ROYAL
ACADEMY OF
ENGINEERING

THE AFRICA PRIZE
FOR ENGINEERING INNOVATION

Five years of the **Africa Prize**

ROYAL
ACADEMY OF
ENGINEERING

THE AFRICA PRIZE
FOR ENGINEERING INNOVATION

Five years of the **Africa Prize**

@RAEngGlobal /africaprize

"The Africa Prize businesses, with engineering at their heart, are providing employment, prosperity and access to essential resources for their communities"

Professor Dame Ann Dowling OM DBE FREng FRS

President of the Royal Academy of Engineering

The Africa Prize for Engineering Innovation was launched in March 2014 to stimulate, celebrate and reward innovation and entrepreneurship across sub-Saharan Africa. The Africa Prize has been extraordinarily successful, providing invaluable training, mentoring and communications support to 72 businesses over the last five years.

In order to meet the United Nations Sustainable Development Goals, we need to build better links between academia and business, and to equip talented innovators with the skills to develop and commercialise solutions to everyday challenges, including access to energy, water, food and employment.

According to United Nations projections, the population of the African continent is likely to grow to 2.53 billion by 2050. With more than 60% of the population aged under 35, this rapid growth offers tremendous opportunities as well as challenges, particularly in relation to employment. The Africa Prize businesses, with engineering at their heart, are providing employment, prosperity and access to essential resources for their communities.

The Africa Prize drew valuable inspiration and direction from the Royal Academy of Engineering's Enterprise Hub, established in 2013. The Hub provides pre-seed funding and a package of mentorship, training and bespoke support to UK-based entrepreneurs to encourage success and contribute to the UK's economic growth. The Africa Prize has emulated that model on another continent.

For many of our alumni, participating in the Africa Prize has paved the way for further opportunities for financing and growth and equipped them to join a truly global network of exceptional engineers, researchers and innovators supported by the Academy. We are proud that 71% of the Africa Prize alumni are currently generating revenue.

The Africa Prize has been made possible through the generous assistance of its funders and supporters. We are especially grateful for the dedication and expertise of the many Academy Fellows who have given their time to provide mentoring to the exceptional early-stage businesses that the Africa Prize supports.

What is the Africa Prize for Engineering Innovation?

The Africa Prize encourages ambitious and talented sub-Saharan African engineers from all disciplines to develop scalable solutions to local challenges, highlighting the role that engineering plays in improving quality of life and economic development. The shortlisted engineers are given crucial commercialisation support with eight months of training and mentoring.

Following this period of mentorship, finalists are invited to present their innovation at an event, where a winner is awarded **£25,000** and three runners-up receive **£10,000** each.

Each year, all 16 shortlisted entrepreneurs receive:

- Access to business and technical expertise
- Bespoke press coverage and communications support
- Introductions to new networks and funding opportunities
- An opportunity to pitch to HRH The Duke of York at Pitch@Palace Africa
- Three week-long residential training sessions
- Access to a global network of entrepreneurs from 28 countries, and counting
- A chance to win a cash prize of up to £25,000

The Africa Prize journey

March 2014
The inaugural Africa Prize for Engineering Innovation opens for applications

September 2014
The Judging Panel selects 12 innovators for the first Africa Prize shortlist

June 2015
Dr Askwar Hilonga from Tanzania wins the first Africa Prize for his innovation, Nanofilters

December 2015
The Africa Prize partners with HRH The Duke of York's Pitch@Palace series, resulting in a multi-year partnership and tremendous exposure for the entrepreneurs

May 2016
Arthur Zang from Cameroon wins the second Africa Prize for his innovation, Cardio-Pad

May 2017
Godwin Benson from Nigeria wins the third Africa Prize for his innovation, Tuteria

June 2018
Brian Gitta from Uganda wins the fourth Africa Prize for his innovation, Matibabu

July 2018
The first UK engineering students arrive to spend their summer interning with Africa Prize businesses, the start of an annual programme

March 2019
The Africa Innovation Fellowship, for female African innovators, is launched in partnership with WomEng

April 2019
A series of STEM teaching resources based on Africa Prize innovations is launched for UK schools

May 2019
Funding is secured from the UK government to launch an Africa Prize alumni support programme

June 2019
Neo Hutiri from South Africa wins the fifth Africa Prize for his innovation, Pelebox Smart Lockers

Achievements

72
innovative businesses supported

More than
1,300
NEWS
individual pieces of media coverage

$14 million
raised by the alumni in grants and equity

15,000
school students use Africa Prize innovations as STEM learning resources

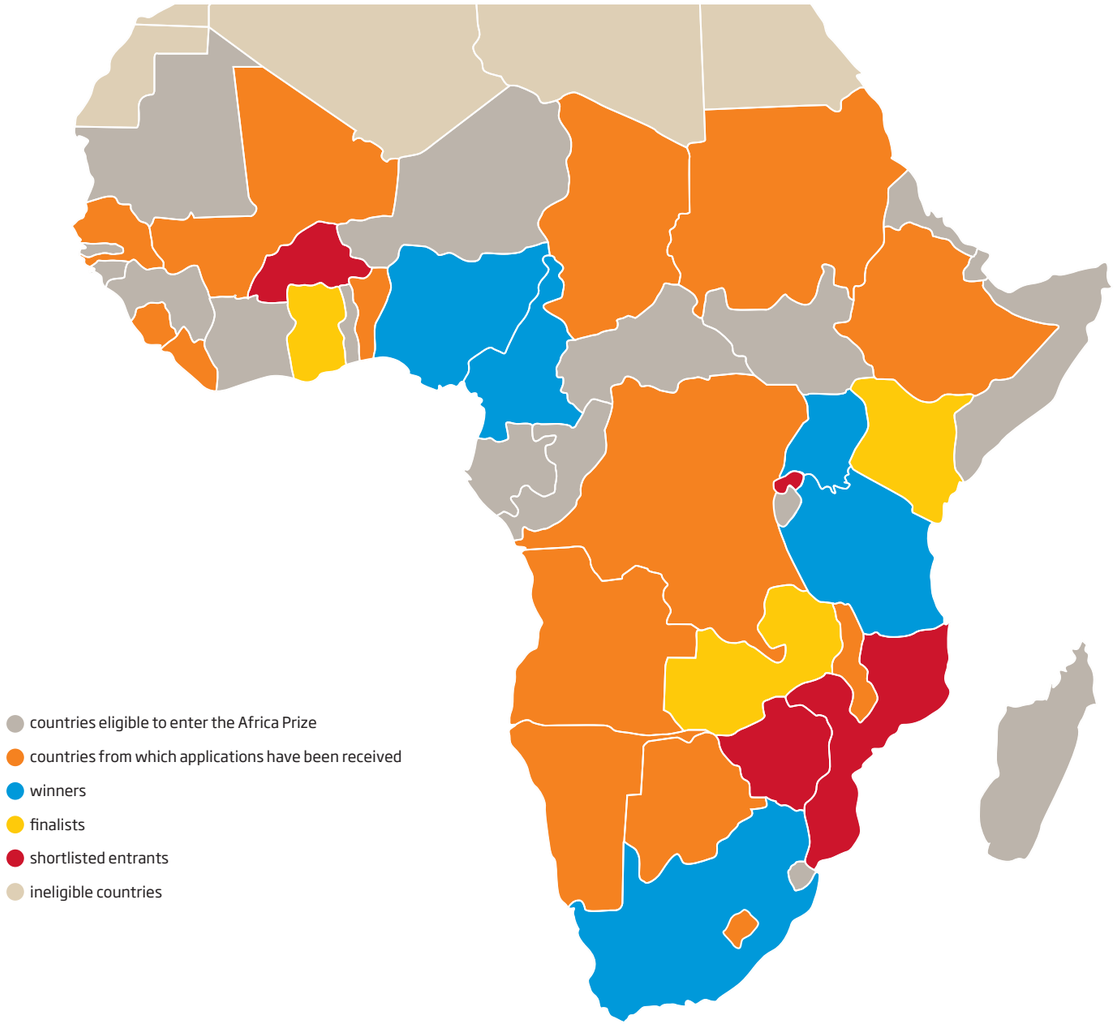
Media coverage in
28
countries

More than
1,800
volunteer hours

71%
of alumni are generating revenue

Alumni companies projected to impact over
3 million
lives in the next five years

Geographical reach of the Africa Prize



Meet the Africa Prize for Engineering Innovation businesses

63% of alumni ranked the Africa Prize as the most valuable programme they had participated in

> Pitch@Palace Africa was the highlight of my year, it opened up so many channels for me

> If it wasn't for the Africa Prize, my business would not exist

> During the mentorship process, we were able to decide to safeguard the company financially by having access to free legal services when needed

ColdHubs

3-D-3-P industrial dryer

The 3-D-3-P dryer is a simple system that dries grains and cereals using conduction rather than the hot air that is conventionally used in industrial dryers.

The system is far more affordable than existing dryers, and is faster and safer than drying grains in the sun – the method used by most farmers who cannot afford industrial dryers. A series of three drums are heated to directly dry out the grains travelling through them, based on the same principle as simply heating grain in a pan over fire. Rollers ensure that grains do not burn, and the gas heating the system is adjustable at each stage.

Clear Banana Juice

Clear banana juice is difficult to produce because pulping ripe bananas makes a highly viscous puree. This innovation mashes bananas mechanically without the addition of enzymes or extraction aids to create clear banana juice. It mirrors the traditional process of kneading a mixture of ripe banana and grass or fibres until the juice oozes out from the pulp. This adds value to juice-producing banana varieties, which currently fetch low prices and are being phased out.

ColdHubs

ColdHubs are solar-powered walk-in cold rooms that extend the shelf-life of perishable foods from two to 21 days. According to the Rockefeller Foundation, 45% of food is lost because of a lack of cold storage in developing countries such as Nigeria. This leads to a 25% loss of annual income for smallholder farmers.

ColdHubs are three-metre-square units with solar panels on the roof. Each hub can store up to three tonnes of food arranged in 30-kilogram crates. They use natural refrigerants that minimise the environmental impacts of cooling. Excess solar power is stored in batteries to ensure that the hubs are kept cold at night and in bad weather. ColdHubs are installed at markets and farm cooperatives, and farmers and retailers can rent space and only pay per crate of food stored each day.

FasoPro

FasoPro

FasoPro develops consumer products made entirely from African insects. In Burkina Faso, half the population live below the poverty line. FasoPro makes nutritional products from 'chitoumou' caterpillars, which feed on the shea tree. The caterpillars are traditionally harvested for only three months of the year, but FasoPro has developed a breeding system to ensure a year-round supply.

It produces a powdered meal supplement that is rich in Omega 3 and three times higher in protein than beef. This combats malnutrition and helps to protect shea trees by making communities more aware of their value. A new product, made of crickets, is now available.

Drylobag

Drylobag is a heavy-duty plastic bag designed to dry and store grain without the need for expensive silos. It is a non-permanent structure that can be installed quickly and easily almost anywhere. A Drylobag is 60 metres in length, and dries and stores up to 200 tonnes of grain for up to 18 months.

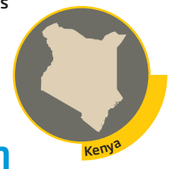
The Drylobag prevents loss of stock from grain going mouldy by reducing the grain temperature and drying it evenly, even in the high humidity typical of Africa's most fertile regions. This enables farmers to harvest earlier, which reduces the risk of weather damage and crops being eaten by wildlife, and helps farmers get crops to market sooner.

HWESOMAME

HWESOMAME is a low-cost, smart sensor that farmers can use to accurately measure soil conditions. HWESOMAME – meaning 'look after it for me' in local language Twi – consists of a sensor in the ground that measures the soil moisture, temperature, salinity and levels of organic matter. The data is converted into an easily understood format and sent to the farmer via text or voice-automated phone call in a local language.

The data helps farmers make decisions on what fertiliser to use, how frequently to water their crops and how to minimise labour costs and farm visits. It helps farmers increase their profits through improved crop quality and up to 50% higher crop productivity.

Illuminum Greenhouses



Illuminum Greenhouses

Illuminum Greenhouses use solar panels and sensor technology to create a controlled environment for growing crops. The sensors collect data on temperature, humidity and soil moisture and send it to farmers via text message, allowing them to monitor and regulate their greenhouse, including turning irrigation on and off, without having to be on the farm. Using solar power means that Illuminum is ideal for rural areas with poor access to energy, and the system works with all phones. The greenhouses enable farmers to improve production and increase efficiency.

Kitovu

Kitovu is an online platform that helps rural and remote smallholder farmers triple their crop yields, reduce wastage and sell their produce.

The app uses the farmer's location to determine the soil types found in a particular area through a soil database. This information, plus the crop type, determines the fertiliser the farmer should use.

Farmers can then buy high-quality fertilisers or seedlings through the app, or find buyers for their produce. If a farmer can't afford to buy the fertilisers or seedlings immediately, they can pay Kitovu with their produce after harvest.

Mechanical Cassava Harvester

The labour intensity of cassava harvesting is the biggest constraint to its commercial production. The Mechanical Cassava Harvester is an affordable tractor-mounted tool that turns up the soil to expose the root vegetable without damaging it. It takes five to ten minutes to harvest one cassava plant by hand, depending on the softness of the soil. The mechanical harvester can uproot one plant every second.

On-Spot Fertiliser Applicator

On-Spot Fertiliser Applicator

Smallholder farmers in Zambia typically apply commercial fertiliser to their crops by hand, which is labour intensive, time consuming and can cause inconsistent application. The On-Spot Fertiliser Applicator is designed to mimic a walking stick with a backpack-style fertiliser container. It is an efficient and consistent device that allows farmers to apply fertiliser directly to crops with one simple action. It is light, affordable and eliminates wastage, making it both user- and environmentally friendly.

On-Spot Fertiliser Applicator

Sparky Dryer

Sparky Dryer

Sparky Dryer is a low-tech dehydrator that dries fruits and vegetables to extend their shelf-life from two days to two years. The dryer, which looks like a filing cabinet, is powered by organic waste such as leaves and branches.

Sparky Dryer removes moisture from food five times faster than electric dryers and 10 times faster than open sun drying. It is cleaner and more reliable and convenient than open sun drying, which is weather dependent. It costs just one third of the price of an electric dryer. Up to 100 kilograms of produce can be dried within five hours using only two kilograms of biofuel. Sparky Dryer is fitted with a catalytic converter to stop harmful gases being released during the drying process.

Tryctor

Tryctor is a three-wheeled mini-tractor based on a modified motorbike. Using low-cost local components, it is easy to maintain, efficient and simple to operate. The Tryctor is manufactured in Nigeria and provides affordable mechanisation to smallholder farmers and cooperatives. Its size-to-power ratio makes it a multipurpose vehicle that can be used as a conventional tractor, as well as to transport goods and even generate power. There are an estimated two million farmers in Nigeria alone, and 85% of them do not have tractors. The Tryctor is an ideal solution for small-scale farmers.

Tryctor

The Vertical Farm

UjuziKilimo

UjuziKilimo

UjuziKilimo, meaning knowledge farming, measures soil characteristics such as macronutrient levels, moisture and pH to help farmers understand and quantify soil qualities. An electronic sensor in the ground collects information and sends it to a central database that collates agricultural information from research institutions, universities and financial markets. Farmers then receive a text message with a guide on the soil and personalised advice on preferred crops, pest control, current market value of crops, required tools and where to find them. UjuziKilimo helps farmers make better informed decisions to increase their crop production.

The Vertical Farm

The Vertical Farm is an easy-to-build wooden farm in a box that is designed to increase food production in urban areas by capitalising on waste. The Vertical Farms are custom-built to fit the space and needs of individual buyers, and the modular platform is designed to grow leafy green crops used in home kitchens.

A central column acts as a repository for organic waste and contains earthworms, which break down waste into fertiliser. The fertiliser sinks into a drawer at the base of the box and can then be used to supplement the soil in soil beds that surround the central column, significantly improving crop yields.

AltMet

AltMet

AltMet has developed a process to affordably recover the precious metals found in autocatalytic converters of petrol and diesel vehicles. Autocatalytic converters reduce the toxicity of gases emitted by exhaust pipes. They contain platinum group metals – platinum, palladium and rhodium – all of which are valuable for industrial processes and on the European Union's *Critical Raw Materials List*.

The team dismantles used autocatalytic converters, crushes and leeches them before extracting the metals. The process also extracts aluminium and cerium. It uses much lower temperatures compared to existing methods, making it more affordable, and emits fewer toxic gases. The AltMet method uses chemical reagents, which are cheap, relatively common and environmentally friendly.

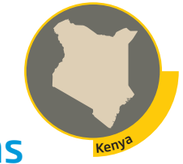
Macjames Chemical Products

Macjames MMDC-11 is an affordable, heavy-duty multi-purpose cleaner that removes organic and inorganic dirt from washable surfaces. Many industrial processes require daily cleaning, yet most available cleaners contain petroleum distillates and organic solvents, which are harmful to the environment and the user.

Macjames MMDC-11 is produced using biodegradable raw materials, so is environmentally friendly, non-corrosive and non-acidic. It emulsifies and cleans dirt, such as oil, rust and soot, from household and industrial surfaces and is particularly suited to manufacturing, mining and agricultural applications.

NatiV

Science Set



eLearning Solutions

eLearning Solutions is a nationally accredited eLearning provider that offers affordable on-demand courses to anyone, anywhere through any internet-enabled device. The app allows for self-paced learning, group classes, access to tutors and learning through games and videos. It also hosts custom-made courses for organisations to use as an online training platform.

Its extensive range of ready-to-use courses meets the learning needs of different groups, including young people looking for work-readiness courses after high school or university, or people looking for IT, marketing and entrepreneurship skills to start their own businesses.

NatiV

NatiV is an app that teaches children how to read and write Shona, a local Zimbabwean language, by improving their syllable-to-sound association. Children learn to build words and then whole sentences, and parents can track their progress through performance statistics.

The innovation is particularly aimed towards children with reading difficulties, and uses native speakers whose accent and intonation are easily recognisable. The app could also be used to teach other languages.

Science Set

Science Set is an affordable, portable science lab that is the size of an average textbook, fitting easily into a school bag or desk. Science Set contains over 45 components including circuit boards, wires, an electromagnet and a mini lightbox to perform 26 experiments that are part of the primary and junior high school syllabus. The set comes with an illustrated manual, providing a step-by-step guide for all experiments.

A 2015 study by the Organisation for Economic Co-operation and Development showed that out of 76 countries, Ghana and South Africa ranked the lowest in science education. Science Set aims to solve the lack of practical science education in Africa and inspire learners to pursue science after school.

Science Set

Yaaka Digital Network

Zenafri

Tuteria

2017 winner

Tuteria is an online platform that connects people seeking to learn 'anything' with verified local experts who can teach them what they want to learn, while ensuring safety, accountability and quality teaching.

Over 42 million children, young people and adults in Nigeria, and 204 million in Africa, who want to learn new skills and subjects or study for their exams have no reliable access to competent, local teachers. Tuteria provides an easy way to find, book, pay for, schedule and track lessons with vetted tutors. It bridges the learning gap, and creates a healthy source of income for teachers, graduates and students in Africa.

Yaaka Digital Network

Yaaka Digital Network is an online platform and app consisting of a social network and educational tools for users to access and share locally relevant academic content and academic and extracurricular activities.

Students and teachers at all levels, from pre-primary to tertiary, can use the site to learn, mentor and interact. It works online and offline, giving users access to all the educational tools they need, wherever they are.

Zenafri

Zenafri is a series of mobile apps that teach toddlers and young children basic numeracy and literacy in their own language. Teseem, the first app, teaches toddlers their first words and numeracy in vernacular languages such as Hausa, Igbo, Yoruba and Swahili.

When children are old enough to follow storylines, AfroTalez narrates original stories based on traditional African folklore, with an educational element.

The team continually improves the apps through feedback from its users and has launched a decision-based storytelling app for teenagers.

JuakaliSmart

Chura

In Kenya, most mobile phone users have at least two SIM cards to ensure signal strength across different carriers. Chura is a web-based multi-network system that allows users to move airtime between their different SIM cards regardless of carrier, buy airtime that can be used on any network, send airtime to family members or employees, and exchange airtime for cash. Organisations can use it to manage, track and top up airtime for multiple phones.

Draadsitter

The Draadsitter (Afrikaans for 'fence sitter') is a fence security alarm system that is mounted to the wiring posts of a fence.

The innovation detects tampering on fences of up to 800 metres and can also detect fires.

Using sensors, the device warns owners of the location and nature of tampering on their fence, allowing them to react before security is breached.

JuakaliSmart

JuakaliSmart is an online store designed to give informal artisans in Kenya direct access to customers. Juakali means 'under the hot sun' in Kiswahili, which originally referred to welders that work on the side of the street, but has come to refer to informal artisans in general. Kenya has thousands of juakali working across towns and cities.

JuakaliSmart has gone from an online store akin to Amazon to a mobile app that allows buyers to talk directly to juakali.

Muzikol

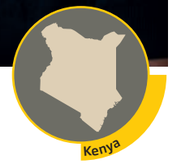
Muzikol

Muzikol is an online music marketing and social media application designed to meet all the career needs of musicians. This virtual music world brings together elements of social media and networking platforms such as Facebook, Twitter and Eventbrite. Musicians can use the app to generate revenue by selling their music, merchandise, event tickets, and getting direct bookings. They can find jobs through the app and interact with other musicians and their fans.

Riziki Source

Riziki Source is a web platform for employers to tap into the millions of skilled people living with disabilities in Africa, of which up to 80% are without work. Based in Kenya, Riziki Source is a social enterprise that unlocks the potential of people with disabilities by providing access to job opportunities.

Sign-IO



Sign-IO

Sign-IO combines a mobile app with smart gloves that track and translate sign language movements into speech in real time. The intelligent system was designed with young children in mind, and is being developed with young people with hearing and speech impairments. Hardware embedded inside the glove reads the user's finger movements, and compares these to an internal database of American Sign Language.

The app immediately translates this to speech – and users can set the gender, pitch, tempo and delay of the voice that represents them. The gloves can be packaged in any style, from a princess glove to a Spider-Man design, helping to fight the stigma associated with hearing and speech impairments.

Smart Brooder

Smart Brooder is an intelligent energy management system to automate chicken coops, giving farmers more freedom and peace of mind. The system is pre-programmed to understand the needs of chickens at every stage of their development and can control heating, measure temperatures and humidity, and advise farmers and workers when physical intervention is required.

Smart Brooder can activate and deactivate heating systems – both electric and gas – and allows farmers to remotely manage chicken coops. Smart Brooder helps farmers to reduce heating costs and lower chick mortality rates.

Smart Brooder

The Sixth Sense

AEON Power Bag

Elo-cart

GreenTower Microgrids

The Sixth Sense

The Sixth Sense uses echolocation technology inspired by bats and dolphins to help visually impaired people 'see' what is in front of them.

It is a small, handheld device that uses ultrasonic sensors to allow users to detect obstacles. The device vibrates in different ways and at different frequencies to warn the user of the location and distance of an object.

If a visually impaired user is in distress, they can push a button to send a text showing their location to a pre-set emergency contact.

Usalama

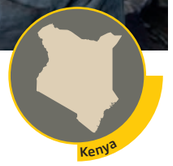
The free-to-use Usalama app boosts policing and emergency response times by allowing users to effortlessly alert police, emergency services, family members and other users to emergency situations.

In an emergency, a user can alert the police, medical or fire authorities and every other Usalama user within 200 metres by simply shaking their Android phone three times. It can also be activated by holding down the volume button for six seconds or tapping the emergency icon. Data about hot spots for different types of emergencies is also made available to the emergency services.

AEON Power Bag

AEON Power Bag allows its users to charge their phones and tablets on the go by converting radio or telecommunication waves and solar energy into power. The lightweight backpack contains a unit that harvests radio waves in the surrounding environment and converts them to electricity. When radio signals are low, the solar charging unit kicks in. The bag can also charge when placed against inductive charging power mats, which are increasingly available in airports and restaurants.

The energy generated is stored in a battery, similar to a power bank, and the user can charge their devices anywhere, anytime by plugging in a USB cable. The battery pack charges in under 90 minutes when the radio, solar and inductive units are working at their optimum capacity.



Elo-cart

Elo-carts run on batteries powered by the excess energy produced by the vehicles' own rotating wheels. Energy is captured from moving axles as the handcart is pushed along and kinetic energy is amplified through a series of gears and then converted into electricity stored in a battery pack. A second battery pack powers the handcart and, when depleted, is swapped with the pack that has been charging. Movement then charges the depleted pack, beginning the cycle again.

Elo-carts are designed to assist the thousands of informal vendors who currently use heavy manual handcarts as shops and for transporting goods between markets and supply points. Elo-carts can also be used for efficient transport in hospitals and airports.

GreenTower Microgrids

GreenTower Microgrids is a hybrid solar microgrid solution that uses 90% less energy than electric boilers to heat water, helping to solve electricity and water supply problems. The modular GreenTower system is designed to be scalable, and a single containerised unit typically serves 15 homes.

The Sun directly heats the water in a series of thermal black pipes and low-pressure storage tanks. Once heated, the water is pressurised using electrical energy generated by photovoltaic solar panels, which can also keep the water hot overnight. Any excess electricity is fed back into the grid to avoid wastage, or used to power LED lights and essential household appliances. Owners can monitor the system's performance and energy consumption remotely online.

iMeter

iMeter

More than 30% of meters in Nigeria are tampered with or bypassed, so utilities companies resort to bill estimation. The Intelligent Meter (iMeter) and Advanced Metering Infrastructure (AMI) give consumers and utilities companies control over how electricity is used.

The iMeter measures energy usage and enables consumers to manage their smart meters remotely through their phones or computers, using the AMI software. They can monitor power usage, set budgets, disconnect their meters and make payments. For people with limited internet access, some services can be accessed through text. The iMeter and AMI system detects tampering and notifies companies, ensuring that consumers are only billed for the energy they use.

Kamata

Electricity theft causes financial losses and disrupts access to power for homes and businesses. Kamata, meaning 'to seize', is a prevention system that alerts regional utility centres when power is being tampered with. The system is built into household power meters and sends the location, meter number and type of interference when it happens. The utility centre can seize control, cut off the power and alert authorities, and then remotely restore power after the incident is resolved.

Kamata is available as a single-phase solution and a three-phase version to cater for industrial power consumers.

Khainza Energy Gas

Up to 94% of Ugandans use firewood and charcoal for cooking, which can cause severe health problems.

Khainza Energy Gas is an affordable, clean biogas that is safe to use for cooking, lighting and heating. It is made from locally sourced manure or food that goes through a chemical treatment process to remove dirt and increase the purity of the biogas up to 98%, making it highly efficient.

The biogas is sold in 6 kilogram and 13 kilogram cylinders, which last 120 and 250 hours respectively. It is cheaper than liquefied petroleum gas, and costs less than a bag of charcoal to refill the small cylinder.

Khainza Energy Gas

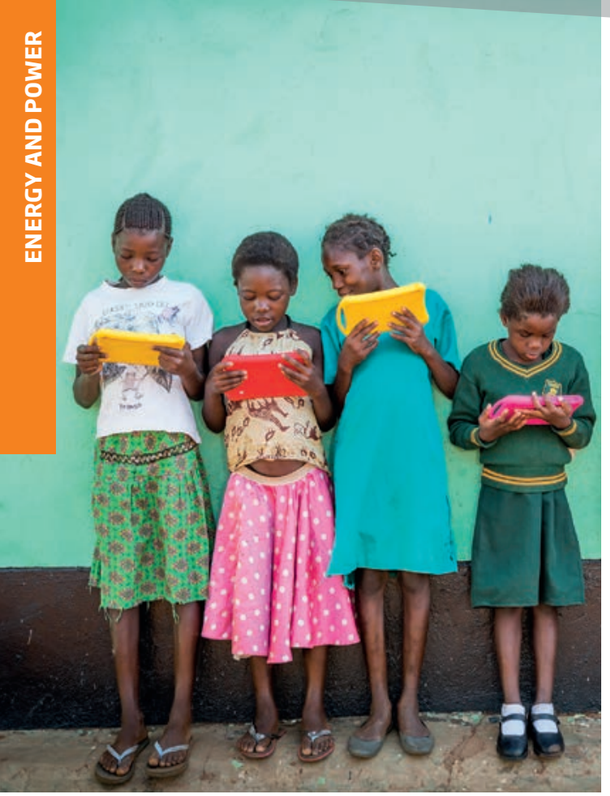
SolarTurtle

SolarTurtle

The SolarTurtle is a self-contained solar-powered hub that provides instant electrification in remote locations. Housed in a shipping container, the solar panels are unfolded every morning and use the Sun's rays to charge batteries inside recycled bottles. In the evening, the panels fold away into a tamper-proof hard shell to prevent solar panel theft, which is a common occurrence.

Community members can take a bottle home and plug it into their home system, and then exchange it for a small fee when it is depleted. Local women are trained to be Turtlepreneurs to own and promote these small energy franchises. The power generated by the SolarTurtle can also be used to support a business inside the hub, such as an office or shop. Since being shortlisted for the Africa Prize, SolarTurtle has developed and deployed the BabyTurtle, a more affordable, portable mobile-phone charging kiosk.

SolarTurtle



Standard Microgrid

Standard Microgrid

Standard Microgrid is a self-contained, community-managed renewable power grid that can be deployed anywhere at a set cost. Rather than paying a utility company for electricity by the kilowatt unit, a local Microgrid manager has access to simple tools to manage the grid and distribute subscription credit to connected community members. Generated power is stored in batteries and supply and demand is balanced to ensure reliability and eliminate electricity waste.

The system is designed to satisfy the basic power needs of the greatest number of people. It is low-maintenance and robust, making it ideal for rural African electrification.

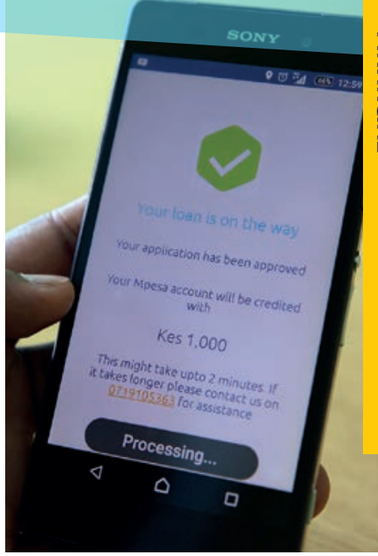
Standard Microgrid

Water&Solar100

The Water&Solar100 is a next-generation, multi-purpose solar generator. It is lightweight and portable, and functions as a water purifier and solar cooker. The system tracks the Sun automatically, has temperature and timing controls, and can generate electricity to charge batteries. It enables people to cook without gas, wood or electricity, and can be used to purify water through boiling.

The Engineering Lab

KAOSHI



Loanbee

FlexiPay/The Engineering Lab

FlexiPay is a mobile money solution that allows merchants and customers to make and receive payments using their phones.

Since being shortlisted, the team behind Flexipay has switched focus and created The Engineering Lab (E-Lab). E-Lab is working to build the technical and scientific capacity of young people through science, technology, engineering, art and maths (STEAM).

The E-Lab works with educational institutions to integrate STEAM alongside their mainstream curriculum as an afterschool programme or timetabled lessons. E-Lab aims to turn brilliant young minds into future engineers, scientists and innovators.

KAOSHI

KAOSHI is a mobile app that connects money senders across the globe. The app facilitates a peer-to-peer money swap, circumventing the need to physically send money across borders, which is traditionally done through remittances. The app tackles the high cost of transferring money to and between African countries, the hassle of long queues at financial institutions, or buying foreign currencies on the black market.

Instead, it allows users who want to send money in opposite directions to match up and swap between themselves, which is cheaper and more convenient. KAOSHI connects users both within and outside of Africa, allowing each to specify the currencies that they want to exchange and matching them to users making inverse exchanges.

Loanbee

Loanbee is a mobile app that offers instant micro-loans to individuals and small businesses that do not qualify for bank loans. Loanbee uses machine-learning algorithms to calculate the user's credit scores using biodata (such as age), data mined from their mobile transactions, and information from Kenya's Credit Reference Bureau.

First-time users can get a loan within 10 minutes and it only takes a few seconds for repeat borrowers. The loan can be repaid in instalments or as a lump sum. Customers are charged between 8% and 18% interest depending on their risk profile. Loanbee's customers include traders who need money for stock, families who need food money, or graduates paying for transport to job interviews.

Green Rock Drill

Protea Machine Tools

Smart Havens Africa

Smart Havens Africa

Green Rock Drill

The Green Rock Drill is a solar-powered alternative to modern fossil-fuel-powered rock drills. Most modern drills use compressed air, which involves high investment and operational costs. The Green Rock Drill is pedal-powered and uses solar energy, helping small-scale miners bridge the gap between hard manual labour and expensive mechanised equipment. It also reduces air pollution in Tanzanite mines, improving miners' health and making mining more environmentally friendly.

Portable Gold Crusher

Half a million people are estimated to work in small-scale mining operations, responsible for half of the gold production in Zimbabwe. The small to medium mining sector in Zimbabwe needs portable ore crushing machines. The Portable Gold Crusher scales down regular machinery and incorporates local materials to make affordable, portable, sustainable and appropriate crushing machines for local miners.

Protea Machine Tools

Protea Machine Tools' innovation allows users to more precisely shape, cut, grind, and shear metals and hard materials.

Its tool works on five axes and uses simple design innovations to cut costs. While five-axes machine tools do exist, they are typically too expensive for most African artisans. Protea Machine Tools' patent-pending system cuts down on costs without compromising on agility and precision through innovations such as using a granite base.

Removable Burglar Bar

The Removable Burglar Bar system enables a quick emergency exit from a building, enhancing safety without sacrificing security. The system has a locking mechanism that can only be opened from the inside. Until unlocked, the bars are impenetrable meaning that users can feel safe and secure in their home or business, without the burglar bars preventing their escape in an emergency.

The Sisal Decorticator

The Sisal Decorticator is a mechanised peeler that reduces the labour intensity of current manual peeling methods, making natural sisal fibre a more profitable product. The Sisal Decorticator removes the outer surface of the sisal leaf, leaving the valuable fibre inside. The innovation boosts the sisal industry in the global market and makes the natural fibres, which can be used in products such as ropes, mats and baskets, a viable competitor for synthetic materials.

Smart Havens Africa

Smart Havens Africa provides sustainable, smart homes built from appropriate but affordable technologies, geared towards making home ownership more accessible to African women.

Technologies include locally made bricks that use less material, designs that reduce temperatures in the hot Ugandan climate, custom bio-digesters, and solar water and electricity installations to keep utility costs down.

Smart Havens Africa builds houses in areas where homes are predominantly rented out by wealthier landlords. The company receives applications from prospective owners – mostly women – who will rent-to-own over a period of only five years. During construction, the team trains more artisans than needed, offering free bricklaying and other training sessions to people in the area.

Baby Delivery Kits

Baby Delivery Kits

The Baby Delivery Kit is a simple but well-researched kit of tools. It is aimed at midwives in Zambia delivering babies in under-resourced clinics, or for home births. The kit includes basic items such as a scalpel, sanitary pads made from banana fibres, a hygienic sheet and cotton swabs.

Prospective mothers are often given a list of these items, which they must provide themselves, when they arrive at hospital to give birth. Many of the items are expensive and hard to find, but without them, women face the prospect of a complicated birth with increased health risks.

Today, the team produces thousands of kits a month, selling them through 20 clinics directly to prospective mothers and midwives to reduce infections among newborns.

Baby Delivery Kits

Cardio-Pad

Chanjoplus

Cardio-Pad

2016 Winner

The Cardio-Pad is a medical tablet that allows any medical professional to conduct heart examinations quickly and without expensive equipment. The Cardio-Pad produces a digitised electrocardiogram to assess a patient's heartbeat and heart conditions. Results are sent by mobile to a cardiologist, who can interpret the data and send their diagnosis and instructions back to the local doctor or nurse within 20 minutes.

Remote diagnosis is key to improving medical access in Cameroon, which has an estimated 50 cardiologists for a population of over 20 million.

Chanjoplus

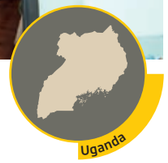
Chanjoplus is an online system that helps parents and healthcare workers track vaccines, ensuring children get access to life-saving medicine. Chanjoplus is built to be integrated into Kenya's national healthcare system and was created following extensive research with nurses, volunteers who dispense vaccines and parents.

Irregularities in national vaccination drives mean thousands of children miss out on their vaccines. Volunteers invent names to increase their quota of vaccines, parents lose their children's vaccine cards, and healthcare facilities are overwhelmed by paperwork associated with an outdated, manual system. By helping health workers to identify children that need vaccines, Chanjoplus protects children from preventable diseases.

E-Con Wheelchair

In Kenya alone, more than 1.16 million people have a mobility disability. The E-Con Wheelchair gives users mobility, comfort and independence. The smart 4x4 wheelchair can go off-road, climb stairs and allows the user to stand upright while still keeping its passenger perfectly level. It can automatically navigate familiar terrain.

Mama-Ope



Mama-Ope

Mama-Ope is a biomedical smart jacket that helps doctors and health workers identify pneumonia faster and more accurately. It measures temperature, heart rate and lung conditions, and compares these to a database of parameters.

Each year, 27,000 Ugandan children die from pneumonia, often because the disease is misdiagnosed as malaria or asthma. Mama-Ope aims to reduce the margin for human error and help doctors make faster, more accurate diagnoses to save lives.

Matibabu

2018 Winner

Matibabu is a device that quickly and accurately tests for malaria without having to draw blood. Matibabu, which means 'medical centre' in Swahili, is a low cost, reusable device that clips onto the user's finger. It uses red light to detect changes in the shape, colour and concentration of red blood cells, all of which are affected by malaria. Within one minute, results are shown on a mobile phone that is linked to the device, which can be used without a doctor.

The device is connected to a platform that collects, organises and visualises data to better understand and identify malaria trends and an app to monitor, register and inform users about their health conditions.

Mama-Ope

Pelebox Smart Lockers

Pelebox Smart Lockers

Okoa

In Tanzania, millions of people rely on government or subsidised healthcare to tackle some of the most life-threatening diseases such as malaria, AIDS and tuberculosis. But the theft of these drugs from government clinics – which are then diverted, repackaged and sold for a premium price – is putting millions of lives at risk.

Okoa works to prevent this. Okoa, which means to save, is a web-based monitoring software that combats the theft of medical supplies across the Tanzanian hospital network. By monitoring medical inventories at the national medical store and in hospitals, and reporting discrepancies to the Ministry of Health, it cuts healthcare costs and helps ensure that medicines are available to those who need them.

Pelebox Smart Lockers

2019 Winner

Pelebox is a smart-locker system designed for public healthcare facilities to dispense regular medicine to patients with chronic conditions, cutting down on long queues and easing pressure on clinic resources.

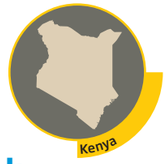
Developed for the South African healthcare system, the Pelebox is a simple wall of lockers, controlled by a digital system in the centre. Healthcare workers stock the lockers with prescription refills, log the medicine on the system and secure each locker. Pelebox then sends patients a one-time PIN, which they enter into the system to access their medicine.

Sanitation Africa

Sanitation Africa

People living in Kampala rely on traditional pit latrines in the absence of flushing toilets. Latrines are easily flooded, increasing the risk of diarrheal disease. Sanitation Africa has created a series of innovative sanitation technologies to improve urban sanitation. It has designed new toilet solutions, updated existing pit latrines, and provides an efficient emptying service to transport and treat faecal sludge. Treated sludge is also dried and turned into cooking briquettes, which is more environmentally friendly than using firewood.

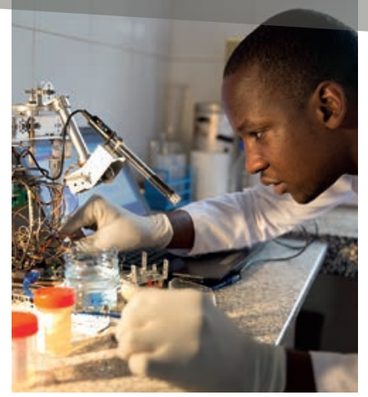
Totohealth



Totohealth

Totohealth, meaning baby health, guides parents through pregnancy and childhood by sending vital maternal and child health information via text message. Parents receive regular, timely information on nutrition, immunisation, hygiene, breastfeeding, family planning, and childhood diseases, as well as reminders for medical appointments.

Designed to solve a problem the innovator's own family had faced, Totohealth helps parents to identify abnormalities and advises on milestones and changes to expect in infants and toddlers. Parents are registered for the service by hospitals, clinics, community workers or non-government organisations.

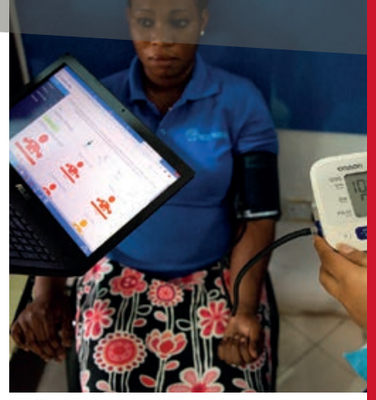


UriSAF

UriSAF

UriSAF is a combined hardware and software solution that quickly and accurately tests urine for infections. The Uriscope uses pH and infrared sensors to test the urine. Within three minutes the results are sent to the UriSAF mobile app, which displays the diagnosis in English or one of four Ugandan languages. The results can be saved to the cloud or shared with a doctor. UriSAF can detect health issues such as urinary tract infections (UTIs), dehydration, diabetes and kidney failure.

During pregnancy, UTIs are associated with an increase in maternal and child mortality, yet in rural sub-Saharan Africa, 90% of pregnant women cannot access antenatal healthcare during their pregnancy, so these often remain undiagnosed.



WellNewMe

WellNewMe

WellNewMe is an assessment tool that uses algorithms to analyse users' risks of contracting non-communicable diseases such as cancer, diabetes and hypertension.

Using years of experience from medical professionals, research and algorithms, the system takes data provided by individual users to predict the risks each person faces from their lifestyle, genetics and environment. Simple data such as family history and habits is supplemented with blood pressure, blood sugar and other medical readings.

WellNewMe is aimed at pharmacies, clinics and employers, but will also be available to individual users. The anonymised data can help improve the public sector's approach to non-communicable diseases.

Kuza Automotive

Kuza Automotive

Kuza Automotive makes sustainable transport in Africa more accessible by creating affordable electric tuk-tuks. Tuk-tuks are a popular means of transport in many African cities.

Kuza Automotive reduces the impact on the environment by converting existing tuk-tuk fleets to run on electric motors. Kuza also aims to develop off-grid charging stations for its own and other electric vehicles.

SnooCODE RED

SnooCODE RED

SnooCODE RED is a logistics app that significantly reduces emergency response times through its custom-made mapping system. Using software originally developed to deliver parcels to areas without street addresses, SnooCODE RED reimagines how we understand the postal system, helping ambulances navigate dense urban areas. It reduces the time spent trying to direct ambulances and explain locations, allowing medics to quickly reach those in need of emergency attention. The SnooCODE RED app is free and certain features can be used without an internet connection.

SafeMotos

SafeMotos is a mobile app that connects commuters to the safest motorcycle (moto) drivers. Commuters use their smartphone to connect them to the nearest moto driver by sharing their pick-up location. They can use the closest landmark if there is not a street name.

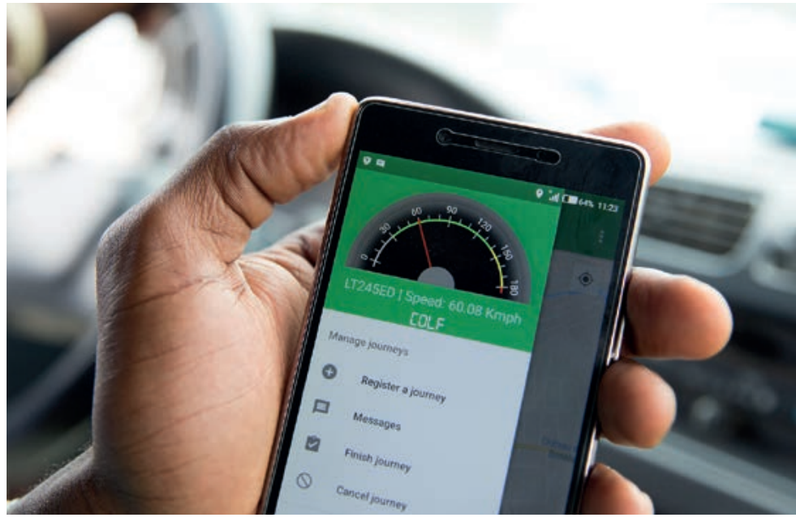
Sensors on the drivers' smartphones monitor how well they drive, which gives commuters peace of mind. Drivers that fall below an acceptable level are removed from the app, which encourages them to adopt better driving behaviours. Commuters also rate their experience after each ride. Commuters pay for their rides by loading money onto their SafeMotos wallet using mobile money, credit card or cash. Since being shortlisted for the Africa Prize, SafeMotos has launched in Kinshasa, DRC.

SafeMotos

Traveler

Traveler is a software system that can automatically track, trace and report reckless driving, especially by buses. The software works through an app and a big-data, integrated cloud monitoring system. The app converts mobile phones into speed, performance and collision detectors. When an accident occurs, the app sends an emergency alert SMS to hospitals, ambulance services and other institutions with the location and severity of collision.

The app has a specialised algorithm that makes smartphones sensitive to data concerning speed, location, orientation, weather conditions, acceleration, and the collision force recorded during impact. Traveler can be used by individuals and organisations, and is being integrated into Cameroon's public transport network.



Traveler

Harvest Rainwater App

Harvest Rainwater App

The Harvest Rainwater App helps users navigate complex rainwater harvesting solutions to find the equipment that suits their location, budget and needs.

It allows users to calculate how much water they could harvest based on the type of roof they have, their location and types of tank available in the area. It is designed to help users overcome drought and water scarcity, which affect millions of people in Africa.

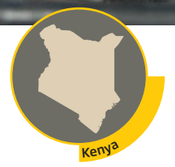
Majik Water

Majik Water

Majik Water uses desiccants (a substance that absorbs water) to harvest moisture from the air, providing affordable, clean drinking water to off-grid communities. The all-in-one system harvests, stores and then dispenses water. Custom-built water dispensers, or water 'ATMs', allow communities to pay only for as much water as they need.

The system works in off-grid locations and even in areas with low relative humidity. Water ATMs are already prominent in Kenya but are typically supplied by costly reverse osmosis devices. The Majik Water team hopes to supplement these with its more affordable water.

Mobi-Water



Mobi-Water

Mobi-Water is a solar-powered system that allows the millions of people who use water tanks to ensure that water is not wasted. It monitors water levels, leaks, valves and pumps via a mobile phone app.

Access to water affects over 16 million people in Kenya and 300 million people in sub-Saharan Africa. This system provides better access to information to alleviate water scarcity and waste in Africa.

Nanofilters

2015 Winner

Nanofilters integrate cutting-edge nanotechnology with sand-based water filtration to provide clean, safe drinking water. The process is affordable, sustainable and highly relevant in rural settings across Africa where access to clean water remains a huge challenge.

Nanomaterials made from sodium silicate and silver eliminate toxic heavy metals such as copper and fluoride, and other contaminants depending on the particular geographical area. Each Nanofilter is custom built for the region to give communities access to existing bodies of water that were previously too polluted to use.

Nanofilters

Nanofilters

SolarKoodo

SolarKoodo

SolarKoodo

SolarKoodo is a movable, solar water pumping system that helps farmers pull water from boreholes in off-grid regions where water tables drop very low. SolarKoodo, which means 'solar crops' in Mooré, can also be used to electrify homes. In Burkina Faso smallholdings are common around lakes and rivers, but the dry months in the Sahel region make farming almost impossible for those who cannot afford irrigation systems.

An adjustable solar panel powers a motor that pumps water from boreholes, and the entire system is built to be highly mobile and adjustable. Unlike permanent installations, the SolarKoodo can be shared by a collective of farmers because it can be moved from one borehole to the next as easily as a handcart.

"My first call with my new mentor was marvelous and I already feel like an entrepreneur. I find myself on a journey of self-discovery and am increasing my business confidence"

"I believe no one in my cohort remained the same, they all grew"

"I have been inundated with requests for information on my business since the Africa Prize promotion started. I feel I shall always be indebted to the Royal Academy of Engineering"

"The confidence, drive and passion I have now came from the Africa Prize"

Judges

DR IBILOLA AMAO | 2018 to present

Dr Ibilola Amao is the Principal Consultant of Lonadek, a firm of consultants focused on identifying, developing and engaging local talent for business growth and profitability. Focusing on STEM and innovation in energy, power, infrastructure, oil, gas and agriculture, Dr Amao's passion is to empower, mentor and coach women and youth for positive transformation. She is a committed and dynamic change agent who established Lonadek in 1991, the Vision 2020: Youth Empowerment and Restoration Initiative in 2006, and the Cedar STEM and entrepreneurship hub in 2008.

DR LIESBETH BOTHA | 2014 to 2016

In 2014 Dr Liesbeth Botha joined PwC as a partner. Previously, she was Professor of Electronic and Computer Engineering at the University of Pretoria; Executive Director: Innovation and Commercialization at Stellenbosch University; and Executive Director: Materials Science and Manufacturing at the Council for Scientific and Industrial Research. She is also a Fellow of the South African Academy of Engineering, a member of the Academy of Science South Africa and registered with the Engineering Council of South Africa.

MALCOLM BRINDED CBE FRENG | 2014 to present

Malcolm Brinded CBE FREng is a Fellow of the Academy and Chair of EngineeringUK. He is President of the Energy Institute. Malcolm has served as a member of the China Council for International Cooperation on Environment and Development and as a Trustee of the International Business Leaders Forum and the Emirates Foundation. Malcolm is a Fellow of the Institution of Civil Engineers and the Institution of Mechanical Engineers, and was awarded a CBE in 2002.

STEPHEN DAWSON OBE | 2014 to 2016

Stephen Dawson OBE was a pioneer of the venture capital industry in the UK 30 years ago and is Non-Executive Chairman of ECI Partners. He is a Co-Founder and former Chairman of Impetus Trust, a venture philanthropy charity. Stephen is Chairman and Co-Founder of Jacana Venture Partnership and also has an executive role focused on marketing and fundraising. He is an investment director for Jacana's investment team in East Africa.

REBECCA ENONCHONG | 2017 to present

Rebecca Enonchong is the Founder and CEO of AppsTech and I/O Spaces. She is Chair of ActivSpaces, an incubator in Cameroon. She is also Board Chair of Afrilabs, a network of over 150 tech innovation spaces across Africa, supporting over 500,000 entrepreneurs. She is Co-Founder and Board Member of Cameroon Angels Network and African Business Angel Network. She also sits on the boards of VC4Africa, Salesforce.org, iamtheCODE, Suguba and the African Media Initiative. She tweets from @africatechie.

MARIÉME JAMME | 2017 to present

Mariéme Jamme is a Senegalese-born British businesswoman and the Founder of SpotOne Global Solutions, a consultancy helping technology companies enter new global markets. She recently created Accur8Africa with African leaders, a platform lobbying for data accuracy to measure the success of the Sustainable Development Goals. She founded iamtheCODE, which mobilises support for girls and women in science, technology, engineering, arts, maths, entrepreneurship and design, with the goal of empowering one million women and girls to become coders by 2030.

PROFESSOR CALESTOUS JUMA FRS HONFRENG | 2014 to 2015

Professor Calestous Juma FRS HonFREng sadly passed away in December 2017. Professor Juma was an internationally recognised authority in the application of science and technology to sustainable development. He was named one of the 100 most influential Africans by *New African* magazine. He was Professor of the Practice of International Development and Faculty Chair of the Innovation for Economic Development programme at Harvard Kennedy School. Professor Juma published prolifically and was instrumental in significant policy changes across the continent.

DR JOHN LAZAR CBE FRENG | 2016 to present

Dr John Lazar CBE FREng is a software engineer and business leader with a focus on combining technology and entrepreneurship to generate lasting positive impact. He is a Fellow of the Academy and BCS, the UK's chartered institute for IT. He recently launched Enza Capital, which invests in early-stage African engineering companies that solve pressing problems. He is an angel investor, startup mentor and sits on the board of What3Words, KindLink, TechforTrade and Tech Trust.

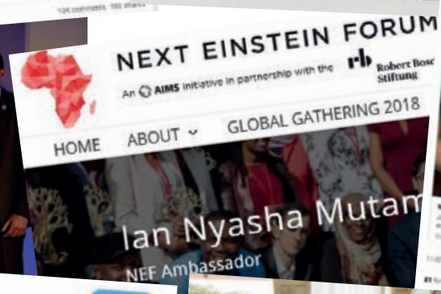
DR MOSES MUSAAZI | 2014 to 2017

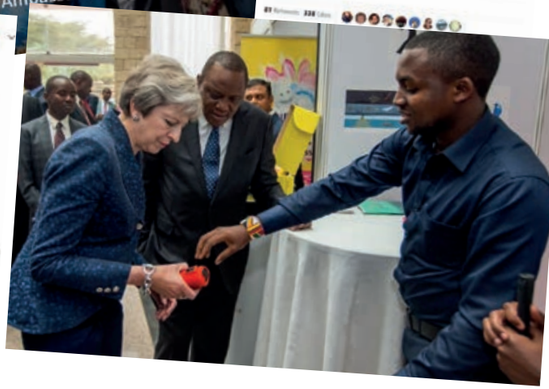
Dr Moses Musaazi sadly passed away in September 2018. Dr Musaazi was a senior lecturer at Makerere University, innovator of MakaPads, and Managing Director of Technology for Tomorrow Limited, which won the Siemens Stiftung Empowering People Award. Dr Musaazi was also an international consultant in appropriate technology, Board Member of Humanitarian Innovation Project, and an Ashoka Fellow.

DR BOLA OLABISI | 2014 to 2017

Dr Bola Olabisi is CEO of the UK-based Global Women Inventors and Innovators Network covering various regions in Europe, Asia, Africa and Latin America. She works to build opportunities for creative, inventive and innovative women. Dr Olabisi is a past Vice-President of the British Association of Women Entrepreneurs. She is a member of the Advisory Board at Regent's University London, a Fellow of the Royal Society of Arts and a former Governor on the board of the University of East London.

Memorable moments





Tributes

PROFESSOR CALESTOUS JUMA FRS HONFRENG

I first met Calestous in 2006 and, in common with the many people he worked with, feel incredibly privileged to have had the benefit of his wisdom, and equally saddened to have lost it.

That same year, Calestous delivered the Royal Academy of Engineering Hinton Lecture, *Redesigning African Economies: The Role of Engineering in International Development*, providing invaluable insight and expertise at a time when the Academy's international activities were beginning to expand. In 2007 Calestous, although not an engineer himself, was elected as an Honorary Fellow of the Academy, in recognition of his extraordinary contribution to engineering throughout his career.

In 2008 Calestous and I co-authored a series of essays titled *Engineering Change: Towards a sustainable future in the developing world*, alongside Professor Peter Guthrie OBE FREng. Calestous opened his foreword arguing that "for decades engineering has often been seen as marginal in development… but times may be changing". While there is much still to do, I believe progress is being made, and Calestous's own contribution to this has been unparalleled.

Calestous also served as a judge for the £1 million Queen Elizabeth Prize for Engineering and was a founding judge for the Africa Prize for Engineering Innovation. He championed the Africa Prize and the entrepreneurs it supports in his *New African* magazine columns, voraciously on Twitter, and in countless other ways.

I have no doubt that Calestous's myriad contributions to engineering, development and the Africa Prize will ensure that his work has an enduring legacy.

Dr Hayaatun Sillem
Chief Executive, Royal Academy of Engineering

DR MOSES KIZZA MUSAAZI

"Gakyali Mabaga".

The phrase is familiar to Dr Moses Musaazi's students. It was the first thing you saw on his office door and the motto by which he seemed to live his life.

"So little done. So much more to do."

Described as the man who couldn't stop innovating, Dr Musaazi's insatiable drive for problem-solving led to a wealth of innovations and changed the way many think about engineering.

His most famous innovation was created when he found out female students missed classes because of menstruation. Neither the taboo around the topic nor the fact that it was not a typical engineering problem would stop him. MakaPads, created from the widely accessible papyrus plant, quickly gained popularity. He turned it into a business for unemployed women and refugees and manufactured them locally.

He was a senior lecturer at Makerere University and his workspace, the Technology Development and Transfer Centre, reflected his engineering philosophy. Built with another of his inventions – nearly cement-free bricks – the centre is self-sufficient and filled with the holistic problem-solving that characterised his work.

Moses supported a dozen students with school fees, mentored entrepreneurs and was the recipient of awards for engineering and social entrepreneurship. His work as an engineer existed to serve those who faced challenges he deemed unnecessary. His mentorship to young entrepreneurs centred on social impact and, as a lecturer, he dedicated himself to inspiring, teaching and invigorating future engineers.

Anzet du Plessis
Director, Proof Africa

Thank you to all those who have helped make the Africa Prize so successful over the last five years

Wale Adeniranye
Africa Prosperity Fund
Professor Bashir Al-Hashimi CBE FREng
Mahmoda Ali
Dr Ibilola Amao
April Six Proof
Georgina Asmah
Dr Norman Apsley OBE FREng
Tim Askew FREng
Geoff Baker
Robin Balser
Professor John Banyard OBE FREng
Keith Batchelor FREng
Adam Bazire
Professor Roger Benson FREng
Professor Simon Blackmore
Aaron Boardley
Professor David Bogle FREng
Dr Liesbeth Botha
Dr Richard Bowman
Professor Nigel Brandon OBE FREng
Malcolm Brinded CBE FREng
Oliver Broadbent
Sir Richard Brook OBE FREng
Professor Clive Buckberry FREng
Cordelia Burch
Cape Innovation Technology Initiative
Dr Silvia Castro
Dr Samuel Chapman
Dr Andrew Clark
Professor David Clifton
Dr Jack Cohen
ConocoPhillips
Consolidated Contractors Company
Brian Corbett
Paymon Daneshpay
Sabrina Dar
Stephen Dawson
De Charles
The Design Unit
Rebecca Enonchong
Brett Eloff
Meredith Ettridge
Sarah Fretwell
Dr Kamau Gachigi
Professor Steve Garwood FREng
Dominic Geyer
Walter Gibson
Global Challenges Research Fund
Professor Richard Godwin FREng
Georgina Goodwin
Professor Tim Green FREng
Professor Jane Grimson FREng
Dr John Groom FREng
Salome Guchu
Professor Peter Guthrie OBE FREng
Professor Andy Hopper CBE FREng FRS
Dr Peiman Hosseini
Professor Tim Ibell FREng
Mariéme Jamme
Professor Nick Jenkins FREng
Professor Calestous Juma FRS HonFREng
Professor Robert Kalin
Doug King FREng
Dr Satheesh Krishnamurthy
Dr Harini Kulatunga
Dr Martin Lavery
Dr John Lazar CBE FREng
Dr Jon Leary
Professor Joseph Lee
Professor Brian Legg FREng
Sala Lewis
Professor Thomas Lipo
Anna Lowe
Professor Gary Lye FREng
Ivana Mackintosh
Professor Malcolm Mackley FREng
Dr Achut Manandhar
Professor Gordon Masterton OBE DL FREng FRSE
Jamie Martin
Dr Michael Mbogoro
Ed McCann
Professor Mercedes Maroto-Valer
Shane McHugh
Dr Paul Miller FREng
The Mo Ibrahim Foundation
Dr Mehran Moazen
Dr Moses Musaazi
Serah Nderitu
Rick Norsworthy
Catherine Nyambala
Kit Oates
James Oatway
Professor Washington Ochieng FREng
Dr Bola Olabisi
Louise Olofsson
Olakunle Oloruntimehin
Oluseun Onigbinde
Christopher Panas
Dr Loren Picco
Aape Pohjavirta
Professor William Powrie FREng
Dr Colin Pritchard
Proof Communication Africa
Pradeep Pursnani
Sheena Raikundalia
Ian Ritchie CBE FREng FRSE
Juliana Rotich
Portia Sale
Dr Robert Sansom FREng
Dr David Sarphie
Dr Nishanth Sastry
Sebastian Scott
The Shell Centenary Scholarship Fund
Dr Hayaatun Sillem
Professor Ravi Silva FREng
Bright Simons
Social Misfits Media
Source Institute
Dr Roberto Speicys
Professor Sarah Spurgeon OBE FREng
Alan Spybey
Professor Tom Stephenson FREng
Amy Stratton
Sir Martin Sweeting OBE FREng FRS
Alastair Taylor
Dr Philipp Thies
Amanda Thirsk
Professor Martyn Thomas CBE FREng
David Thomlinson FREng
Ian Thorpe
Dr Eben Upton CBE FREng
Professor Simon Vaitkevicius
Raphael Vermeir CBE
John Wade-Smith
Professor Michael Walker OBE FREng
Alan Watts
Dr Angus Webb
Chris West
Professor Dick Whittington FREng
Professor Richard Williams OBE FREng FRSE
WomEng
Sir Martin Wood OBE DL HonFREng FRS and Lady Audrey Wood
John Woods
Mike Woolgar
Professor Eric Yeatman FREng
HRH The Duke of York
Professor Steve Young FREng
Professor Paul Younger DL FREng FRSE
Professor Sir Saeed Zahedi OBE RDI FREng

Africa Prize funders

The Shell Centenary Scholarship Fund

GCRF
Global Challenges Research Fund

ConocoPhillips

Consolidated Contractors Company

Mo Ibrahim
FOUNDATION

The Royal Academy of Engineering would like to thank the donors and sponsors who have supported the Africa Prize over the last five years. It is grateful for their generous support, which has made this important programme possible. On behalf of all the entrepreneurs throughout Africa who have benefited, thank you.