

Clean Technology Hub Business Case Study Series

ThinkBikes: Positioning for Scale





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This caselet was written by Byencit Duncan and Abel B.S. Gaiya, under the guidance of Ifeoma Malo, Clean Technology Hub. It was compiled primarily using information from an interview with the company's founder and CEO and news reports, and is intended to be used as a basis for class discussion rather than to illustrate either effective or ineffective handling of a management situation.

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Company Background

The journey which led to the creation of ThinkBikes Limited in 2020 began with a combination of triggers in a country beset with many such triggers. For the founder and Chief Executive Officer (CEO) of the company, Tolulope Opeyemi Olukokun, "when you look at Nigeria, you see a lot of problems." As far back as 2012, when the removal of the government's subsidy on fuel caused a hike in the price of petrol, he had seriously pondered over the alternatives that would help overcome the challenge of bouts of fuel scarcity in Nigeria. Tolulope has also looked at the low survival rates of Nigerian businesses, many of which fail in their first couple of years of existence. In addition to the general challenges of doing business in Nigeria, one of the major reasons for this is the difficulties involved in operating with the existing transportation infrastructure and system.

Tolulope saw electric cargo bikes and electric bicycles as key solutions for addressing the problems of high cost and frequent scarcity of fuel; the profitability of small businesses; carbon emissions in the transportation sector; lower prices of goods and services for consumers due to lower transportation costs; and the challenges involved in using (and overusing) conventional trucks for commercial purposes. However, the cost of importing these vehicles was too high, both for the typical individual Nigerian and the typical small business.

Tolulope had a university degree in Engineering (major in automobile engineering) and had lectured courses in Mechatronics Engineering at an institution of higher education.¹ The entrepreneur therefore embarked upon a quest to produce electric bicycles within Nigeria. With a few months of product development, ThinkBikes came up with a prototype. The company is registered as a manufacturer with a focus on micro-mobility (two and three wheelers) and has its assembling station in Lagos and a manufacturing plant in Ibadan.

¹ Remeredzai Joseph Kuhudzai (20 January 2020). "ThinkBikes Nigeria Is Launching Locally Produced Electric Tricycles", CleanTechnica. <u>https://cleantechnica.com/2022/01/20/thinkbikes-nigeria-is-launching-locally-produced-electric-tricycles/</u>.



ThinkBikes' first proof of concept (POC) was showcased in 2019 for public feedback. Its first product is an electric cargo tricycle called Alpha 1.0, which had 90 percent of its components sourced locally, including the bodywork, the wheels, and the batteries.² The only imported components were the electric motors. The vehicle's battery packs were made using repurposed/recycled 18650 cells.³



Figure 1: ThinkBikes electric cargo tricycle

Business Strategy

Tolulope understands that despite the company's products being half the price of similar products imported from China, not a lot of people are able to afford the upfront costs of acquiring the vehicles within the Nigerian mass market. As a result, the company does not target a niche market but instead makes

² Ibid.

³ Ibid.



intensive use of the internet to be accessible to any customer across Nigeria who is able to afford its vehicles; these presently tend to be businesses. At the moment, sales are concentrated in states with major cities: Lagos, Abuja, and Ogun States. There have also been orders from four other African countries (Sudan, Ethiopia, Ghana, and Kenya). These sales in the "pilot phase" allow for the achievement of the present goal of learning from users to incorporate feedback into the design of the vehicles.

The designs for the vehicles are meant to be customized for different customer needs. While the threewheelers are the same, the cargo bikes are differentiated for purpose. There are those with cargo boxes designed for farmers, for logistics companies, for waste plastic recyclers, and even bikes for carrying passengers. The vehicles may be used by farmers, plastic waste collectors, logistics operators, distributors, warehousers, manufacturers, Fast-Moving Consumer Goods (FMCG) retailers, and even hawkers. ThinkBikes is also looking into developing and adding cooler boxes powered by solar panels to its vehicles, due to the high number of requests from potential clients in the fishing industry and the trade of perishable goods.⁴

With its target customers being Micro, Small and Medium Enterprises (MSMEs), ThinkBikes currently uses a business to business (B2B) business model, with plans to make use of a business to customer (B2C) model in the future. In the long run, leasing of cargo bikes directly to users will be incorporated into its business model. It would also be possible for businesses which need the products but cannot afford them on their own to make use of a vehicle and make payment per use.

One of the long term plans is to undergo vertical integration by expanding into the logistics business. The logistics arm would then be a source of demand for the manufacturing and assembly arm of the company.

Challenges

The major challenge to scaling the business is funding. Most of the financing for product development and overhead costs has come from the pockets of Think Bike's founder. The company won a €10,000 grant from the Siemens Stiftung 2021 Innovation Call, titled "E-mobility Made in Africa for Africa," but much more than

⁴ Ibid.



that has been expended, and more is needed to scale the company's activities. In Nigeria, funding in a new industry and for start-ups is usually difficult to access, "especially when you are in the hardware space." It is Tolulope's belief that this is probably why the e-mobility solution is slow to get to the market. "But then slow and steady wins the race." The situation has given ThinkBikes the opportunity to reflect on solutions to get it right rather than rush to market with inefficient solutions and designs.

Another major challenge is the lack of industry-specific local expertise in the Nigerian e-mobility sector. Everyone who is brought on board has to be trained, which takes a lot of effort. After training, some workers might decide to leave. As a start-up working in an industry that does not receive as much funding as other more established clean technology industries, it becomes very difficult to train and retain talent while undergoing product development and at the same time bootstrapping to keep things going.

The company has engaged with the National Youth Service Corps (NYSC) to be an official trainer. The NYSC is a mandatory one-year scheme for Nigerian graduates to pass through, which requires graduates to get assigned to a place of primary assignment for work for a year. ThinkBike's engagement with the scheme would provide a stream of young and enthusiastic Nigerian graduates willing to develop skills in the budding e-mobility industry.

There are also supply chain challenges for the 60–65 percent of components sourced locally.⁵ There are also a few components, "maybe one or two components out of 50", which cannot be made internally and whose supply has to be outsourced. Sometimes suppliers end up delaying the delivery of the components ordered – in some cases for up to six weeks – for reasons such as challenges with power and problems with their petrol-powered generator sets. Some of Tolulope's mentors have told him that backward integration is an important means of addressing these supply chain problems. However, producing these components increases the cost of production and requires capacity-building, all of which are more feasible when additional financing is available.

As a whole, ThinkBikes is operating as a greenfield investor, which comes with both benefits and challenges. The major challenge is that there are no companies to emulate. "It's extremely difficult when

⁵ Paul Omorogbe (7 June 2022). "Nigeria's First Electric Bicycle Manufacturer Aims To Bring Easy Mobility To Rural, Urban Areas", *Nigerian Tribune* <u>https://tribuneonlineng.com/nigerias-first-electric-bicycle-manufacturer-aims-to-bring-easy-mobility-to-rural-urban-areas/</u>.



you have nobody to copy or emulate. We don't have anything to look at." Many things have to be pioneered, designed, redesigned, and learnt by experience. The benefit is that, as an early entrant to a new industry, it is possible to capture important segments of the market as the industry grows.

Reflection

- 1. What are the advantages and disadvantages for a company undertaking vertical integration in a country with an uncertain business environment?
- 2. What strategies may start-ups use in a budding capital-intensive industry to shore up financing?