farms, and monitoring the health of crops through various drone photography.

Huawei presented their Smart Solutions both for residential and industrial use, that are currently being used in Garissa.



MASTER CARD FOUNDATION INNOVATION CHALLENGE

This session took the format of a panel discussion, showcasing active youth voices in WFP to strengthen local food systems and increase employment opportunities for young people in Kenya's agricultural value chain. The youth participating in this panel session were selected from WFP nationwide. This included representation from the Urban (Nairobi), Peri-urban (Nakuru and Migori), and the ASALs (Isiolo and Garissa) regions to offer different perspectives on the experience of youth undertaking agribusiness in different contexts in the country.

Mastercard Foundation Youth Innovation Challenge was introduced during the session. The challenge will be focused on strengthening food systems to promote increased value-chain employment opportunities for youths in Kenya.



ASSEK CAPACITY BUILDING PROGRAMME

ASSEK presented the needs assessment survey findings on Kenyan ESOs, highlighting the ecosystem's current challenges and recommended solutions. Based on the needs assessment report, ASSEK is implementing a capacity-building program to disseminate digital strategies and solutions to members and share some of the best practices they can adopt in their organisations to support entrepreneurs better.



INSTITUTIONAL COMMERCIALISATION SUPPORT (ICS)

This session saw the selected technical officers get introduced to the goals, strategy, and importance of the program. The overall objective of this initiative is to strengthen commercialisation processes in institutions.

AWARDS

National Innovation Awards (NIA)

NIA recognises & honours Kenya's leading innovators with remarkable achievements in their fields. The purpose of the National Innovation Award is to stimulate and encourage innovation in national priority areas. The Award therefore plays a critical role in strengthening the national innovative capacity through motivation, recognition, and support of innovators.

AFFORDABLE HEALTHCARE CATEGORY



THE UNIVERSITY OF EASTERN AFRICA, BARATON Bag-Valve-Mask (BVM) Medical Ventilator

This innovation is meant to respond to general respiration emergencies by manipulating the functionalities of various parts obtained off the shelf to fabricate a portable, easy-to-use, and low-cost mechanical ventilator for home and hospital environments.

This innovation was started one year ago by sourcing materials from online and local markets. The team has a neatly assembled prototype undergoing a series of tests and trials, and is looking for investors to boost their resources, enabling them to move to the refinement stages through eventual deployment.



RIARA UNIVERSITY

Kiwa Kosmetiks

Kiwa Kosmetiks is a natural cosmetic manufacturer founded on October 3rd, 2020. Its pilot product line was Kiwa Balm, an affordable organic lip balm targeted at broader audiences.

The company's mission is to provide quality products for everyday use and offer a safety guarantee to its users. Kiwa Balm renders good services that the clients deserve, as its mission is to value the customers' health and skin and give proper care to them.

MANUFACTURING CATEGORY



EGERTON UNIVERSITY

HyaPak

HyaPak is a B2B startup that transforms water hyacinth into biodegradable alternatives to conventional single-use disposable plastics.

HyaPak is transforming the plastic industry by making products of similar properties and material quality to existing single-use plastics, biodegradable within six months of end-of-life use. By making these, HyaPak simultaneously solves the challenges caused by plastic pollution and those caused by water hyacinths.



KISIWA TECHNICAL TRAINING INSTITUTE

Multi-Purpose Modern Jiko

The Multipurpose Modern Jiko has been designed to perform various functions such as cooking, heating water and warming food by recycling heat generated by the jiko. The simultaneous performance of duties may go a long way in reducing the pressure exerted on trees caused by increasing demand for energy, making it critical in promoting Sustainable Development.

FOOD SECURITY CATEGORY



SIGALAGALA NATIONAL POLYTECHNIC

Rongel Solar Pendulum Irrigation Pump

The Rongel Pump has a hybrid (manual and electrical) mode of operation. It consists of a pendulum that acts as a flywheel and a drag link mechanism that eliminates loss of prime during cranking. The uniquely designed pump incorporates caster wheels to ease portability and safety during operation.

The operator requires minimum effort and skill regardless of gender or age. The pump's discharge and efficiency are 60 litres per min and 72%, respectively, at a depth of five metres.



KISIWA TECHNICAL TRAINING INSTITUTE

Household Manual Fodder Baler

This innovation is an intervention measure to assist small-scale farmers whose farm sizes may not allow mechanisation methods to be used in baling fodder for future use, besides the associated cost of mechanised harvesting traced to fluctuating fuel prices. The manual fodder is an inclusive innovation targeting 60% of the small-scale farmers not excluded from benefits that accrue on a steady supply of animal products.

AWARDS

KIW AWARDS

The KIW Awards is a program run by KeNIA designed to recognise and honour individuals, organisations, communities, and institutions who have made tremendous efforts to build or support the national innovation system in Kenya. KIW Awards leverages the Kenya Innovation Week and showcases the innovativeness of Kenyans under which the national priorities and Vision 2030 are advanced. Individuals, institutions, or solutions to be awarded need to have demonstrated creativity, excellence, innovativeness, achievements, and impact.

OBJECTIVES OF THE KIW INNOVATION AWARDS

- To increase discoverability and awareness of innovative efforts.
- To recognise and celebrate individuals working to advance innovative solutions in Kenya.
- To incentivise and encourage efforts going into building a stronger national innovation system in Kenya.

The finalists were recognised and awarded during the momentous KIW 2022 as highlighted below:



STARTUP ACCELERATOR OF THE YEAR

STEM Impact Centre

The STEM Impact Center is a non-profit organisation based in Kenya that advances science, technology, engineering, and mathematics (STEM) education and learning to increase the number of students, especially women and minorities, pursuing science and technology innovations, courses, and career pathways. STEM Impact Center Kenya has created opportunities to gain experience in the incubation stages of a business, delivered unique experiences and fast-tracked opportunities for innovations, especially among youth and girls in the program.



ENTREPRENEURSHIP EDUCATION SYSTEM OF THE YEAR - UNIVERSITY

Jomo Kenyatta University of Agriculture and Technology (JKUAT)

JKUAT has a record of supporting innovation and enterprise development through quality entrepreneurial programs for training future generations of entrepreneurs at Colleges of Human Resource Development. JKUAT also established an active Directorate of Intellectual Property Management and appointed a University-Industry Liaison who has gone beyond implementing JKUAT's Intellectual Property Policy. Additionally, the campus initiates, promotes and strengthens technology transfer and commercialisation of the university's IP assets.



VENTURE DEVELOPMENT ENTITY OF THE YEAR

Viktoría Ventures

Viktoría Ventures is a Kenyan company helping early-stage companies obtain seed funding from angel investors and forge networks necessary for growth. They have consistently supported the innovation ecosystem by advising investors and providing portfolio management support, developing linkages to thriving startup ecosystems in other countries, and resourcing and managing incubation and acceleration programs.



COUNTY GOVERNMENT INNOVATION HUB OF THE YEAR

Makueni County Innovation Hub

Makueni County Innovation Hub allows enterprise creation, employment, and competitiveness by providing open spaces for entrepreneurs and programmers to explore and execute their ideas. It also runs periodical innovation challenges tied closely to addressing local and global challenges.



STARTUP OF THE YEAR

Jungopharm

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INNOVATION-FOCUSED DEVELOPMENT PARTNER OF THE YEAR

UK Government

The UK government has been instrumental in supporting the development of national and institutional systems for a more robust national innovation system in Kenya. KeNIA has worked with various programs under the UK government to strengthen the national policy environment by developing a range of programs that support the national system of innovators, researchers, institutions of higher learning and TVETs.





STARTUP MENTOR OF THE YEAR

Eric Ombega Nyamwaro (Partnerships and Linkages Advisor - STEM Impact Center Kenya)

Eric is a visionary leader thriving in positions allowing him to be of service to others. He has shaped young people by offering mentorship support beyond the call-in to various schools and counties, even those in marginalised areas. Over time he has been actively mentoring young people from all over the country and supporting them through sharing knowledge and skills that will help them in startups.



YOUNG MALE IN INNOVATION CHAMPION OF THE YEAR

Calvin Shikuku

Calvin co-founded Motobrix Innovation Centre, which supports innovations in slum areas that create employment or provide solutions to climate change. Through his inspiration and support, several budding enterprises have taken off, like Queening Africa, now a global finalist in the Generation Unlimited Imagen Ventures Youth Challenge.



YOUNG FEMALE IN INNOVATION CHAMPION OF THE YEAR

Nzambi Matee

Nzambi Matee is a trained engineer who found an innovative way of converting plastic waste into sustainable materials. Her Nairobi-based startup company, Gjenge Makers, creates lightweight and low-cost building materials made of recycled plastic with sand to make bricks stronger than concrete materials. She was pronounced the winner at the Young Champion of the Earth 2020 Africa by UNEP and has been featured in several local and international news outlets.



CONGRATULATIONS TO ALL WINNERS. LET'S MEET IN DECEMBER 2023 FOR UNLIMITED SMILES.



