

THINKBIKES – ELECTRIC CARGO BIKE WITH A FRIDGE FOR SMALL BUSINESSES TRANSPORTATION IN NIGERIA

One of the interesting innovations shortlisted by the Africa Prize for engineering innovation is the [ThinkBikes CoolMAX, an electric cargo bike](#) with a fridge to help Nigeria's smallholder farmers get fresh food crops to market. The three-wheel vehicle has been developed by the Nigerian mechatronics engineer, Tolulope Olukokun to help solve the challenge of fresh produce rotting in hot weather when transported in wet sacks or on open roofs and trailers.

The three-wheel vehicle is a cooling unit to be powered by separate removable packs of recycled lithium-ion batteries taken from old laptop computers for a second life usage. [ThinkBikes offers a wide range of electric cargo bikes, including the Alpha and Cool Max models.](#) The cargo bikes are available for hire or purchase.

Food insecurity is a major challenge in Nigeria with 50% of food produce and post-harvest lost annually: ThinkBikes thus identified micro and small businesses such as small holder farmers that are facing difficulties in transporting their produce to provide them with affordable and sustainable means of goods and people transportation, to help the business and general well being of their clients.

The Thinkbikes Limited company was established in 2020 by the engineer Tolulope Olukokun and it is a manufacturing as well as a service firm in terms of ride sharing, lease and sale of electric road and cargo bikes. The company is providing last mile transportation using Electric cargo bikes made available for ride sharing and lease to individuals and businesses in urban and rural communities.

[The ThinkBikes CoolMAX has a one metre by one metre 2,000 litre fridge](#), which can operate for an hour full charge and has a cooling range of -6 °C to 30 °C. The electric bike has a top speed of 40 kilometres per hour and a range of 30 to 50 kilometres, depending on the weight of the cargo. This refrigerated cargo bike ensures the preservation and freshness of food and produce throughout the passage. By providing a reliable and eco-friendly solution for the transportation of perishable goods, ThinkBikes helps reduce food waste and losses. This, in turn, supports the local economy and ensures food accessibility for communities.

The bike also has pedals that are in-sync with the electric motor with a pedal assist system to enable the rider to travel further with far less effort. The bike has a patented energy recuperation system that adds up to 5% of energy back into the traction batteries like



regenerative braking systems work in electric vehicles.

ThinkBikes CoolMAX comes with a wall charger, and Olukokun is working on solar recharging stations. His aim is to improve the vehicles for increased loads and a range of 100 kilometres. ThinkBikes' electric cargo bikes utilize clean energy, significantly reducing carbon emissions and air pollution. By adopting electric-powered vehicles, ThinkBikes will also provide a sustainable and environmentally friendly transportation alternative. This will not only improve air quality but also align with the global effort to combat climate change. The company informs that ThinkBikes helped save over 500,000 litres of fuel and reduced carbon emission by 800,000 Kg. since its launch.

The company's aim is to accelerate Nigeria's transition to renewable energy and sustainable transport, as a response to the climate crisis and increased fuel prices which have a significant impact on smallholder farmers and traders who are struggling to scale up their activities. ThinkBikes CoolMAX wants to provide a product for women smallholder farmers as well to address the issue of post-harvest losses.also

Olukokun and his team manufacture the chassis of the rear-wheel-drive bike in the factory of the company in Ibadan (Nigeria). The bikes require little or no maintenance and are cheap to run. They are suitable for off-road or rural areas, and are locally manufactured for durability and strength. By manufacturing the products locally and collaborating with local suppliers, ThinkBikes creates employment opportunities and stimulates economic growth. This also fosters a sustainable supply chain and strengthens partnerships within the community.

The ThinkBikes Company currently has a production capacity of 5 bikes per day and is working to fulfil 1,200 orders by the end of 2023. ThinkBikes has generated \$50,000 in sales revenue. The company estimates that there is space for significant growth in Nigeria, with potential sales ramping up to 250,000 bikes. ThinkBikes has implemented a lease/PAYGo model in some communities, which could help to make the bikes more accessible to customers who may not be able to afford them upfront and they plan to expand the lease/PAYGo model to 100 communities, which could help to increase accessibility to the bikes.

ThinkBikes is planning to raise a long-term capital of \$1 million to fund expansion and growth. The company aims to mass-produce cargo bikes and hire more women and youths for product sales and marketing. They also plan to expand their operations and market into other nine African countries.

Since 2021, the company has been recognized by prestigious events as the Top 16 Global CLP and the [Siemens E-mobility Innovation Prize in 2021](#); the Top 15 Global Climatech Award at COP 27; the Product Innovation Award and the MSME BOI Award of Excellence in Manufacturing by the Federal Government of Nigeria in 2022; the Gain Agriculture Innovation Challenge Award in 2023. In 2023 the ThinkBikes company has also been [shortlisted by the Royal Academy of Engineering at the in 2023 Africa Prize for Engineering Innovation](#) for having addressed challenges central to the UN's Sustainable Development Goals, including clean water and sanitation, sustainable cities and communities, clean energy, good health and wellbeing, and quality education.



All these recognitions, which include support for the company's operation, will allow expanding the impact of ThinkBikes in Nigeria and other interested countries.

To know more

[Think Bikes website](#)

[Think Bikes in Facebook](#)

[Think Bikes in reports.raeng.org.uk](#)

[Think Bikes brochure](#)

[Shortlist Africa Prize 2023](#)

[Africa Prize Engineering Innovation 2023](#)

[Think Bikes in siemens Stiftung.org website](#)

[Electric Cargo Bikes in Empowering People Network website](#)

[Think Bikes in cleantechnica.com](#)

[Think Bikes in electronicdesign.com](#)

