



A customer in a local Nairobi grocery store fills a reusable KOKO Networks bottle at a KOKOpoint Fuel ATM.

IT'S BEEN OVER SIX MONTHS SINCE FIRST SPEAKING to Greg Murray, the Nairobi-based CEO of KOKO Networks, an international technology company focused on improving life in fast-growing emerging market cities. Since then, the world has experienced the disastrous effects of the global pandemic. For a country like Kenya, with so many inhabitants living on a daily wage and the inability of government to fund household stimulus payments, it has been particularly difficult.

While a total lockdown would have been virtually unimplementable, Kenyan authorities were quick to focus on preventative measures, such as compulsory mask wearing, closing flights and a curfew as early as March. So far, the country has had fewer than 500 deaths. But as we enter September, it is faced with an impossible balancing act: how to kickstart a tanking economy, combat the loss of jobs, handle mounting government debt and the crippling of the hospitality industry—without allowing the virus to spread.

Against this challenging backdrop, KOKO's first innovation—addressing the persistent health and environmental threat posed by the use of dirty cooking fuels—is more pressing than ever. For many, current cooking options are limited to charcoal, firewood and kerosene, driving both mass deforestation and an alarmingly high rate of respiratory conditions that make COVID-19 even more dangerous.

# SAFER, CLEANER, CHEAPER

Indeed, carcinogenic cooking fumes account for over 600,000 premature deaths in Africa each year, over 50 percent of which are children under the age of 5.

In 2019, after years of R&D and a successful pilot, the company launched its KOKO Fuel business in Nairobi, a clean bioethanol-based solution that delivers major cost savings and quality of life improvements for low-income customers switching from dirty fuels. Customers use mobile money to buy fuel in small daily quantities at KOKO Fuel ATMs that are installed inside local shops a short walk from people's homes. The KOKO Fuel ATMs are refilled by smart micro-tankers operated by Vivo Energy Kenya (the Shell licensee), with whom KOKO partnered in 2018.

Murray explains, "People in Kenya and further afield are spending \$20 on charcoal per month

**GREG MURRAY,** CEO of KOKO Networks, spoke to Brunswick's **KIRSTY CAMERON** about how conscious capitalism can build a better world.

whilst only earning \$100 to \$200 per month, which just seems totally crazy. They desperately want to upgrade their fuel but can't afford to upgrade their fuel spend." The urban cooking-fuel market, estimated to be worth more than \$40 billion in Africa, is ripe for innovation. What was missing was a clean solution that could scale and provide cost savings.

"Once bioethanol had been proven to work, we needed to de-cost it and make it mass market," he says. Ethanol itself is not a new solution. The difference here is that "instead of distributing single-use plastic bottles, customers refill reusable KOKO Smart Canisters at nearby KOKO Fuel ATMs, and once at home they use the canister to refill their KOKO Cooker, a modern two-burner bioethanol stove." The cost for a KOKO Cooker Kit is \$45, including a Smart Canister and a \$5 KOKO Fuel credit. Customers can pay the full amount upfront, or they can spread the cost out over time using a lay-away savings plan at no additional cost. About half of KOKO's customers take advantage of the plan. Since the city-wide rollout at the end of 2019, KOKO has been adopted by over 50,000 households, with most of that growth occurring during the pandemic.

A crucial element to KOKO's success has been partnering with existing infrastructure operators, including fuel distribution, but also around 700 small grocery stores. "Nairobi", Murray explains, "is a city of shopkeepers, with over 80 percent of retail spend occurring through small local shops around the corner from your home." Shopkeepers become KOKO Agents and earn revenues by signing up new customers and hosting the KOKOpoint Fuel ATMs. Agents don't need to have scarce funds tied up and KOKO's Network Operations Centre receives over 15 million datapoints each day from sensors inside the Fuel ATMs, enabling safe and efficient operations across the supply chain. The result is ultra-low-cost fuel within a short walk of all homes.

When COVID-19 hit, KOKO brought together a group of Kenyan companies to launch Safe Hands Kenya, a pop-up nonprofit initiative which used tech-enabled retail networks in the informal settlements to distribute free soap, hand sanitizer, surface disinfectant and masks, while simultaneously launching a nationwide consumer education campaign via TV, radio and online.

"I see KOKO as a great example of socially conscious capitalism, focused on delivering solutions to consumers that improve lives," Murray says. "In recent decades, financialized capitalism has sometimes delivered poor outcomes for consumers and society, but it wasn't always that way. We are

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**KIRSTY CAMERON** is an Account Director and Digital Specialist in Brunswick's London office.

capitalists in the traditional sense. We don't do things if they aren't useful to consumers and society. The scourge of dirty fuels is a massive societal problem."

Murray also plans to expand beyond cooking fuel into other areas: "If KOKO were a telco, clean fuel is the 'voice' of the network, but our R&D Labs have been working on a range of other solutions that can be layered on top of the Fuel network, and be just as transformative. Basic goods and services are far more expensive in urban Africa, than in most 'Western' nations. Being poor in urban Africa is extremely tough—low incomes are reduced further by high expenses. Our approach is to start with the consumer and work backwards, in order to find ways to lower the cost of basic goods and services."

Problems of infrastructure and government are widely documented in Kenya and neighboring states. Yet Murray, who is broadly supportive of what the government of Kenya is trying to do, found it straightforward to identify and engage the right stakeholders required to enable KOKO to launch.

"Governments in Africa get a bad rap," he says. "Yes, there is corruption, but there is corruption in every country on the planet. In Kenya, there are also very competent technocrats who seek to move the country forward. For KOKO, it has been important to build relationships within a broad range of government agencies, to find individual champions who genuinely and legitimately support the positive outcomes we deliver for Kenyans, and who can help us navigate the right processes. KOKO has worked with regulators to draw up formal safety standards for ethanol cooking appliances and fuel, and has the support of many key ministries who understand that KOKO's progress helps the Government achieve a range of policy objectives."

In Nairobi, people are recognizing the opportunity KOKO's solution represents. Reducing smoke and soot from dirty cooking fuel helps the environment as a whole.

"All Kenyans have seen first-hand the effects of deforestation from the charcoal industry," Mr. Murray says. "Every Nairobiian has family up-country, in the village or rural areas. Charcoal takes out the forests, which dries up the land, wrecks the soils and causes crop failure. The impacts of deforestation are crystal clear when Nairobiians head up-country every year. There is a personal connection to the deteriorating landscape that is perhaps missing for many urban dwellers in the 'West.' So yes, using KOKO is practical, but we also are able connect to Kenyan consumers on a personal, emotional level as a result of this deep connection with the land." ♦