



Hello Tractor, The Uber for tractors

Lekan Otufodunrin

For small-scale farmers in Nigeria, especially in the northern parts of the country, getting tractors to use on their farmlands to boost their yield has always been difficult.

Many farmers can't afford to buy one due to the high cost, while the country's federal government, which is the major supplier of tractors, is not able to meet more than four percent of their requirements. [Africa has less than 50 agricultural tractors per 100 square kilometres of arable land](#), according to the Food and Agriculture Organisation (FAO), which ranked Nigeria 132 out of 188 countries surveyed on agricultural mechanisation. [Farm sizes in Nigeria are small](#), making it difficult for individual farmers to own a tractor.

However since mid-2014, the introduction of the Hello Tractor project has been addressing the prevalent problem of crippling poverty and poor crop yields amongst small-scale farmers. Hello Tractor is the brainchild of Jehiel Oliver, an American who developed the idea while working as a global finance consultant focused on SMEs and agricultural industries at Aya Consulting in the United States.

He relocated to Nigeria to implement the project; a social enterprise that improves food and income security by facilitating Nigerian farmers with the right tools to efficiently harvest their land. Hello Tractor promotes collaborative consumption by building a network of "Smart Tractor" owners, enabling small-scale farmers to request and pay for tractor services via SMS and mobile money, as and when they need specific services.

On what makes the solution unique, the operators say, "Our powerful booking system allows farmers to conveniently request, schedule and prepay for tractor services, from nearby Smart Tractor owners, through SMS messaging and mobile money. Once service is completed, the pre-payment is automatically released to the Smart Tractor owner."

Since it was launched in mid-2014, farmers who participated in the beta period have reportedly seen their yields increase by 200 percent using a machine that's 40 times faster than manual labor. "We have designed an innovative, low-cost "Smart Tractor" specifically for small farmers' unique needs," remarks Oliver, the founder of Hello Tractor.

"The smart tractor is a two-wheeled tractor with GPS antennae that allows us to track its usage and telematics, which collects and transfers data in no Internet areas such as the rural areas," Oliver adds.

According to Oliver, each tractor on the platform reaches an approximate 250 Ha of farmland annually, which is substantial in Nigeria where farmers own, on average, just over one hectare of land.

With one of the fastest growing populations in the world, and huge pressure on the employment market to provide new jobs, optimizing Nigeria's agricultural industry is key to combatting youth unemployment for the next generation.

"Despite the profitability of agriculture in Nigeria, there remains a substantial risk (both real and perceived) preventing banks to engage more deeply," remarks Oliver. To address this issue Hello Tractor also coordinates low-cost financing to help facilitate the purchase of a Smart Tractor. "Equipped with various attachments, owners can tailor its use for a variety of crops and stages of the production cycle, allowing them to serve their customers throughout the year. The GPS antenna allows Hello Tractor to track its usage and gather data on location, market trends, and uptake," Oliver explained.

"At the beta phase we're prioritizing land preparation

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• Hello Tractor

Stories that change the world

Today, for Impact Journalism Day, 50 newspapers join forces to highlight stories that change the world.

Beyond the constant stream of negative news, there are many stories of hope and concrete solutions. Stories of changemakers tackling some of the world's most pressing issues with innovative ideas, in order to change the lives of millions for the better. Stories worth reading and spreading, not only to rebalance our view of the world, but to help these existing solutions be replicated worldwide.

The media can play a crucial role in telling the individual stories behind this global movement. That's why for the last five years Sparknews has invited newspapers to take part in Impact Journalism Day, harnessing the power of collaborative journalism to bring stories of change to the surface. Every year these newspapers explore and publish an array of groundbreaking solutions in special supplements on the same day, reaching 120 million people worldwide in print and digital media. Many publications have come to realize the impact of these articles, and now incorporate more solutions-driven stories into their day-to-day coverage of the world.

For the fifth edition of Impact Journalism Day, the media are joined by organizations that believe spreading these stories is a first step toward change. These include the United Nations as well as One Young World, which annually gathers together 1,500 young leaders from social and corporate sectors who are involved in positive innovations. A large community of well-known personalities and ordinary citizens have also joined the

chorus in signing a manifesto to show that everyone - governments, the private sector, civil society, NGOs and everyday people - can take action for a better future. You, too, can be part of this transformational movement.

Discover those who have successfully brought answers to challenges such as good health, access to water, quality education, decent employment and clean energy. Each serves as a concrete example of the power of individual or group initiatives to help reach the UN New Sustainable Development Goals, to end poverty, protect the planet and ensure prosperity and good health for all.

We hope you enjoy the read...and that you become part of the solution. Sign the manifesto ([sharestoriesofchange.org](#)) and share the stories that impress you most on Facebook and Twitter (#ImpactJournalism, #StoryOfChange, @Sparknews, @Thenationnews).

Christian de Boisredon, founder of Sparknews and Ashoka Fellow & The Sparknews Team.



A second life for waste

By Amina Nazarli

JUST like nature creates a beautiful butterfly from an ordinary caterpillar, the pioneers behind the project "Papillon" morph unwanted items into something beautiful and useful.

A group of young student-volunteers are working together for one very noble goal - to decrease the pressure of excessive waste on nature and reduce the pollution of the environment. Creative thinking is the main component of the project, which is centred on repurposing unwanted items in an environmentally responsible manner. The Papillon team's inventive approach helps turn waste into colorful and attractive interior decorations and accessories for houses, restaurants and cafes. They are the first in Azerbaijan to engage in this process.

Recycling in Azerbaijan is only at the beginning of its development. Citizens do not currently sort their household

waste. A big step forward in the sphere of recycling was the opening of a plant for sorting solid household waste in Balakhani in 2012, with a capacity of 200,000 tons per year. However, only 20 percent of waste is recycled at the plant. After the separation of recyclable materials, the remaining mass is sent to a plant in Baku for incineration.

Papillon aims to tackle waste at the source. "We are giving waste materials a second life, thus making them useful again. In the future we plan to design homes, restaurants, cafes and other facilities," the team said.

They are also gathering volunteers from among students, who are taught the heart and methods of the upcycling process. Volunteers devote their spare time to a good cause and gain a chance of becoming a potential employee of this design company, which is at an early stage of development.

IMPACT Journalism Day by Sparknews

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Secretly Solar

An Italian company is making photovoltaic roof tiles that perfectly mimic materials such as terracotta, stone and wood

By Elena Comelli for Corriere della Sera

Invisible to the naked eye but designed to produce clean energy, Invisible Solar is an innovative photovoltaic (PV) module, produced by Vicenza-based company Dyaqua, to meet the needs of historical cities, towns and areas that are subject to aesthetic constraints.

You can't see the modules because they are embedded into a polymeric compound that is opaque to the human eye, but transparent to the sun's rays. They can be designed to look like any type of construction material—whether terracotta, stone, cement or wood—in order to blend in with the building's architecture. The first PV roof tile production line is so successful that inventor Giovanni Quagliato is struggling to keep up with orders.

The PV shingles can be used to build a rooftop that is identical to that of surrounding buildings, perfectly fitting in with the landscape of a historic town, although it is actually a PV roof with only a slightly lower efficiency than that of traditional solar panels. Invisible Solar technology was tested by scientists at the Italian National Agency for New Technologies, Energy and Sustainable Economic Development, and can also be applied to other types of building material, such as stone. In fact, a PV system was built in Capri with Dyaqua solar modules that were created to look just like stone and to be seamlessly assembled into a wall. Quagliato, an artist specialised in creating epoxy resin artwork, launched an Indiegogo crowdfunding campaign—which is still underway—in order to increase production.

<http://www.dyaqua.it/>



By Michelle Bao and Jacquelyn Guillen

I-Drop Water aims to increase the accessibility and affordability of safe drinking water by making purification and distribution processes more efficient. According to a 2015 World Health Organization (WHO) report, approximately 300 million people in Africa and 1.8 billion people around the world use a drinking water source contaminated with faeces.

Frustrated by the drinking water industry's inefficiencies, co-founders James Steere and Kate Thiers Steere both left their jobs in 2015 to start I-Drop as an alternative business solution.

I-Drop purification systems are installed in any grocery store with access to a running tap, at no cost to the shop owner. Customers can then purchase safe drinking water for R1 per litre. At the end of each month, I-Drop splits the profit from water sales evenly with the shop owner.

I-Drop Water

"It's a price point low enough for just about everyone to afford and it's incredibly efficient," Steere said.

Using GSM technology, I-Drop machines can be monitored from anywhere and require minimal oversight. It also reduces plastic waste because consumers can bring their own containers or purchase a reusable one as opposed to purchasing individual water bottles.

I-Drop has partnered with over 60 shop owners in four African countries (South Africa, Zimbabwe, Botswana and Ghana) and has sold over half a million litres of safe drinking water.

"We want to be part of the drinking water solution," Steere said.

<https://www.idropwater.com/>

Feeling life under your fingers

by Maja Prijatelj Videmšek

The blind and visually impaired can be very skillful at using tablets and smartphones with touchscreens but they are not able to see object shapes on one-dimensional surfaces. The digital agency 4WEB from Slovenia has developed and patented the Feelif multimedia device which enables the blind and visually impaired to feel these shapes.

The device consists of a tablet, a relief grid placed over the screen, and an application. It applies vibrations, sounds, and voices to help users identify shapes displayed on the tablet screen or which they drew themselves. The small elevated points on the grid allow for better orientation as the user slides his or her fingers on the screen.

The application makes it easier for the blind and visually impaired children to learn Braille and geometrical functions. But the developers of the Feelif device are also looking for ways to apply this technology to adults. They are testing a device on the Slovenian market and the first users will receive it within a month.

The Feelif device costs 500 euros. "When we are sure that the product is at an excellent level, we will make it available on the global market: first in European countries, and later in the USA," says Katarina Pavšek, a member of the 4WEB team.

There are about 14 million potential users of the device in both markets, and 88 million potential users worldwide. The company is also developing an open platform which will create a network of people linked to the blind and visually impaired, and that will facilitate the sharing information.

<http://www.feelif.com/>

Impact Water: providing safe drinking water solutions at scale



By Eronie Kamukama, Daily Monitor

When non-profit Impact Carbon was first introduced in Uganda, it sought ways of advancing the production and quality of improved, clean-burning cook stoves as a way to mitigate carbon emissions and reduce indoor air pollution. As operations at Impact Carbon progressed, there was a realisation of the need to introduce water purification systems as another means to reduce the consumption of wood-based fuel, which was being used in large quantities to boil water. Impact Carbon decided that the idea would work best as a business

project, and should focus on schools. Buying the systems would encourage schools to own the responsibility of carefully utilising and maintaining them. The idea birthed Impact Water, a social business which was registered in 2015.

Mark Turgesen, Director of Impact Water in Uganda says, "The response is, 'when can I get started'? It is because schools are looking for solutions because they know it is a problem," he notes.

Indeed, Mr Adam Kakembo, a teacher and sanitary master at Kawempe Muslim Secondary School in Kampala says the school now has three Impact Water systems and consumes about 4,500 litres of water a day. He explains that before the introduction of these systems, the staff "would boil 300 litres for the boys and about 200 litres of water for the girls in the students' kitchens. We would consume about three to four lorries of firewood per week."

Impact Water put in place a credit facility that allows schools to pay over a two and five year long-term period, each child paying an average of Shs800 per term. Since the company's inception, 650,000 students in 1300 schools have benefitted from access to safe drinking water thanks to its systems.

Impact Water is looking to expand further in institutions such as health facilities by specifically targeting bulk sales with non-governmental organisations and via partnerships with school associations.

<http://www.impactwater.co/>

The jacket that spots pneumonia

By Beatrice Nakibuuka, Daily Monitor

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When her grandmother died after being diagnosed with malaria - following six months of presenting symptoms such as a cough and fever - Olivia Koburongo (26) was devastated to discover that in fact her grandmother had been suffering from pneumonia.

In 2014, Koburongo - a Telecom engineering graduate from Makerere University - along with four others thus came up with "Mama-Ope" (Mother's Hope), a biomedical smart jacket used to test pneumonia among children, thereby helping reduce the number of children that die due to misdiagnosis. **Pneumonia is the number one infectious killer of children under age five globally, according to WHO.**

"The jacket diagnoses, measures the extent to which the disease has affected the lungs and also enables tracking the progress of the disease since diagnostic information is sharable," says Brian Turabagye, one of the founders. Each sensor in the jacket is aligned to a particular symptom and in four minutes, data is computed and sent to a mobile phone application (via Bluetooth) which analyses the information in comparison to known data so as to get an estimate of the severity of the disease.

The jacket, which is still only a prototype, can diagnose pneumonia up to three times faster than a doctor and reduces human error, according to studies carried out by its inventors. The Mama-Ope team has also hired private medical researchers from Makerere University's Infectious Disease Institute to test their

prototype, and sought guidance from Unicef.

The jacket is currently awaiting approval by Uganda's Ministry of Health, which will ensure its commercial viability.

In the meantime, Mama-Ope has been gaining supporters around the world - **in March this year, Brian Turabagye won the Pitch@Palace Africa event** hosted by HRH The Duke of York in London, England.

The team intend to ensure that the jacket can run on solar power in future, making it more reliable in rural areas with frequent electrical outages.

<https://mamaope.wordpress.com/>

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because first of all, it's the first stage of production," Oliver said. "It's also the most labor intensive. It takes about 40 days of manual labor to prepare the land. Our tractors do it in eight hours."

On the impact so far, Oliver told The Nation that, "Farmers are reporting that having access to tractor services saves them money on land preparation while removing the labor constraints that have prevented them from planting the land that they have access to."

Hello Tractor has just been launched in Kenya with a pilot this year. Oliver believes the results there should be as promising as those in Nigeria.

<http://www.hellotractor.com/>

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