



SUPER INNOVATORS

To kick off a new year for new ideas, Wings finds inspiration in the new wave of African innovators who are coming up with ingenious solutions to local challenges.

WORDS **BELINDA OTAS**

At a time when technology-driven development plays an increasingly significant role in shaping the economic outlook of the developing world, African innovators are equally taking the lead where solutions for local problems are concerned. This has been most prominent in the area of mobile technology, which has gone beyond the traditional boundaries and, in many ways, leapfrogged the continent's ability to export solutions internationally – such as mobile money transfer, and Ushahidi, an open-source project which allows users to crowdsource crisis information to be sent via mobile, which was used to save lives in the 2010 Haiti earthquake.

From Nigeria to South Africa, innovation hubs have become incubators for transformative ideas with the ability to impact lives and fuel an optimistic outlook about Africa's development and growth. These successes also boost the confidence of its young population, who play an intrinsic part in the continent's new wave of innovation. According to the African Innovation Foundation, which runs the

Innovation for Africa Prize (IPA): "Innovation is crucial. Not only does it utilise Africa's greatest resource – its human capital – and build Africa's capacity to invest in entrepreneurship; it also offers an opportunity for Africans to develop creative and effective ways to overcome everyday challenges.

"Innovation, if funded and supported, has the potential to draw Africa out of the cycle of poverty, dependency and unemployment and push the continent towards economic growth and prosperity," the IPA adds. This viewpoint is shared by Hervé Kubwimana, of the Rwanda-based African Innovation Prize, which encourages a culture of entrepreneurship across African universities. "Innovation, enterprise and sustainable, responsible businesses are the key to ensuring that Africa continues to grow and prosper on a long-term basis. Innovation serves to elicit a new approach to old issues."

Over the following pages, Wings meet six innovators who have created solutions that are impacting lives while addressing key development challenges in African communities. >



Points Mean Prizes
Mobile incentives are indispensable to WeCyclers' success.



On Your Bike
WeCyclers will become increasingly common in Lagos

Good As New

Bilikiss Adebisi, co-founder and CEO of WeCyclers, a waste management company based in Lagos, Nigeria and winner of the Cartier Women's Initiative Awards for Sub-Saharan Africa, 2013.

According to the UN, about 10 per cent of the waste in Nigeria is collected. The rest is left in low-income communities. When I took a closer look at Lagos, where we generate about 10,000 tons everyday and only 40 per cent is formally collected, I wondered where the waste that's not collected ends up. When you ask further questions about communities affected by poor waste management, it's usually the informal settlements. Hence, it was a conscious decision to go into such areas rather than affluent suburbs like Victoria Island or Ikoyi. We saw an opportunity and decided to come up with a solution that would address the challenges.

What makes our approach innovative (apart from the over-arching health and environmental benefits) is that we incentivise people to recycle with our use of mobile technology. We operate a points-

based system that allows us to send SMS messages to people every time they give us their waste, notifying them of its weight and points gained, which they can redeem in the form of gifts. Another factor that makes our work at WeCyclers compelling is that we are going after a lower-income demographic that people ignore. We collate demographic information. As such, we work with FMCGs (fast-moving consumer goods) companies like Coca-Cola and PepsiCo. We are going after this demographic because we are going to be a logistics company and as things grow, it's going to be about the data. I'm a software engineer driven by data, and I think it's sexy. FMCG companies want us to exist because we are solving a problem. We are going to have a huge database of information that gives different insights about consumer habits that they will benefit from.

Currently, we have 15 WeCycles and recently took an order for an additional 18. By the end of the year, we want to have 40, but in three years' time, we want to have 2,760. We recognise our potential to create at least 500,000 jobs. We have tailors that sew the bags, we have painters, carpenters and graphic designers and we have people that support us at the hub. Hence, the more WeCycles we have, the more jobs we can create. It goes without saying that technology is the tool that will help people reach new levels. It's going to be catalytic. In Nigeria, look at what GSM has done. It created a whole new middle class. That's what technology can do, and it's fantastic. There are opportunities in Africa for this kind of growth and change.



Pure Pill

Bright Simons, Ghana-based entrepreneur and founder of mPedigree, an SMS-based system that fights the proliferation of counterfeit drugs in developing nations. Simons was named by MIT as one of the world's '35 Innovators Under 35.'

The initial goal was to empower African farmers, the largest working group and the most impoverished on the continent. I had put

together a team of PhD students to work together to directly resolve at least one big challenge in Africa, instead of complaining and making noise about it. With no money, we turned to technology as we felt tech, more than anything, could have the kind of dramatic and practical impact we wanted without us needing to raise tons of money. We thought we could help farmers by revolutionising the organic and Fairtrade certification programmes that could help them triple or even quadruple their income, but which were inaccessible because of the high costs of the traditional approach managed from

Europe by expensive consultants. The problem, as it turned out, was that the intended beneficiaries had such limited capacity that without huge investments in capacity-building, they couldn't even use the technology I had invented (then called Virprox). In 2006, on the brink of despair, it suddenly occurred to me that the technology could actually be applied to addressing the fake medicines crisis I had heard about on the news. That was one of the most exhilarating moments of my life.

Technology can indeed be more political and socio-economically potent than is often appreciated. In fact, without cloud technology and various interfaces for connecting to the massive infrastructure of the telecom companies, how could we have hoped to create a system that is today accessible to, for example, 70 per cent of the Nigerian population? Just consider how massive that country is. Nigeria is our most celebrated case study. We decided that we should specialise in SMS, the most ubiquitous electronic platform in Africa then.

So effective has the solution been that the government, through NAFDAC, has been able to muster the confidence to promote the technology as a national standard for the management of the anti-malaria supply chain. The successful export of our model to India has been a further vindication of the power of ideas, since even continental and vast cultural chasms appear to submit before the innovative disruption that has been unleashed. I wholeheartedly believe that in decades to come, the mPedigree approach will be the world's leading method for quality assurance. We have triggered a huge cultural shift in the role of consumers, and this is globally seismic in its effect and implications. Technology and innovation in Africa means we can create completely new ways of solving our problems and rethink most of the models that have been foisted on the world. Africa has the 'freedom of imagination'.



Impressive Pedigree
mPedigree uses the mobile platform to combat the spread of counterfeit drugs.

Used by over **one million professionals**

...and over 18,000 employers

In the news

Jobberman is West Africa's most popular job search engine...
Jobberman helps link qualified personnel to the right job opportunities

Forbes

One of the fastest growing job search websites in Africa

CNN

Jobberman
NIGERIA'S #1 JOBS WEBSITE
www.jobberman.com

Simply Airports
"The Airport Transfer Specialist"

Travelling to London!!!
Call **Simply Airports**
on **020 7701 4321**
00944-7701 4321

For

- Secure, Licenced fixed price Airport pick-ups from all UK Airports to your destination.
- What More!!! Call on arrival and have your car / minivan or executive car ready in 15 minutes.
- Scheduled Car hire arrangements during your stay in the UK.
- Scheduled drop-off Services from any location to all UK Airports on your return date.

Prices: £31 from Heathrow to Central London
Book online at www.simplyairports.co.uk
Email: sales@simplyairports.co.uk



Take The Test
Technology has helped MD create advanced yet cost-effective testing

Early Detection

Ashley Uys, founder and MD of Real World Diagnostics and Medical Diagnostech, a company whose development of the pf/PAN (pLDH) Test Kit has been described as innovative for its new approach to detection and finding effective treatments for malaria

We are focused on developing malaria-sensitive products which assist in detecting malaria early, and indicate whether or not malaria treatment is effective. We are based in Africa, and know the problem is big here. The gap in the market was to develop a product in Africa for Africa. The fact that we had developed the core intellectual property, and were able to achieve the sensitivity and quality (of the kit) without compromising on price was helpful. There's a balance between quality and price. Obviously, in Africa the cost of the kit is very important. Hence, technology and innovation played a massive role because we have developed a high-quality product without the additional direct cost.

WHO recommends that a test kit should be sensitive enough to detect a minimum of 200 parasites per micro litre of blood. However, our test kit can detect fewer than 50 parasites per microlitre of blood. Hence, it's about four times more sensitive than what WHO requires.

It can therefore indicate positive results even before symptoms arise. The test kit can be used as a screening test in rural areas, and anybody can use it at the point-of-care. It's very user-friendly. The process consists simply of pricking your finger, transferring blood and waiting for the results.

To date, we have sold almost a million units of the test kit, which is performing quite well. We are part of the WHO programme to become a preferred supplier to the World Health Organisation programmes. Next year, we expect to be top three in the world for our product performance. The innovation behind this, and the research that went into developing this product, also makes us competitive on cost with mass-producing countries like India and China. I believe innovation is the most important thing in the science industry and many industries out there, and I believe more can be done to spark innovation in Africa. Africa is doing quite well at the moment, but there will never be enough innovation.

Water, Water Everywhere

Professor Eugene Cloete, creator of the Tea Bag Water Filter

Globally, 1.2 billion people do not have access to safe water. Our research focuses on developing point-of-use devices for cleaning water. I developed the Teabag Water Filter, which can treat one litre of water at a time. We used tea bag material that you would normally pack tea into as a support for Nano fibres that we manufacture through a process called electro-spinning. We can make these fibres extremely thin. We then use activated carbon and package the filter containing this Nano fibre on the inside of the activated carbon, like you would package a teabag. You can then put this into a special cartridge which fits into the neck of a water bottle. As the water flows through the filter, it filters out the bacteria and the activated carbon removes quite a lot of the chemical impurities, organic substances, chlorine and heavy metals, rendering the water safe for use. We also functionalise these filters, which mean we can incorporate empty microbial compounds into the filter, so as you filter the bacteria out, you also kill them with the anti-microbial compounds which reside in the Nano fibres. Currently, the technology is being upscaled and we are trying to produce it on a semi-commercial scale, while ironing out one or two technical problems that we have with the electro



Bag For Life
The Teabag Water Filter is the result of groundbreaking production methods.



A Secured future for everyone



Flexible pension management from
PAL Pensions that fits into your future plans.
Start planning your future today.

Talk to us now:
01-2802290-3,
info@palpensions.com,
www.palpensions.com



www.facebook.com/palpensions 
www.linkedin.com/company/pal-pensions 
[@palpensions](https://twitter.com/palpensions) 



your **PAL** For life



Art And Sole
 Founder Bethlehem Alemu weaves creativity and sustainability into Ethiopia's soleRebels

spinning process, and we have succeeded. We aim to take this filter to the market. We are also working on developing a cartridge which will be adaptable to different types of bottles.

The idea was one of the 10 world changing ideas as selected by Scientific American, in their 2010, December edition which is fantastic for us. We were the first in the world that produced fibres that were functionalised. We have a patent on this and that in itself is very innovative. Africa can lead innovatively because I don't think that if I lived in the first world, that I would have thought about or come up with this innovation because it would not have been an immediate need in my immediate environment. So people in Europe won't set out to develop teabag filters. It's the environment in which you live that influences the solutions you come up with. I have a huge amount of hope for African countries and think we can come up with our own solutions. We don't have to rely on the first world to help us solve our problems. That's from a political perspective but also from a technological perspective.

Sole Sister

Bethlehem Alemu, Founder and Managing Director of soleRebels, was named by CNN as one of the 'Top 12 Women Entrepreneurs who changed the way we do business' and by Fast Company as 'one of the most Creative People in Business.'

I started soleRebels for two reasons; Firstly, we had talented artisans in my community, yet there were no job opportunities. This struck me as both an immense tragedy and opportunity. Secondly, I kept hearing the phrase "poverty alleviation" in the wider context of Ethiopia and specifically with regards to the community where I grew up. As I entered college, it became clear to me that poverty alleviation is a myth and that prosperity creation is the sole route to the elimination of poverty. And to create prosperity you have to create something world class. Hence, from its inception, soleRebels has been an innovative company committed to creating world-class footwear and apparel products and community-based jobs that create sustained prosperity by utilising the immense, diverse, and sustainable materials and artisan arts of Ethiopia.

I believe one of the central elements of our success is the fact that we have always seen ourselves as a creative-force company first and foremost. At soleRebels, we have reimagined what artisan footwear and craft can be. This ethos is innovation in action, and has given us innovations like totally new thread types that our hand spinners have imagined; a new weave technique that gave birth to a more breathable and absorbent fabric for lining our shoes and sandal straps with. When people think of innovation they think of a new technology, but innovation is in fact substantively improving the state of what was before. And so innovation can and must be applied to areas like artisan crafting. In fact, it's this approach that will keep them

vital and relevant. This is one of the reasons soleRebels has found success – we have embraced the idea that tradition and innovation go hand-in-hand, so that yesterdays' hand loomer of fabrics is tomorrow's textile innovator. That's the ethos we employ, and it's one of the assets that makes soleRebels a unique, vibrant, dynamic and exciting brand. Over the coming 18-24 months we will begin deploying our Walk Naked kiosks. We created these groundbreaking interactive kiosks to allow customers to create custom shoes in real time with soleRebels artisans. We wanted to find a way that seamlessly showed that technology and craft are two sides of the same coin. We wanted to find a way to leverage technology beyond the simple web-based e-commerce interface and make it ubiquitous, customisable and interactive.

Piece Of The Pie

William Enyo, founder and CEO of SliceBiz, a mobile investment platform in Ghana.

SliceBiz is a crowdfunding micro-investment platform that provides early-stage funding for start-ups in Africa by leveraging the disposable income of the rapidly growing African middle class (both domestically and the diaspora). We provide an easy-to-use web/mobile investment platform that can be used by anyone to make 'micro investment' transactions. Users create an Angel Investor account either by texting their details to a unique sort code via mobile phone, or by logging in to the SliceBiz web portal. For start-ups, this means they can get access to a whole new funding source which aggregates small investments from a large pool of accredited investors.

We've developed a hybrid approach by using accredited investors in Angel networks to validate companies, which allows Angels to first provide part of the start-up's funding before turning to the larger middle-class group to ask for smaller investments. So if a company needs \$50,000 of seed stage funding, SliceBiz working with its Angel Investor network partners and gives them the opportunity for about five Angels to each invest \$5,000, bringing the total to \$25,000. SliceBiz then uses the names and recognition of these notable business leaders on the platform to validate the company, before using the additional crowdfunding approach that urges the second target market of investors (domestic and diasporan middle class) to invest small amounts via our platform. It's an approach that leverages investments of recognised business leaders, while at the same time keeping the threshold of investments low enough to spread the risks. This approach to funding start-ups is unique and innovative in at least four ways: mobile money integration, unique investors, equity ownership and transparency/strong due diligence. Granted, the technology innovation scene in Africa is pretty much in its nascent stages compared to the rest of the world, and issues such as access to early-stage capital seem to persist. Yet, the consistency with which African tech innovation continues to receive global attention is fuelling a strong grassroots movement of tech-savvy young people. ✓

