



Clean Technology Hub
energy innovation centre

Clean Technology Hub Business Case Study Series

Max Drive

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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 Vice President of Strategic Partnership 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

Metro Africa Xpress, also known as MAX, was all about the gig economy and independent drivers. Incorporated in 2015 by Tayo Bamiduro and Chinedu Azodoh, MAX looked out for the welfare of independent commercial drivers within the gig economy by equipping them to earn money on a daily basis while concurrently running its logistics services. MAX was created on the grounds of finding demand for drivers and upskilling them with information (access to road navigation systems, vehicles, registration and value added services) needed to function as independent commercial business owners within the gig economy. At the national level, MAX seeks to close up the unemployment gap within the Nigerian economy as well as carryout other social impact activities.

In 2020, MAX moved its attention from ride-hailing and delivery to other critical problems. This includes pioneering electric vehicle production and launching the largest subscription platform for vehicle subscription across the continent. The major motivation for pivoting to electric mobility was reducing carbon emissions in Nigeria; MAX understood that while other governments are taking initiatives to cut down carbon emissions within their countries, it would be great not to continue to pollute Nigeria and the continent. Another motivation for the adoption of electric mobility was to foster technological advancement and innovation in the country and Africa. MAX was all about empowering drivers and improving the economic situation of Nigeria, venturing into electric vehicles was in a bid to enable the drivers save more and improve their standard of living given the long term economic impact of owning an electric vehicle as compared to an internal combustion engine.

From an economic standpoint, MAX was aiming at fixing the rising unemployment within the gig economy and by extension improving the economic growth of the country. By providing access to vehicles for drivers and various packages that will improve and grow the income of the drivers.

Max's journey into the electric vehicle market began with the production of two wheelers called the MAX E series under the Nigerian Energy Support Program (NESP) at Gbamu Gbamu Ogun state in 2020 implemented by the Federal Ministry of Budget and National Planning and Federal Ministry of Power and funded by European Union (EU) and The Deutsche Gesellschaft für Internationale Zusammenarbeit

(GIZ). The first model, M1, was followed by a faster and better performing model, M2.¹ The MAX E M3 model is the current MAX model, an advanced technology model of electric two wheelers.² The M3 is the flagship model for MAX's two wheelers and the T1 holds the same spot for its three wheelers. MAX is currently designing and producing four wheelers in collaboration with partners in Bonny Island.



MAXE M3³

When it comes to fundraising, MAX is backed by venture capital globally, which includes but is not limited to Techstar, Yamaha, Shell Foundation, Global Ventures, Light Rock, and Mastercard. MAX raised its Series A funding of \$6 million and received a grant of \$1 million, making \$7 million shortly after its incorporation in 2018. The funding was led by Novastar Ventures with participation from Japanese

¹ Abubakar Idris (2020). After two year of development, Max deploys its electric motorbikes in Nigeria: TechCabal. <https://techcabal.com/2020/08/11/after-two-years-of-development-max-deploys-its-electric-motorbikes-in-nigeria/>

² <https://www.max.ng/electric-vehicles>

³ <https://www.max.ng/electric-vehicles>

manufacturer, Yamaha.⁴ In 2021, MAX raised its series B funding worth \$31 million, led by Lightrock (a global private equity platform) and Global Ventures (a UAE-based international venture capital). This was to drive its international expansion into Egypt and Ghana, followed by East and Southern Africa. The funding will also enable the deployment of electric vehicles and charging infrastructure coupled with credit and financial services to over 100,000 drivers. Prior to raising Series B funding, MAX had previously raised over \$40 million of institutional debt for driver financing.⁵

Research and development is also a priority for MAX. Most of the capital pulled by MAX is pumped into research and development. This is because MAX is still at an early stage in the E-Mobility sector and is still developing newer models as technology advances.

Business Strategy

Every business has dreams of expansion, and it is not different from MAX. MAX has been able to expand across Nigeria with its headquarters in Lagos and to Ghana, Kenya, and Cameroon (soon to be launched). Such expansion is as a result of a working business strategy. For MAX, having a good penetration strategy and good financial models supported its business strategy.

Firstly, understanding the driver market and creating scalable models that can be replicated across several markets was one of the penetration strategies MAX used. It was important to understand the needs of the drivers and new markets to be fully operational. Learning about the needs of the drivers in a new market that exists was MAX's major penetration strategy. It was important to understand the existing support systems in order to improve them; teams will be deployed to provide solutions to problems and further develop support services for the drivers.

Another penetration strategy that MAX has leveraged on is strategic partnerships. Strategic partnerships were necessary due to the nascent nature of electric mobility, as it was necessary to build a future template for other startups coming into the space. These partnerships exist between MAX and drivers, transport companies, swapping/charging stations, logistics firms, etc.

A vehicle subscription model was the business model adopted by Max as part of its business strategy. The subscription model comprises packages that drivers can subscribe to. The subscription is based on the

⁴<https://techcrunch.com/2019/06/20/max-ng-raises-7m-round-backed-by-yamaha-and-pilots-evs-in-nigeria/>

⁵<https://www.max.ng/max-raises-31m-in-series-b-round>

type of vehicle – either two, three or four wheelers – and payment plans are on a weekly basis. The subscription package is structured like the “lease to own” model called vehicle financing, where ownership of MAX vehicles will be transferred to the drivers after complete payment for the vehicle is made. There is also a package for support services that allows drivers access to MAX network connections, technical support, insurance renewal, and other services even after they become owners of the vehicles.

For EVs, due to the high cost of batteries in comparison to the cost of other vehicles, MAX had to decouple the batteries from the body of the bike and offer a subscription package that provides the body of the battery while the battery will be provided on a rental basis (MAX provides a 24 hours rental service). This package can either be paid daily (for rentals) or pay a fee per swap, whereby drivers visit swapping stations when the battery is out and swap it for a fully charged battery.

Challenges

Unlike many EV startups in Nigeria, MAX does not see finance as the first challenge it faces in carrying out operations within the sector. This is likely due to the fact that it gained experience, maturity and relative financial strength in a different subsector and then horizontally integrated into the EV subsector. By doing so, it was also able to leverage its pre-existing knowledge, networks, and skills in the transportation sector to give it an extra chance of success compared to several other EV startups that are starting off from scratch. MAX’s capacity may also enable it to benefit from a wider variety of partnerships and new markets that allow it to scale further. This includes its partnership with the renewable energy mini-grid company Rubitec to provide EVs that would serve as anchor loads for a mini-grid at Gbamu Gbamu, Ogun state. This pilot has successfully demonstrated the economic value of the partnership model to all parties (mini-grid developers, MAX, and drivers in rural areas) and indicates that MAX might be able to tap into Nigeria’s mini-grid market, which provides developers with an \$8 billion annual revenue potential.⁶

For MAX, the major challenge is therefore that of scaling its production capacity to meet the ongoing demand for its fleet. Scaling the deployment of EVs fleet was its major challenge given the rising demand of carbon free vehicles across Africa.

⁶ Andrew Allee, John Schroeder, James Sherwood (2022). Powering Small-Format Electric Vehicles with Minigrids. Colorado: Rocky Mountain Institute; Rocky Mountain Institute (2022). Minigrad Investment Report: Scaling the Nigerian Market. Colorado: Rocky Mountain Institute.

Another challenge faced by MAX arises from the nascent nature of the sector. There is not a lot of support as compared to internal combustion engine bikes, which have long been operational. The absence of information with regards to its supply chain, value chain, operations and infrastructure, support network, etc., has been a hard cord to chew; but MAX is striving to overcome these challenges and leave a template for other startups to follow through.

Reflection

1. For a company as MAX expanding to African countries, discuss the best expansion strategy to use that will suite expansion to not just African but globally.
2. As an alpha organisation in the E-Mobility sector in Nigeria, do you think they have monopolistic effect on the pricing of E-bikes within the country?