THE AFRO PIVOT POINT
Strategic Growth for African Markets

A PRACTICAL DIAGNOSTIC FROM THE AFRO PIVOT POINT

The African E-Mobility Business Model Stress Test

15 questions to help founders and investors assess the financial, operational and rider risks behind an electric mobility business.

Based on the three-part investigation, Battery-as-a-Surprise.

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INTRODUCTION

The electric mobility opportunity is real. Are the business assumptions ready for scale?

Africa's electric two-wheeler market presents a significant opportunity. Electric motorcycles can reduce fuel and maintenance costs for riders, while creating new opportunities for businesses operating across mobility, energy and finance.

But the motorcycle is only one part of the business.

Battery ownership, charging and swapping infrastructure, supplier relationships, rider financing, enforcement and daily operating conditions all influence whether an electric mobility business can remain viable as it grows.

Battery-as-a-Service (BaaS) illustrates this particularly well. It can make electric motorcycles more affordable and create a financing structure that investors can understand. It can also introduce substantial infrastructure requirements, supplier dependencies and risks for riders whose livelihoods depend on reliable battery access.

The challenge is to understand the entire operating model before committing to scale.

This diagnostic brings together questions raised by The Afro Pivot Point's three-part investigation, *Battery-as-a-Surprise: What Battery-as-a-Service in Africa Reveals About Infrastructure, Finance, and Power*.

It is designed to help founders and investors interrogate five areas:

1. Business model architecture
2. Capital and infrastructure
3. Rider economics
4. Operational resilience
5. Scale readiness

Use it to identify assumptions that need stronger evidence, decisions that need revisiting and risks that deserve closer attention.

> PLEASE NOTE
> This is a strategic diagnostic, not a substitute for financial, technical, legal or market due diligence.

HOW TO USE THIS DIAGNOSTIC

How to use this diagnostic

For each question, select the answer that best reflects your current position.

Answer	What it means
Yes	We have addressed this and can support our answer with evidence.
Partly	We have made some progress, but important gaps remain.
No	We have not adequately addressed this.
Unknown	We do not currently have enough information to answer.

Be honest. The purpose is to expose assumptions, not produce a flattering score.

For every answer, record the evidence supporting it and the next action required.

SECTION 1

1. BUSINESS MODEL ARCHITECTURE

Are you accounting for every business you operate?

An electric mobility company may look like a vehicle distributor, but its operating responsibilities can extend into energy logistics, consumer finance and labour coordination.

Each layer has different costs, capital requirements and failure points.

QUESTION 1

Have you mapped all the businesses and operating responsibilities inside your model?

Consider vehicle distribution and servicing, energy logistics, consumer finance and the conditions under which riders earn their income.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 2

Is it clear who owns each major asset, who pays for it and who carries the risk when something goes wrong?

Consider the motorcycle, battery, charging or swapping infrastructure, and any financing arrangements. In a BaaS model, the rider may own or finance the motorcycle while the operator retains ownership of the battery.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 3

Have you assessed your dependence on battery suppliers and the consequences of being locked into a particular battery system?

Consider supplier concentration, negotiating power, battery chemistry, vehicle compatibility and the cost of changing suppliers or specifications.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

WHAT THIS SECTION IS TESTING

Whether the company understands the full architecture of its business, rather than evaluating the motorcycle or battery-swap revenue in isolation.

SECTION SCORE _____ / 6

SECTION 2

2. CAPITAL AND INFRASTRUCTURE

Does your capital plan reflect the actual cost of operating the network?

In a swapping model, one active motorcycle can require several batteries in circulation. Batteries may be charging, deployed at stations or held in reserve.

This creates a capital requirement that can grow substantially with fleet size.

QUESTION 4

Have you modelled the full battery capital requirement for every active motorcycle?

Include the number of batteries required per bike, battery acquisition cost, reserve inventory and replacement requirements. Do not calculate the cost of the motorcycle alone.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 5

Have you secured a credible plan for financing infrastructure as your fleet grows?

Consider the cost of charging and swapping stations, battery inventory, site acquisition and the funding available to support expansion. Can the business finance this growth without continually putting pressure on its treasury or equity base?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 6

Have you assessed your exposure to energy costs, infrastructure utilisation and battery replacement?

Consider how changes in electricity prices, station utilisation, battery lifespan and the number of swaps per bike affect the economics of the network.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

> WHAT THIS SECTION IS TESTING
> Whether the business has a realistic picture of the capital and operating resources required to support its fleet.

SECTION SCORE _____ / 6

SECTION 3

3. RIDER ECONOMICS

Can riders earn consistently under the model?

The rider is not simply a customer purchasing a vehicle. In many cases, the motorcycle is a productive asset and the rider is a micro-entrepreneur whose income depends on being able to work.

A model that looks attractive on paper still has to work across ordinary and difficult working days.

QUESTION 7

Have you assessed rider take-home income rather than relying primarily on gross earnings or fuel savings?

Account for battery swaps, repayments, maintenance, working days and the distance riders travel. Compare what riders actually retain under the electric model with their previous operating economics.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 8

Have you measured how infrastructure downtime affects riders' earnings and ability to meet repayments?

Consider station stockouts, charging delays, queues, the distance to alternative stations and the effect of lost working time. Where riders use delivery platforms, consider how service disruptions could affect ratings and future orders.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 9

Does your onboarding process establish that riders understand the financial and ownership arrangements they are entering?

Consider battery ownership, swap pricing, repayments, inactivity rules, remote restrictions, repossession and the circumstances under which a rider could lose access to the motorcycle.

Can riders explain these terms in their own words after onboarding?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

WHAT THIS SECTION IS TESTING

Whether the business understands the rider's actual economics and whether the terms of participation are understood in practice.

SECTION SCORE _____ / 6

SECTION 4

4. OPERATIONAL RESILIENCE

What happens when the system does not work as planned?

Infrastructure businesses are tested by what happens during disruptions, not only by how they perform when everything is working.

A station can run out of batteries. Electricity costs can change. A rider can become ill. A battery specification can become difficult to support.

The operating model needs to account for these situations.

QUESTION 10

Do you have a practical response when a rider cannot access a charged battery or a functioning swap station?

Consider station stockouts, alternative access points, battery availability, maintenance and the process for resolving service disruptions.

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 11

Does your enforcement process distinguish between deliberate non-payment and temporary income disruption?

Consider illness, accidents, mechanical problems, periods of reduced demand and other circumstances that may prevent a rider from working.

Are grace periods, hardship procedures and human review available before restrictions or repossession?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 12

Have you assessed the risks associated with proprietary battery networks and changing technical standards?

Consider whether your batteries, vehicles and charging or swapping infrastructure can adapt to emerging standards. What would happen to your existing assets if interoperability requirements or battery specifications changed?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

WHAT THIS SECTION IS TESTING

Whether the business can absorb operational shocks without transferring disproportionate costs to riders or creating avoidable damage to its own operations.

SECTION SCORE _____ / 6

SECTION 5

5. SCALE READINESS

Will the model still work when the fleet gets bigger?

Pilot economics are not necessarily fleet economics.

As a business expands, battery degradation, infrastructure capital, energy costs, rider retention and enforcement expenses can change the financial picture.

The question is not simply whether the business can grow. It is whether the underlying model remains viable as it does.

QUESTION 13

Have you modelled the economics beyond the pilot stage, particularly around month 18 and beyond?

Consider battery degradation, utilisation changes, infrastructure capital requirements, energy cost volatility and enforcement costs.

Which assumptions become less favourable as the fleet grows?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 14

Are you tracking rider retention and rider outcomes as indicators of operational and financial performance?

Consider rider churn, repayment consistency, earnings, utilisation, recruitment costs and the time required to replace or onboard riders.

Can you connect rider retention and service reliability to the quality of your financial performance?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

QUESTION 15

Have you assessed the political, regulatory and reputational risks that could affect the model as it scales?

Consider battery interoperability, government policy, public infrastructure access, consumer protection, contract enforcement and public responses to repossession or remote lockout practices.

Do you have a plan for engaging regulators and responding to disputes that could affect rider trust?

ANSWER ☐ Yes ☐ Partly ☐ No ☐ Unknown

EVIDENCE OR EXPLANATION

NEXT ACTION

> WHAT THIS SECTION IS TESTING
> Whether the company has considered the second-order costs and institutional conditions that may determine its long-term viability.

SECTION SCORE _____ / 6

YOUR RESULTS

A simple diagnostic score

There are 15 questions, each worth a maximum of two points.

Response	Score
Yes	2
Partly	1
No	0
Unknown	0

Maximum score: 30 points.

Unknown answers receive zero because an untested assumption should not be treated as a demonstrated strength. Keep track of Unknown responses separately: they indicate where further evidence is needed.

Overall assessment

24–30 points: Stronger foundations

You have addressed many of the major questions raised by the investigation. The next step is to verify that the answers are supported by operating data, not just business plans and projections.

16–23 points: Important gaps remain

The model has some foundations in place, but there are areas that require more attention. Identify which gaps could materially affect rider outcomes, infrastructure reliability or the economics of expansion.

0–15 points: Significant exposure

Several important assumptions remain unresolved. Scaling before addressing them could amplify financial, operational and reputational risks.

YOUR TOTAL SCORE _____ / 30

Assess each section separately

Each section has three questions and a maximum of six points.

Section score	Interpretation
5–6	Relatively strong
3–4	Needs attention
0–2	Significant gap

A strong overall score does not cancel out a critical weakness in one section. For example, a company with strong capital planning but weak rider comprehension may still face substantial operational and reputational exposure.

YOUR ACTION PLAN

Your action plan

Use your lowest-scoring section to identify the first area requiring attention.

Area requiring attention	What needs to change?	Who owns the action?	When will it be reviewed?
Business model architecture			
Capital and infrastructure			
Rider economics			
Operational resilience			
Scale readiness			

Three questions to take into your next strategy or investment meeting

1. Which assumption in our current business model has the least supporting evidence?
2. Which operational or financial risk becomes more expensive as we scale?
3. What would we change now if we had to design the model around the rider's ability to earn consistently?

A FINAL NOTE

A final note

Battery-as-a-Service can be useful infrastructure. It can lower the upfront cost of electric motorcycles, support financing and make battery access more convenient for riders.

But the durability of the model depends on decisions about capital, infrastructure, ownership, enforcement, technical standards and rider economics.

The companies that understand those decisions are better positioned to build models that can withstand the realities of operating in African markets.

The purpose of this diagnostic is to make those decisions easier to examine before they become expensive to change.

Battery-as-a-Service is useful infrastructure. Battery-as-a-Surprise is a noxious choice. Choosing which one to pursue is an intentional decision.

ABOUT THE AFRO PIVOT POINT

About The Afro Pivot Point

The Afro Pivot Point is a strategic growth, communications and intelligence company helping businesses understand, enter and grow in African markets.

We work across market intelligence, research, strategic advisory and media to help businesses make better-informed decisions about African markets.

Strategic Growth for African Markets.

Website: theafropivotpoint.com

Explore our research and insights, or get in touch about a market or growth challenge.

Source note: This diagnostic draws on The Afro Pivot Point's three-part investigation, Battery-as-a-Surprise: What Battery-as-a-Service in Africa Reveals About Infrastructure, Finance, and Power. It translates issues raised by the reporting into practical questions. It does not independently validate a company's answers or provide a technical, legal or financial certification.