



THE EV ECOSYSTEM REPORT

A LOOK AT THE 2&3 WHEELER EV MARKET IN KENYA

SEPTEMBER, 2024




MIDEVA

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ABOUT MIDEVA VENTURE LABS

MIDEVA is a Pan-African Social-Impact Research, Design and Innovation collective. Through behavioral, human-centered design, and community-powered approaches, we work with organizations to understand, design, pilot and scale evidence-informed interventions that meet people's needs. Our work provides valuable insights, ideas, and concepts that help people and communities thrive while propelling organizations forward. We have a niche in the key sectors of clean energy and green transition, sustainable food systems and regenerative agriculture, entrepreneurship and workforce development.

Research and Insights

We help organizations develop a deep understanding and insights around their stakeholders or topics of interest through various field research techniques. Research may cover user and customer research, product and service interest or usage research, value chain mapping and analysis, problem understanding, and exploratory and validation research.

Product and Services Concept Building

Leveraging our expertise in behavioral design, human-centered design, data, and product and service design, we help translate innovative ideas into viable concepts through prototyping and testing. This can be in the form of digital products, services, experiences and programs.

Social Venture and Business Design

We support social enterprises, companies, and entrepreneurs in launching new or refining existing products, services, and business models. We test ideas and concepts by leveraging human-centered design and lean and agile methodologies and strategies, helping organizations make business decisions quickly and affordably.

Innovation Programs Design & Management

With decades of experience in social innovation across Africa, we support organizations in conceptualizing, launching, and managing customized innovation programs, including incubation and accelerator programs, bespoke entrepreneurship programs and designing and managing venture-building programs.

Innovation Facilitation

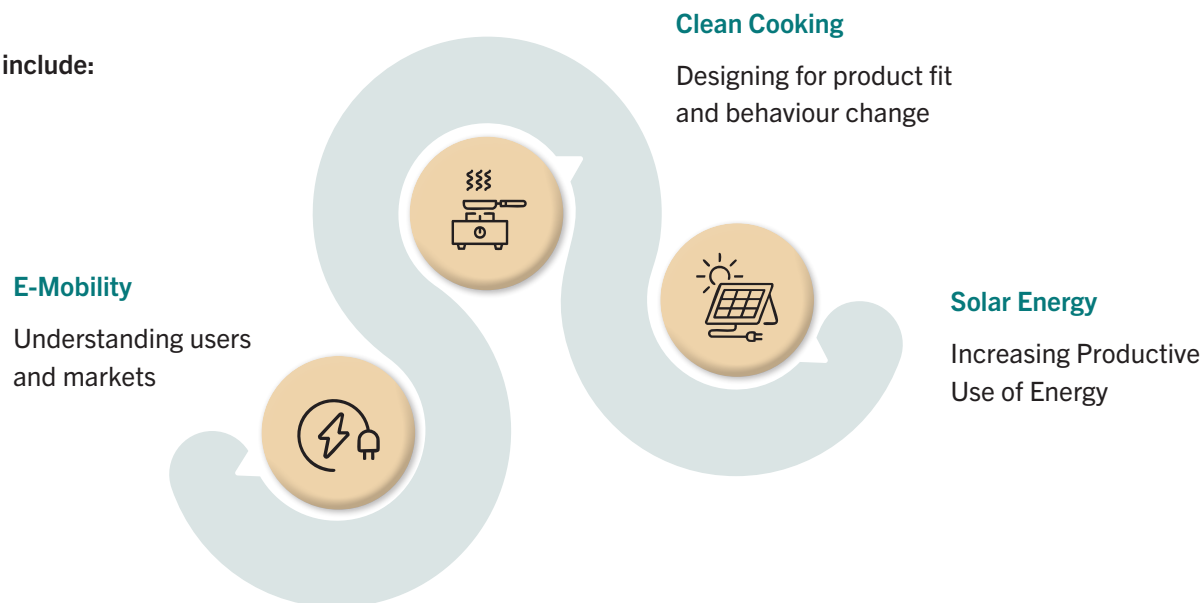
Our core expertise is in human-centered design, behavioural design, business design and research. We design and facilitate innovation workshops through a partner-centered approach, including HCD workshops, design sprints and ideation workshops.



OUR CLEAN ENERGY & GREEN TRANSITION PORTFOLIO

The Clean Energy portfolio forms one of the four core portfolio areas of work. Our previous work in the sector spans from understanding users, designing behaviour-change interventions for clean energy uptake, consumer and market intelligence on energy products/services, market strategy development, business model innovation, product re-engineering and training.

The industry verticals in this portfolio include:



E-MOBILITY AS AN ENERGY COMPONENT

The clean energy portfolio is keen on enhancing work in the e-mobility space in Kenya. There currently exists a wide data-and-information gap in the space, being an emerging early-stage industry. With an estimated CAGR of 5%, it is paramount to avail knowledge outputs that support evidence-based policy, precise innovation of solutions that meet user needs and data-informed funding for this fast-growing space.

Kenya has some ambitious climate goals and nationally determined commitments to reduce GHG emissions. Amongst various intervention areas in the different sectors, the transport sub-sector under the energy sector is one strategic focal area on the metrics of impact and perceived level of effort. The sector accounts for at least 23.08% of all emissions. Thus, solving in the transport space has a significant contribution to Kenya's ambition for GHG emissions reduction.

A person is riding a bicycle on a city street. The background shows a blurred city scene with cars and buildings. A green sign with the text "Let's Max" is visible in the upper left. A teal semi-transparent box is overlaid on the center of the image, containing the text "1.0 BACKGROUND AND CONTEXT".

1.0

BACKGROUND AND CONTEXT

1. BACKGROUND AND CONTEXT

Kenya has emerged as a thriving hub for e-mobility startups within the region, particularly in the realms of Electric Three-Wheelers (E3W), and Electric Two-Wheelers (E2W). Currently, the market boasts approximately 12 major local Electric Motorcycle Manufacturers (OEMs)/Direct Retailers and 3 major local Electric Bicycle OEMs/Direct Retailers. Notably, the E2W sector stands out for its high adoption rate among Kenyan consumers, featuring two primary vehicle types: Electric Bicycles and Electric Motorcycles.

The necessity for comprehensive information and data regarding the present state of e-mobility and its users cannot be overstated. Such data is pivotal for establishing baseline measures for ongoing impact evaluation and crafting effective interventions and policies that cater to the genuine challenges and needs of individuals on the ground. However, significant data gaps persist within the Kenyan e-mobility market, with crucial information scattered across various stakeholders. This fragmented landscape impedes swift market entry for enablers, as comprehensive insights are sought before investment.

Moreover, the nascent state of the e-mobility industry in Kenya raises concerns regarding consumer and user safety due to inadequate regulation. In crafting pertinent e-mobility policies, an approach centered on understanding consumer needs, experiences, behaviors, and challenges has proven to be the most effective in driving the organic adoption of e-mobility solutions in Kenya.

Over the past five years, 2- and 3-wheeler vehicles have consistently represented the highest volume of imports among vehicle types, serving as integral components of first and last-mile transport solutions in urban areas. This research endeavor aims to share the 2- and 3-wheelers EV market in Kenya, encompassing various aspects to provide an in-depth understanding of the industry, including the funding landscape, the players, the competitive landscape and future industry trends.



1.1 SCOPE OF RESEARCH

Our second series of research publication explores the 2&3 wheeler EV market in Kenya, particularly highlighting:



Market Overview

The Market Overview of 2 wheelers and 3 wheelers in Kenya, with a focus on the market size, growth trends and market segmentation, and market dynamics.



Competitive Landscape

The Competitive Landscape of key players in the market.



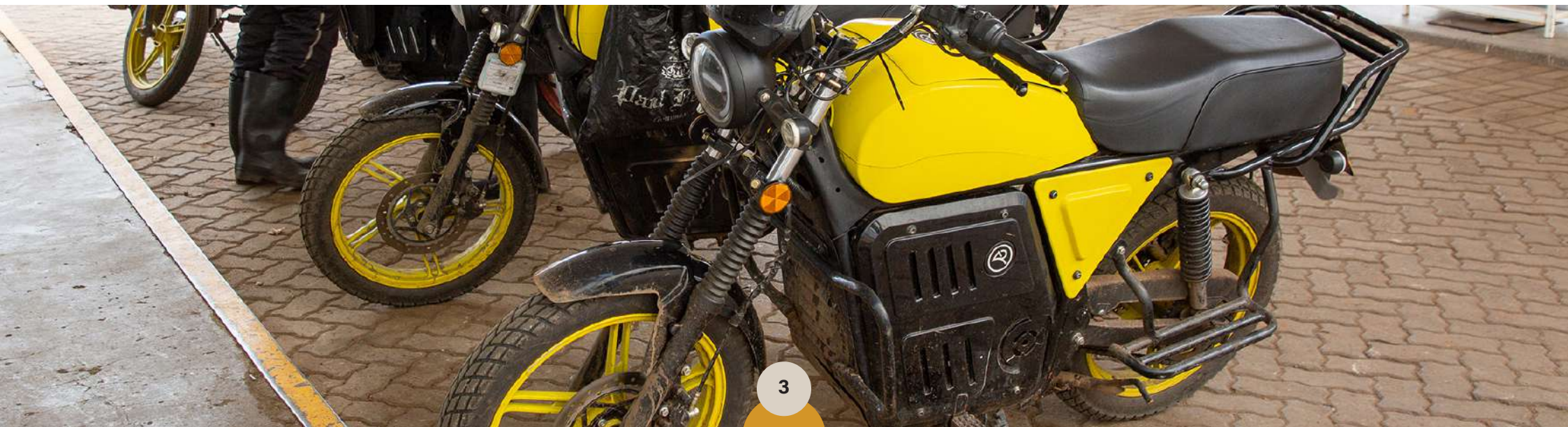
Financing Mechanisms

Financing Mechanisms for 2&3 wheeler EVs.



Distribution Channels

The Distribution Channels and supply chain for 2- and 3-wheelers.





1. 2 RESEARCH METHODOLOGY

1.2.1 APPROACH

Our methodology combines field and desktop research, offering a comprehensive lens through which to analyze the market landscape. Leveraging Human-Centered Design principles, we adopt a user-centric approach, placing end-users at the heart of our research endeavors. This empathetic approach fosters deeper insights and ensures the relevance and efficacy of our findings.

1.2.2 DATA COLLECTION

Secondary Sources

In addition to primary data collection, we conducted extensive desktop research to augment our understanding of the e-mobility landscape. By synthesizing existing literature, market reports, and academic studies, we gain valuable insights that inform our approach. This secondary research serves as a benchmark for validating and contextualizing our primary findings, ensuring the reliability and robustness of our conclusions.

Primary Sources

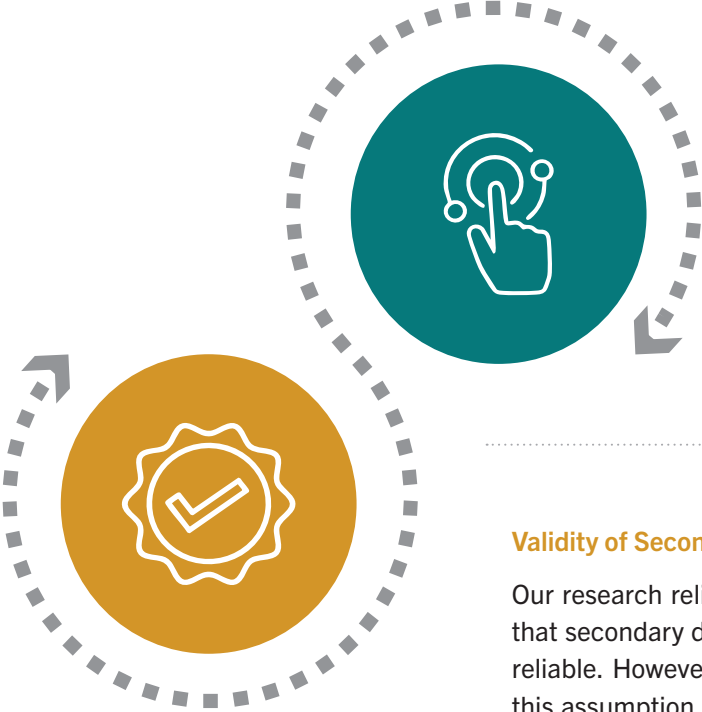
Our research methodology relied on both qualitative and quantitative data collection techniques to provide a comprehensive understanding of Kenya's e-mobility landscape. Through interviews, structured surveys, observations, and immersions, we engaged stakeholders across the market spectrum.

1.2.3 DATA ANALYSIS

In our analysis, we employ a synthesis mixed-methods approach, combining qualitative and quantitative data to derive actionable insights. Through thematic analysis and pattern recognition, we distill raw data into meaningful narratives, illuminating key trends and emerging patterns. This iterative process of sensemaking ensures that our findings are robust, nuanced, and actionable, empowering stakeholders to make informed decisions.

1.2.4 RISKS & ASSUMPTIONS

The success of the research is contingent upon our ability to navigate a myriad of risks and assumptions inherent in the research process.



Data Accessibility:

Acquiring comprehensive and accurate data poses a significant challenge, especially considering the fragmented nature of information in the e-mobility market. Market players have often been hesitant to share data that is considered proprietary, allowing us to only work with limited data and assumptions. We hope through this publication to foster trust and transparency to facilitate data sharing.

Validity of Secondary Data:

Our research relies on both primary and secondary data sources to inform our analysis. Our overall assumption is that secondary data sources, including existing literature, market reports, and academic studies, are accurate and reliable. However, inaccuracies or biases in secondary data could impact the validity of our findings. To address this assumption, we have critically evaluated the credibility and relevance of secondary sources, cross-referencing multiple sources to ensure data integrity and robustness.

1.3 DEFINITION OF TERMS



Market Overview: A comprehensive assessment of the 2-Wheeler and 3-Wheeler market. The goal of this is to provide a clear and concise understanding of the current state and future prospects by exploring target markets, competitive landscape, trends and dynamics of the 2-Wheeler and 3-Wheeler vehicle space.



Market Size: The total value of sales within the 2-Wheeler and 3-Wheeler market in Kenya, encompassing the number of units sold and the overall revenue generated from these vehicles within the Kenyan market over a defined period.



Growth trends: Patterns of consistent growth in the 2-Wheeler and 3-Wheelers' popularity, interest, and engagement in the Kenyan Market. It involves analyzing increases or decreases in sales, market expansion or contraction and adoption rates.



Market segmentation: The process of dividing the 2-Wheeler and 3-Wheeler market in Kenya into distinct groups based on specific criteria such as vehicle type, consumer demographics and usage type to better understand and target different segments of the market.



Market drivers: Key factors and forces that influence and stimulate demand and growth in the 2-Wheeler and 3-Wheeler market in Kenya; such as economic conditions, government policies, technological advancements and consumer preferences.



Market challenges: Obstacles and difficulties that hinder growth and development of the 2-Wheeler and 3-Wheeler market in Kenya. (for example, regulatory barriers, high upfront costs of EVs, limited infrastructure and range anxiety).



Opportunities: Potential areas for growth and innovation within the 2-Wheeler and 3-wheeler vehicle space that either meet customer needs, fill gaps in the market, or capitalize on emerging trends to generate sales and growth.



Market dynamics: Forces and factors that influence the behavior and performance of the 2-Wheeler and 3-Wheeler market in Kenya; including supply and demand, pricing strategies, competitive actions, consumer trends, and regulatory impacts).



Demand for 2 and 3-wheelers EVs: Quantities of 2-Wheelers and 3-Wheelers that consumers are willing and able to purchase at various prices during a given period of time. (It represents consumers' collective desire or need for 2-Wheelers and 3-Wheelers).



Distribution Channels: The various pathways and intermediaries through which 2-Wheeler and 3-wheelers are delivered from manufacturers to end users, including dealerships, online platforms, and retail outlets.



Dealerships: The businesses or outlets that are authorized to sell and service specific brand electric 2-Wheeler and 3-Wheeler vehicles.



Online Platforms: Digital websites or marketplaces where potential end users can browse, compare, and purchase electric 2-Wheeler and 3-Wheelers.



Distribution Network Efficiency and Effectiveness: The overall performance of the supply chain and logistics processes that ensure electric 2-Wheelers and 3-Wheeler vehicles reach their end-users in the most cost-effective, timely, and reliable manner.

- Effectiveness refers to how well a distribution channel delivers electric 2-Wheeler and 3-Wheeler vehicles to end users. It emphasizes customer satisfaction, market reach, and the network's ability to adapt to changes and disruptions.
 - Efficiency refers to how well a distribution channel gets the job done with minimal waste of resources. It focuses on minimizing costs, reducing lead times, and maximizing resource utilization.
-



Supply Chain: The entire network of people, businesses, and activities involved in getting electric 2-Wheelers and 3-Wheelers from production to the end user.



Logistics: The process of planning and executing the efficient transportation and storage of 2-Wheelers and 3-Wheelers from the point of origin to the point of consumption according to the needs of customers.



Bottlenecks: Points or areas of inefficiency within the distribution network where the flow of 2-Wheelers and 3-wheelers from manufacturers to end-users or retailers is restricted or slowed down, often causing delays, inefficiencies, and increased costs.



2.0

EV MARKET OVERVIEW

2.1 MARKET SIZE SUMMARY

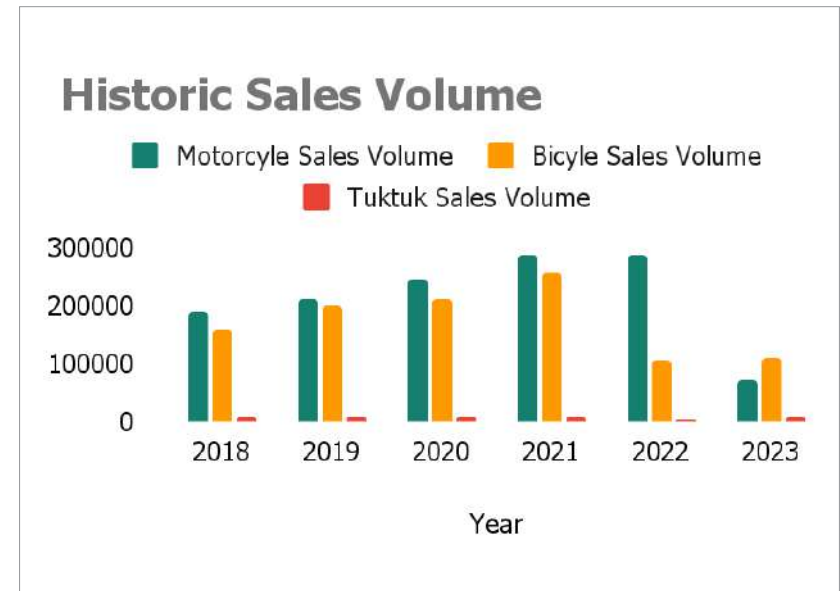
Table 1: EV 2&3 Wheeler market size by revenue and volume

MARKET SIZE SUMMARY	
Aggregated E2&3W 2023 Market Size by Volume: 3949 Units	Aggregated ICE/non-motorized 2&3W 2023 Market Size by Volume: 186,951 Units
Aggregated E2&3W 2023 Market Size by Revenue: KES 752.5 Million	Aggregated ICE/non-motorized 23W 2023 Market Size by Revenue: KES 16.4 Billion

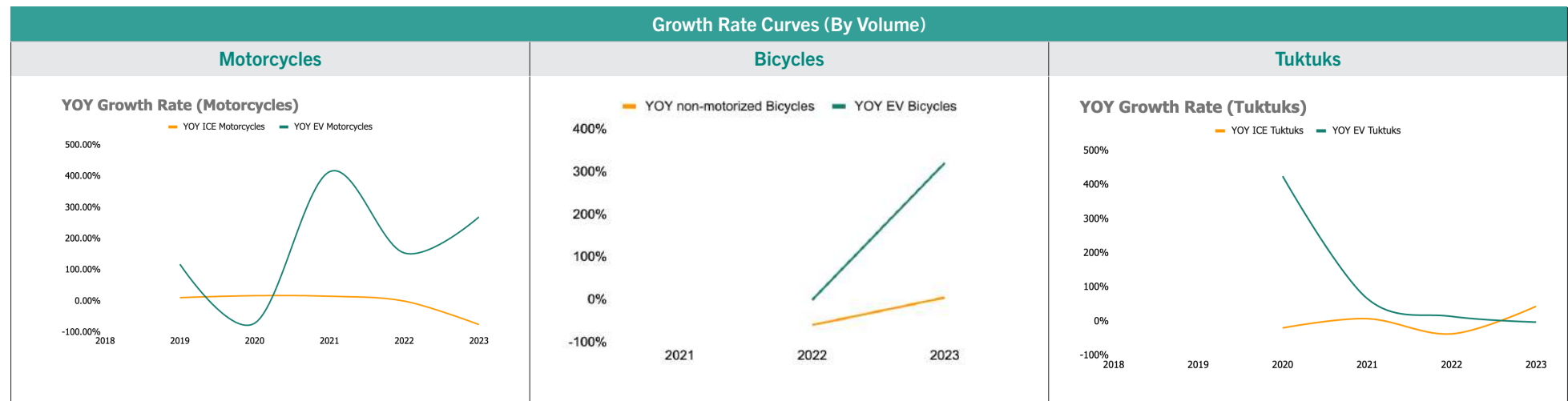
EV types, average price, units sold, revenues and CAGR

Type	Average Price	Est. No. of new units (2023)	Est. Revenue	CAGR (2018 -2023)
ICE Motorcycles	KES 161,868	70,691	KES 11.4 Billion	-17.9%
Non-Motorized Bicycles	KES 21,209	110,500	KES 2.3 Billion	4%
ICE Tuktuks	KES 465,007	5760	KES 2.7 Billion	-2%
EV Motorcycles	KES 217,000	2557	KES 555 Million	98.41%
EV Bicycles	KES 132,000	1353	KES 179 Million	YOY (2022-23) - 322%
EV Tuktuks	KES 473,500	39	KES 18.5 Million	76.71%

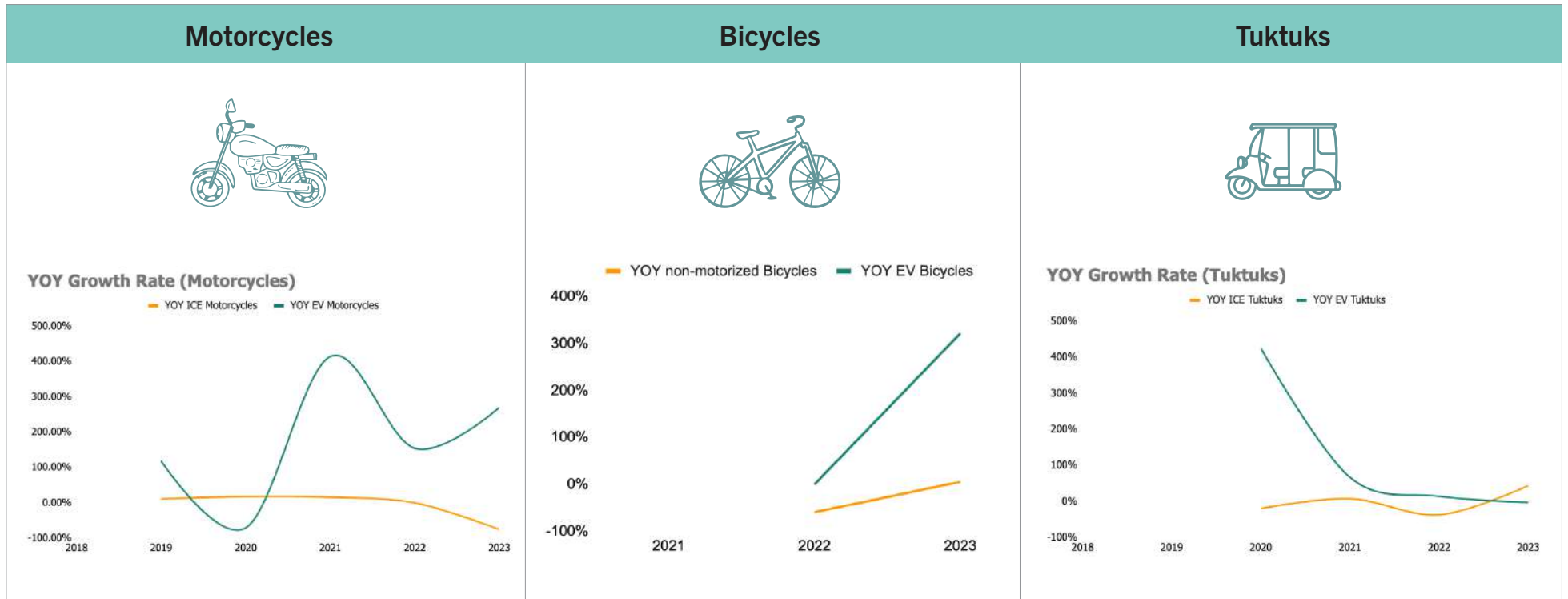
Historic Comparison Period - January 2018 - December 2022



2&3 Wheelers Growth Rate by Volume



2&3 Wheelers Growth Rate by Volume



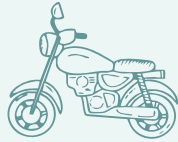
Methodology with Motorcycle Example

Data Sources:

- ⊗ National Repositories - KNBS Economic Survey (2023)
- ⊗ Aggregated Industry Reports - KAM, EMAK, Motorcyclesdata.com
- ⊗ Local Manufactures & Dealers Sales & Stock Data
- ⊗ 2W Imported Units Data: NTSA, EMAK, KNBS(proxy), Trend Economy data

Market Size

a. Total Market Size by Volume



64,041

Total Number of Motorcycles Registered in 2023

Estimated Market Compound Annual Growth Rate:

CAGR Formula: $FV = PV (1 + r/m)^n$



The compound annual Growth Rate (CAGR) for the motorcycle market in Kenya is:

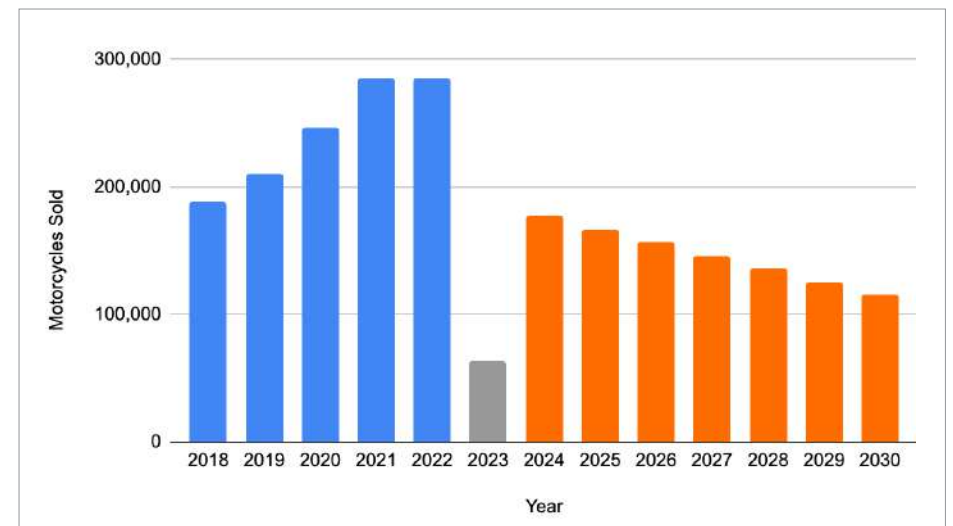
17.9% p.a Indicating a rapidly declining market

Forecast Analysis - Methodology (Linear Regression Model)

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	21007191.2	43548737.8	0.4823834688	0.6547426534	-99903488.39	141917870.8	-99903488.39	141917870.8
X Variable 1	-10291.4	21553.43838	-0.4774829807	0.6579379643	-70133.33833	49550.53833	-70133.33833	49550.53833

Year	Predicted Sales
2024	177398
2025	167106
2026	156815
2027	146523
2028	136232
2029	125941
2030	115649

Motorcycles Sales Forecast Regression



Total Market Size by Value



Average Selling Price: KES 161,868

The average pricing used in the analysis is first-user pricing and doesn't account for the second-hand market.

Cash purchase was used for analysis.



Total Sales Value:

Ksh 10,366,156,5688 (KES 11.4 Billion)

Avg Selling Price * Number of Units sold in Base Year

Validation of Data

Source	Computation	Market Size
Max: KES 16.2 Billion Min: KES 6.8 Billion Average of range: KES 12.5 Billion		
Motorcycle data.com	<i>Already calculated</i>	6.8 Billion
World Bank	Motorcycle industry contributes USD 1.4 Billion p.a Motorcycle no.of users: ~500,000 <i>Derived: Given average replacement period for motorcycle vehicles is 1 every 5 years, we assume 25% of the users bought their motorcycles in 2023—100,000</i> $100,000 * 161,868 = 16,186,800,000$ (KES 16.2 Billion)	KES 16.2 Billion
Tech-Sci Consulting	Africa's Market Size - \$3.05 Billion (KES 628.2) Kenya has 3.7% of all the motorcycles in Africa (Analysis from World Population Review data) Assuming same average market price across African countries, Kenya's share of this market size is $(3.7% * 1.16 \text{ Trillion}) = \text{KES } 14.6 \text{ Billion}$	KES 14.6 Billion

Therefore our estimated value of **KES 11.4 Billion**, falls within this range and is validated as a reasonable market size estimation.

2.2 EXTERNAL FACTORS AFFECTING MARKET SIZE

External Factors Affecting Market Size

Economic Factors: GDP & Disposable Income strongly affect the market demand hence market size estimations.

Method: Derived Importance by correlation

Factor	Derived Importance Scale
GDP	70.5%
Disposable Income	68.6%

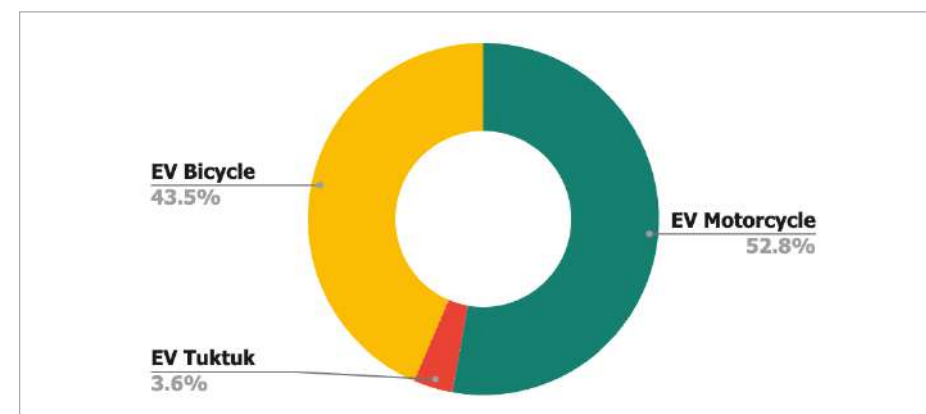
Regulatory Environment:

YEAR	REGULATION INTRODUCED	Impact
2018	The Finance Bill 2018 increased the excise duty on motorcycles from KES 10,000 to KES 11,608 per unit.	Low
2019	Finance Act introduced Turnover Tax to businesses with an annual turnover of less than 5M.	Low
2020	The Finance Act, 2020, introduced an increase in excise duty on motorcycles from KSh 10,000 per unit to 15% of the import value.	Low
2022	The bill proposed an increase in excise duty for motorcycles, which would have raised prices from KSh 12,185.16 to KSh 13,403.64 per unit.	High
2023	The bill doubled the Value Added Tax (VAT) on petroleum products from 8% to 16% increasing the running costs of operating motorcycles	High

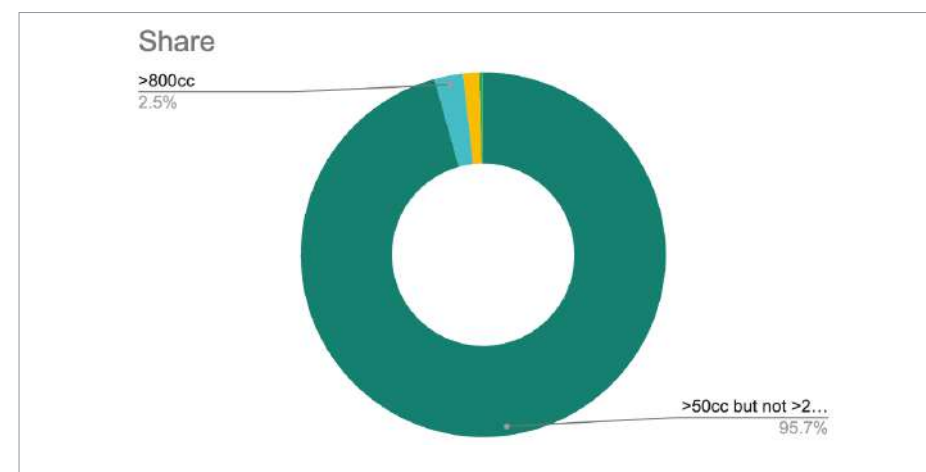
2.3 MARKET SEGMENTATION

2.3.1 MARKET SEGMENTATION BY EV TYPE

Motorcycles are the most popular type of E2&3W deployment.

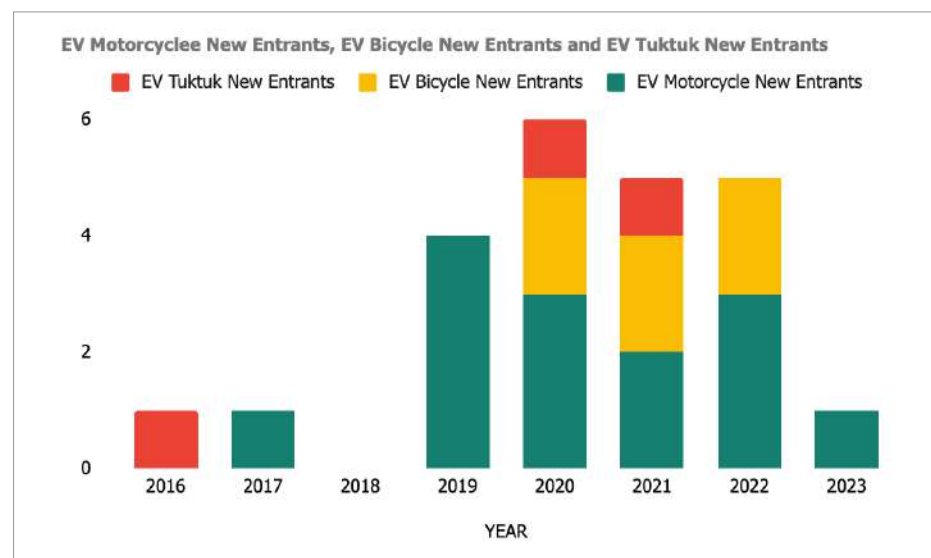


2.3.2 ICE MOTORCYCLES BY CAPACITY



2.3.4 MARKET SEGMENTATION BY PLAYER TYPES

2020 saw the highest number of new E2&3W players in the Kenyan market



2.4 MARKET SIZE IN TERMS OF NUMBER OF 2 & 3 WHEELERS

2.4.1 Data on total ICE vs EV (over a period of years)

Table 1.1

	2021	2022	2023
ICE Vehicles	399,052	234,879	195,656
EV Vehicles	284	796	4047
CNG Vehicles	-	-	-

*Data is on registered vehicles.

Source: EMAK: Electrifying Kenya's Transportation Sector, KNBS Economic Survey 2024

2.4.2 Motorcycle type by volumes

Table 1.21 Motorcycle type by volumes

	2021	2022	2023
ICE Motorcycles	285,203	131,513	70,691
EV Motorcycles	144	366	2,557
CNG Vehicles	-	-	-

*Data is on registered vehicles.

Source: EMAK: Electrifying Kenya's Transportation Sector, KNBS Economic Survey 2024

2.4.3 3-wheeler type by volume

Table 1:22 (3-wheeler type by volume)

	2021	2022	2023
Three Wheelers	6,350	4,001	5,760
EV Tuk Tuk	35	40	39
CNG Vehicles	-	-	-

*Data is on registered vehicles.

Source: EMAK: Electrifying Kenya's Transportation Sector, KNBS Economic Survey 2024

2.4.4 Bicycle type by volumes

Table 1.23 (Bicycle type by volumes)

	2021	2022	2023
Manual Bicycles	-	-	-
EV Bicycles	-	321	1,353

*Data is on registered vehicles.

Source: EMAK: Electrifying Kenya's Transportation Sector

2.5 DATA ON EV MARKET SEGMENTATION PER EV TYPE

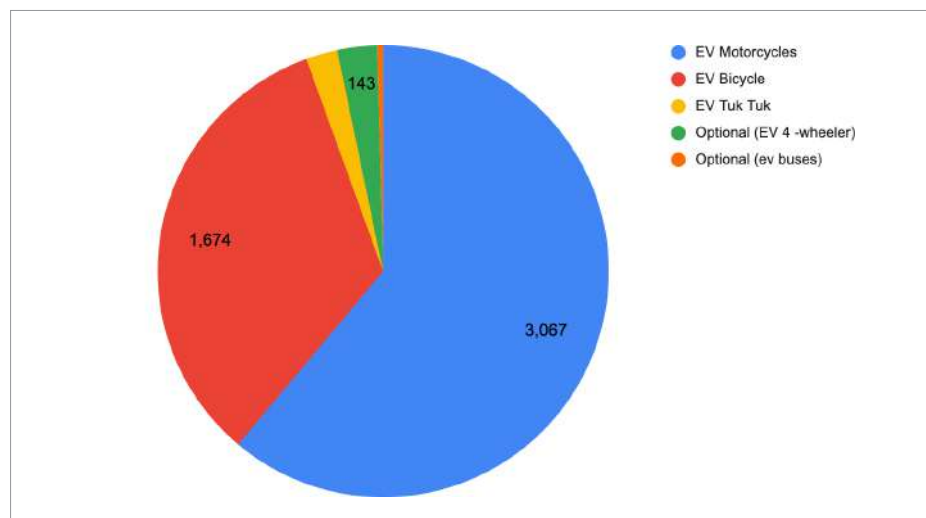
2.5.1 EV sales volumes over years

Table 1:3

	2021	2022	2023	2024	Cumulative (Without '24)
EV Motorcycles	144	366	2,557	-	3,067*
EV Bicycle	-	321	1,353	-	1,674*
EV Tuk Tuk	35	40	39	-	114*
Optional (EV 4-wheeler)	62	36	45	-	143*
Optional (ev buses)	-	3	18	-	21*

*Data is on registered vehicles.

Source: EMAK: Electrifying Kenya's Transportation Sector



2.5.2 Import Volumes of 2-wheelers

Table: Import quantities (Unit Tonnes)

Quantities of Imports	2022	2023	2024
Bicycles, assembled or partly assembled	256.7	104.9	110.5
Motorcycles and cycles fitted with an auxiliary motor	342.2	192.6	73.3

Source: KNBS Economic Survey 2024 pg. 148

Table: Import Value (Ksh Millions)

Value of Imports	2022	2023	2024
Bicycles, assembled or partly assembled	882.0	656.5	610.8
Motorcycles and cycles fitted with an auxiliary motor	20,767.2	13,766.7	6,451.8

Source: KNBS Economic Survey 2024 pg. 152

A collage of images showing a person on a bicycle, a car, and a building with a sign that says "Let's Move".

3.0

EV FUNDING LANDSCAPE

3.1 FUNDING AMOUNTS TO DIFFERENT EV PLAYERS

Total Investment & funding	2021	2022	2023	2024
EV Motorcycles	Ampersand-US\$9 million Roam - US\$7.5 million Ecobodaa - Undisclosed Kiri EV - Undisclosed* Mazi Mobility - Undisclosed	Arc Ride - Undisclosed Kiri EV - US\$100,000+ Spiro - US\$20 million Mazi Mobility - TBC* Fika Mobility -TBC	Ampersand-US\$19 million Spiro - US\$63 million Ecobodaa - Undisclosed Arc Ride - Undisclosed Mazi Mobility -Undisclosed Ewaka - Undisclosed* Kiri EV - Undisclosed*	Ampersand - Undisclosed Roam - US\$24 million Spiro - US\$50 million Ewaka - Undisclosed* Ecobodaa - Undisclosed* Kiri EV - Kiri EV - Undisclosed*
Ev Bicycles	-	-	Ebikes Africa - US\$555,000	Ebikes Africa - US \$10,000
EV Tuk Tuk	-	-	-	-

Hyphen signs indicate that data could not be sourced. (DOES NOT mean that there was no funding).

TBC-To Be Confirmed.

Undisclosed - Sources did not state specific amounts raised.

3.2 TRENDS IN INFRASTRUCTURE INVESTMENTS (FOR EVS)

Total Investment & funding	2022	2023	2024
EV Motorcycles	P4G - US\$ 130,280 (Sun Run Partnership) P4G - US\$ 295,041 (Charge Up! Partnership) P4G - US\$ 792,500 (Pay Go Partnership)		DFC - US \$10 Million to roam (Inc. Buses) P4G - US\$402,071 - (Sun Run Partnership) P4G - US\$347,684 - (Practical Action Partnership)
EV Bicycles	-	-	-
EV Tuk Tuk	-	-	-
Optional (EV cars)	-	-	KPLC - Ksh.6.5 Million (Charging station)

3.3 TRENDS IN NUMBER OF PLAYERS PER EV TYPE OVER A PERIOD OF TIME

No of players (actors)	2019	2020	2021	2022	2023
EV Motorcycles	<ul style="list-style-type: none"> • Mazi Mobility • Arc Ride • Spiro • Fika Mobility 	<ul style="list-style-type: none"> • KiriEV • Stima Boda • Ecobodaa 	<ul style="list-style-type: none"> • eWAKA • Gecss 	<ul style="list-style-type: none"> • YNA kenya • Ampersand (entered Kenyan Market) • Stima Motors (Link) 	<ul style="list-style-type: none"> • Transboda Ltd • TryKe • Waya Electric
Ev Bicycle		<ul style="list-style-type: none"> • E Trails Kenya • Jua E-Bike 	<ul style="list-style-type: none"> • eWAKA • Ebee 	<ul style="list-style-type: none"> • Ebikes Africa • Little Cab E-Bicycles 	
EV Tuk Tuk		<ul style="list-style-type: none"> • Solutions Africa Ltd. 	<ul style="list-style-type: none"> • Biliti 		<ul style="list-style-type: none"> • TryKe • eMos E-Mobility • Waya Electric





4.0

2&3 WHEELER EV PLAYERS & COMPETITIVE LANDSCAPE

4.1 EV BICYCLES PLAYERS

Name	Location	Year founded	Product offerings and number of units	Markets	Summary of Model	Business model	operating model	Player type	Financing	Partnerships	Customer Segments
eBee	Nairobi Mombasa	2021	-Nyuki - Cargo ebicycle -eBX - commuter & leisure - fleet for last mile deliveries 1124 units Accessories & maintenance services	Kenya-urban markets Uganda Rwanda	Rental model: providing e-bicycles to a business on a weekly or monthly basis. The essence is to reduce operating cost and the business can opt out any time. The provider handles maintenance costs. Lease to own: Providing e-bicycles to independent riders on loan basis, flexible payment options through a microfinance lender. Full service delivery: providing e-bicycles and riders to delivery companies for a fee. Fleet management for delivery companies. The essence is to take off the burden of logistics Direct purchase: direct sale to customers or business through online purchase(website), physical shop or through a microlender institution (Hakki, Little Pesa)	- Rent to own (KES 207/day, KES 1552/month subscription for 23 months) Rent (weekly/8500 per month subscription) - Sales (KES 111,999 - Nyuki for bicycle, charger, helmet, rear light) -sales KES 89,999 eBX for charger, rear light, bicycle, fenders -full service delivery (B2B ,Partnerships)	- Leasing to delivery companies - Rent-to-own program for individual customers -direct consumer sales -Online Physical shops fleet	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Assemble <input checked="" type="checkbox"/> Retail <input checked="" type="checkbox"/> Distribute	Hakki Little Pesa	99 Mart Let's drift	Businesses (Delivery companies) Individual customers (commuters) Institutions Independent delivery riders

Name	Location	Year founded	Product offerings and number of units	Markets	Summary of Model	Business model	operating model	Player type	Financing	Partnerships	Customer Segments
Ewaka	Nairobi Mombasa	2021	Electric bicycles - (Shujaa 2.0,electric flexi) -battery, full maintenance, comprehensive insurance, charger Swappable batteries Charging stations	Kenya Rwanda	Rental model: providing e-bicycles to a business / Individual on a monthly basis. The essence is to reduce operating cost and the business can opt out any time. The provider handles maintenance costs. Lease to own: Providing e-bicycles to independent riders on loan basis, flexible payment options through a microfinance lender. Direct purchase: direct sale to customers or business through online purchase (website), physical shop or through a microlender institution Fortune Credit)	Direct sales (KES 139,000) Rental sales/subscription model (13500 per month) Rent to own Deposit ksh 11,500ksh Ksh 511 daily for 18 months	Outright purchase Ride to own Rent Online Physical shops	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Assemble <input checked="" type="checkbox"/> Retail <input checked="" type="checkbox"/> Distribute	Fortune Credit	Sponsored by SECO Start up fund	- Delivery companies - Individual customers - Commuters, delivery riders, institutions
Ebikes Africa	Nairobi	2022	Electric bikers Tracker Comprehensive insurance	Kenya East Africa	Rental model: providing e-bicycles to a corporate/ Individual on a weekly, monthly,quarterly,annual basis. The essence is to reduce operating cost and the business can opt out any time. The provider handles maintenance costs. Lease to own: Providing e-bicycles to independent riders on loan basis, flexible payment options through a microfinance lender. (Aspira) Direct purchase: direct sale to customers or business through online purchase (website), physical shop or through a microlender institution (Hakki, Little Pesa)	Direct sales KES 99,000 bike only, 105K with tracker, 112K with comprehensive insurance Lease (weekly/monthly/ quarterly/annually	Upright purchases Lease to own Online Physical shop	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input checked="" type="checkbox"/> Distribute	Lipa Later Aspira	Arc Ride	Urban commuters, delivery companies, businesses focusing on eco-friendly transport solutions

Name	Location	Year founded	Product offerings and number of units	Markets	Summary of Model	Business model	operating model	Player type	Financing	Partnerships	Customer Segments
Little	Nairobi		Ride hailing services Electric bicycles	Kenya Uganda Ethiopia Somalia Senegal Ghana India	Rent: rent for hours/ /days via online platform	Rental (60 KES per hour)	Online	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input type="checkbox"/> Distribute			Commuters Independent delivery riders
Bikeisbest	Mombasa	2017	Electric bicycles - Training - Adventures/tours - Consultancy - Parking stands	Kenya	Rental model: providing e-bicycles to a corporate/ Individual on a weekly, monthly, quarterly, annual basis. The essence is to reduce operating cost and the business can opt out any time. The provider handles maintenance costs. Direct purchase: direct sale to customers or business through online purchase(website), physical shop	Direct sales Rental/leasing B2B B2C	Physical shops	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Assmber <input checked="" type="checkbox"/> Retail <input checked="" type="checkbox"/> Distribute			Businesses in delivery service Independent delivery riders Commuters
Baiskeli Centre (retrofitting)	Nairobi		Electric bicycles	Kenya	Direct purchase: direct sale to customers or business through online purchase(website), physical shop	Direct sales	Online Physical shop	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input checked="" type="checkbox"/> Distribute			Urban commuters, cycling enthusiasts, schools, community groups
E-Trails Kenya (retrofitting)		2020	Electric bicycles and spare parts	Kenya	Direct purchase: direct sale to customers or business through online purchase(website), physical shop	Direct sales	Physical shop	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input type="checkbox"/> Distribute			Institutions Commuters Delivery riders
Solar e-cycles		2015	- Solar-powered electric bicycles	Kenya Morocco South Africa	Direct purchase: direct sale to customers or business through online purchase(website), physical shop	PAYG		<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input type="checkbox"/> Distribute			

4.2 EV MOTORCYCLE PLAYERS

Company	Location	Year founded	Product offerings and number of units	Markets/	Business model	Operating model	Future plans	Player type	Financing	Partnerships	Customer segments
Ampersand	Rwanda kenya germany	2016	E-motorcycles -1,350 units on the road in rwanda and kenya	Rwanda kenya germany	- Leasing the battery - Pay-as-you-go leasing model		- To have 10,000 e-motos on the road by the end of 2024. - To expand to uganda and tanzania. Here	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Mkopa 	-Bolt -Total energies	B2b,b2c
Roam	Kenya	2017	Roam air	Kenya	- Pay-as-you-go model - Fleet management software - Supporting infrastructure	- Direct consumer sales - Fleet management	- To expand local manufacturing and expand roam park.	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Mkopa 	-Quickmart -for charging - Bolt - Sandstorm - ridewell as a distributor - wetu - Syokinet	B2b, b2c
Spark / powerhive	Kisii	- 2011 With power mini grids. - Pivoted to electric vehicles in 2019	Gen-3 spark motorbike	Usa kenya	- Pay-as-you-go model - Energy as a service	- Direct consumer sales	- Looking to scale the production of the spark motorcycle, producing up to 150 spark bikes per factory shift	<ul style="list-style-type: none"> • Manufacture & assembling • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo 	Petrocity, shell,lexo and rubis- for charging stations - Mobius motors for the assembling of the motor bikes - Lexo energy where its flagship showroom is at. - Kutuma kenya	B2c,
Arcride		2019	Bidii boda the corbett	Kenya	- Battery as a service	- Fleet management		<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Hakki africa • Aspira • Mosmos • 4g capital 	- Car and general - artcafe	B2b, b2c

Company	Location	Year founded	Product offerings and number of units	Markets/	Business model	Operating model	Future plans	Player type	Financing	Partnerships	Customer segments
Ampersand	Rwanda kenya germany	2016	E-motorcycles -1,350 units on the road in rwanda and kenya	Rwanda kenya germany	- Leasing the battery - Pay-as-you-go leasing model		- To have 10,000 e-motos on the road by the end of 2024. - To expand to uganda and tanzania. Here	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Mkopa 	-Bolt -Total energies	B2b,b2c
Roam	Kenya	2017	Roam air	Kenya	- Pay-as-you-go model - Fleet management software - Supporting infrastructure	- Direct consumer sales - Fleet management	- To expand local manufacturing and expand roam park.	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Mkopa 	-Quickmart -for charging - Bolt - Sandstorm - ridewell as a distributor - wetu - Syokinnet	B2b, b2c
Spiro	Togo benin rwanda uganda	2019	- Commando electric bike - Chapchap e-scooter	Togo benin rwanda uganda	- Pay-as-you-go model	- Pay-as-you-go model	- Aiming to be the largest ev facility in africa with a production goal of 1000 bikes and 2000 batteries per day. - Intend to make more than half of our ev technician workforce to be women. - To establish assembly plants in another 3 countries, employing 3000 people per year.	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Spiro capital • Mogo • Watu 		B2c
Stima / one electric	Westlands	2020	- Kridn one electric	Kenya france	-Battery-as-a-service - Pay-as-you-go model	-Battery-as-a-service	-	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo 	- One electric	B2c

Company	Location	Year founded	Product offerings and number of units	Markets/	Business model	Operating model	Future plans	Player type	Financing	Partnerships	Customer segments
Ampersand	Rwanda kenya germany	2016	E-motorcycles -1,350 units on the road in rwanda and kenya	Rwanda kenya germany	- Leasing the battery - Pay-as-you-go leasing model		- To have 10,000 e-motos on the road by the end of 2024. - To expand to uganda and tanzania. Here	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Mkopa 	-Bolt -Total energies	B2b,b2c
Roam	Kenya	2017	Roam air	Kenya	- Pay-as-you-go model - Fleet management software - Supporting infrastructure	- Direct consumer sales - Fleet management	- To expand local manufacturing and expand roam park.	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	<ul style="list-style-type: none"> • Mogo • Watu • Mkopa 	-Quickmart -for charging - Bolt - Sandstorm - ridewell as a distributor - wetu - Syokinet	B2b, b2c
Fika mobility								<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 			
Ewaka	Mombasa nairobi kigali	2021	Ewaka jasiri ewaka imaara	Kenya rwanda	- Direct sales (210,000 ksh upfront) - Ride to own (deposit 25,000 ksh Ksh 650 daily for 18 months) - Rent (monthly fee of 23,000 ksh)	- Operate internal fleet - Corporate - Direct consumer sales	- Financing options– lease to own (to introduce jan 2024) - Expand to other nairobi regions & its outskirts e.G thika road	<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 	• Fortune credit	- Powerbase - to affordability and removing financial barriers to rapid acceleration.	B2b, b2c
Ecobodaa	Nairobi	2020	Umeme 3000	Kenya	- Lease to own model	- Battery as a service		<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 		- Persistent energy	B2c
Kiri ev	Nairobi	2020	Motorcycle scooter sports bike	Kenya				<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 		-	B2c
Mazi mobility	Nairobi	2019	The magnus 3000 nduth-e	Kenya	- Pay-as-you-go	- Battery as a service - Mobility as a service		<ul style="list-style-type: none"> • Manufacture • Retail • Distribute 		Satgana - for financing	B2c

4.3 EV 3-WHEELERS (TUK-TUK)

Name	Location	Year founded	Product offerings and number of units	Markets	Business model	Player type	Partnerships	Customer & user segments
Kisii smart community	Kisii		3 Wheeler electric vehicles for rural transport, including cargo and passenger services.	Kenya - rural markets	Community based model	Community initiative	Toyota Mobility Foundation Aceleron energy Ogembo dairy Exa innovation studio	Local micro-enterprises, entrepreneurs, small-scale farmers, rural households, and transport providers
Biliti	California based	2021	Electric 3 wheelers -3 Models Battery swapping service Last mile deliveries	Kenya urban markets	B2b	<input type="checkbox"/> Manufacture <input type="checkbox"/> Retail <input type="checkbox"/> Distribute	Jumia	Delivery companies Independent riders
Mazi mobility	Nairobi	2023	Swapping and charging infrastructure Electric motorcycles		B2b B2c	<input type="checkbox"/> Manufacture <input type="checkbox"/> Retail <input type="checkbox"/> Distribute		
Car & General/ Piaggio			Ape e city fx - for passengers Ape e cargo fx - for cargo			<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input type="checkbox"/> Distribute		
Solutions Africa Limited	Mombasa	2020	Electric 3 wheelers	Kenya		<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input type="checkbox"/> Distribute		
Ana green tech	Mombasa					<input type="checkbox"/> Manufacture <input type="checkbox"/> Retail <input type="checkbox"/> Distribute		
Wetu /wemobility	Kisumu		Electric 3 wheelers -Last mile delivery	Kenya - rural markets		<input type="checkbox"/> Manufacture <input type="checkbox"/> Retail <input type="checkbox"/> Distribute		Individual consumers, delivery and logistics companies, urban commuters, and corporate clients looking for sustainable transport solutions
Auto truck e.A ltd			Electric 3 wheelers	Kenya		<input type="checkbox"/> Manufacture <input type="checkbox"/> Retail <input type="checkbox"/> Distribute		
Emos africa	Mombasa	-	E 3 wheelers Emos vega 4i	Kenya	-	<input type="checkbox"/> Manufacture <input checked="" type="checkbox"/> Retail <input type="checkbox"/> Distribute	-	-

4.4 EV INFRASTRUCTURE PROVIDERS

Name	Location	Year founded	Product offerings and number of units	Markets	Business model	operating model	Player type	Partnerships
E-Safiri charging limited	Kisumu	2022	developing solar powered charging hubs.	Kenya	- public charging -swapping station - private charging - cold storage	- Energy management - solar powered and grid connected swap stations.	Manufacture Retail Distribute	- Kiri - P4G
Electrify Africa	Nairobi	2023	deploying fast public EV chargers - five deployments in two locations	Kenya	- Micro-mobility solutions	- Fleet charging - Energy management	Manufacture Retail Distribute	
Roam	Nairobi	2017	Solar, Inverters & Energy Storage	Kenya	- Residential, commercial and industrial utility.	- Full off-the-grid and on-the grid modular system. - Battery system	Manufacture Retail Distribute	
Powerhive	Nairobi California	2011	develops scalable, bankable off-grid utility solutions	Kenya USA	- Microgrid solutions	- modular mini-grid systems - off-grid utility	Manufacture Retail Distribute	
EV Chaja	Nairobi		Installing charging solutions - Pulsar Plus - Copper SB - Quasar - Supernova	Kenya	- Office charging - Fleet charging - Business charging	- charging solutions for public, private EV owners, and fleets operators	Manufacture Retail Distribute	
Charge Up***	Nairobi		Establishing a network of charging stations	Kenya	- Fleet -	- Battery-as-a-service - charge a flat battery swap fee for electric two- and three-wheelers	Manufacture Retail Distribute	P4G ARC Ride Fika Mobility
Ecotrify	Nairobi	2018	Establishing a network of charging stations where people stay, work, shop and eat	Kenya	- Fleet charging - Residence charging - Workplace charging - Commercial charging	- Charging solutions	Retail / supplying Distribute	
Chaji energy	Nairobi	2020	eSOKK - IOT smart socket Cloud platform - Intelligent cloud-based management platform for charging assets.	Kenya	-Deploy, Manage and Monetize Charging Assets	- Energy, Charging, Batteries, Electric Vehicles, Electric Motorcycles, and Solar Energy - Providing charging and distribution of batteries for Electric motorcycles.	<input type="checkbox"/> Manufacture <input type="checkbox"/> Retail <input type="checkbox"/> Distribute	

4.5 MARKET SHARE, PRODUCT OFFERINGS, AND PRICING STRATEGIES OF MAJOR EV PLAYERS

Player	Products (EV Motorcycle)	Products (EV bike)	Products (EV tuk tuks)	No.of units in stock and sold	Pricing	Pricing strategy	Infrastructure	Distribution model	Acquisition channels
Ebee	-	Nyuki	-	1124 Units in sold (total)	KES 111,999 upfront Kes 8500/month subscription	<input checked="" type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared-financing <input checked="" type="checkbox"/> Rental	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	-Direct online sales (website) -Physical retail outlet (company shop) -Corporate partnerships (bulk sales & lease)	-Online marketing (social media, website, SEO) -Offline marketing (company shop) -Partnerships (M99)
		EBX			KES 89,999 upfront				
Ewaka	Jasiri electric motorbike	Shujaa 2.0	-		Upfront KES 139,000 Lease to own KES 11,500 deposit, for 18 months, 511 daily Rental KES 13,500	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared-financing	<input checked="" type="checkbox"/> Swapping <input checked="" type="checkbox"/> Charging	-Direct online sales (website) -Physical retail outlet (company shop)	-Online marketing (social media, website, SEO) -Offline marketing (company shop)
		Electric flex Buga	-		Upfront KES 255,555 Quarterly Installment KES 63,167				
						Jasiri Upfront KES 210,000 Lease to own Deposit KES 25,000 KES 650 daily for 18 months Rental Monthly fee Ksh 23,500			

Player	Products (EV Motorcycle)	Products (EV bike)	Products (EV tuk tuks)	No.of units in stock and sold	Pricing	Pricing strategy	Infrastructure	Distribution model	Acquisition channels
Ebikes Africa		The Adventurer			Direct sales KES 99,000 bike only, 105K with tracker, 112K with comprehensive insurance Lease (weekly/monthly/ quarterly/annually Leasing; KES3300 weekly rate, 10,900 monthly rate, 38500 quarterly rate, 142000 annual rate with comprehensive insurance.	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet (company shop)	-Online marketing (social media, website, SEO) -Offline marketing (company shop)
Little**		E bicycle	-		Rental (60 KES per hour)	<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website)	-Online marketing (social media, website, SEO) -Offline marketing (company shop)
Bike is best		E-bicycle Parking stand	-		Upfront Rental	<input checked="" type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online(social media) Partnerships (Sote hub)	-Online marketing (social media, SEO) -Offline marketing (Sote hub)
Baiskeli center		Electric Buffalo Bicycle	-		Upfront KES 69,999	<input checked="" type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	-Online marketing (social media, website, SEO) -Offline marketing (company shop)
		Electric Bike EBM-6 (SHIMANO 21-SPEED)			Upfront KES 109,999	<input type="checkbox"/> Shared financing <input type="checkbox"/> Rent			
E- trails Kenya		E bicycles	-		Upfront	<input checked="" type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	-Online marketing (social media, website, SEO) -Offline marketing (Bison Bike shop/) Partnerships (Baiskeli center)

Player	Products (EV Motorcycle)	Products (EV bike)	Products (EV tuk tuks)	No.of units in stock and sold	Pricing	Pricing strategy	Infrastructure	Distribution model	Acquisition channels
Solar e-cycles		E bicycles			PAYG	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	Swapping Charging	Direct online sales (website)	-Online marketing (social media, website, SEO) -Offline marketing (company shop)
Kisii Smart			E 3 Wheeler			<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	Swapping Charging	Direct online sales (website) Physical retail outlet	Community engagement -Online marketing (social media, website, SEO) -Offline marketing (company shop)
Biliti			Taskman			<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own	Swapping Charging	Direct online sales (website)	-Online marketing (website, SEO) -Offline marketing (company shop) Partnerships
			Dumpstar		<input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent				
			Taskman (OB)						
Car & General / Piaggio			Ape E City FX - For passengers		Upfront KES 1,090,322	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	Swapping Charging	Direct online sales (website) Physical retail outlet	-Online marketing (social media, website, SEO) -Offline marketing (company shop)
			Ape E cargo FX - For cargo		Upfront KES 1,295,982	<input checked="" type="checkbox"/> Rent			
Solutions Africa			E 3 wheeler			<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	Swapping Charging		Online marketing (social media- linkedin)
Ana Green Tech	-	-	-	-	-	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	Swapping Charging	-	

Player	Products (EV Motorcycle)	Products (EV bike)	Products (EV tuk tuks)	No.of units in stock and sold	Pricing	Pricing strategy	Infrastructure	Distribution model	Acquisition channels
Wetu/ WEMobility			E 3 wheelers			<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input checked="" type="checkbox"/> Charging		Community engagement -Online marketing (social media, website, SEO) -Offline marketing (company shop)
Auto Track E.A Limited			Electric 3 wheelers			<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging		
Ampersand	AMPERSAND GEN3 MOTORCYCLE	-	-	- 1000 e-motorcycles on the roads of Kenya and Rwanda by 2023.	Upfront KES 211,028.56	<input type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)
Roam	Roam Air	-	-		Upfront KES 195,517.50. Here	<input type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own (pay-as-you-go) <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input checked="" type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet. Here	Online marketing (social media, website, SEO) -Offline marketing (company shop)
Spark / Powerhive	Gen 3 Spark electric motorbike	-	-	- Over 60 motorcycles Here	Upfront KES 190,000. Here	<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)
Arcride	Bidii Boda The Corbett	-	-		Upfront For Bidii Boda - recommended price KES 185,000 Retail price KES 199,000 The corbett retail price KES 171,000	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)

Player	Products (EV Motorcycle)	Products (EV bike)	Products (EV tuk tuks)	No.of units in stock and sold	Pricing	Pricing strategy	Infrastructure	Distribution model	Acquisition channels
Spiro	Scooter- chap chap Motorbike - Commando	-	-		Upfront KES 195,000 and KES 196,700	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Rent to own <input type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input checked="" type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)
STIMA / One Electric	KRIDN	-	-		Operates on installments only	<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent <input checked="" type="checkbox"/> Leasing	<input checked="" type="checkbox"/> Swapping <input type="checkbox"/> Charging		
Fika Mobility	Electric Motorbike	-	-		Upfront KES 1,694,485.00 Here	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input checked="" type="checkbox"/> Shared financing <input checked="" type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input type="checkbox"/> Charging	Collaborations and partnerships. Here Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)
Ecobodaa	Umeme 3000 Here	-	-		Upfront KES 186,000 Here	<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)
Kiri		-	-		Upfront KES	<input type="checkbox"/> Upfront <input type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input type="checkbox"/> Swapping <input type="checkbox"/> Charging		
Mazi Mobility	Magnus 3000 Nduthi-E	-	-		Upfront KES 130,000 for a one battery model and KES 180,000 for a dual battery model	<input checked="" type="checkbox"/> Upfront <input checked="" type="checkbox"/> Lease to own <input type="checkbox"/> Shared financing <input type="checkbox"/> Rent	<input checked="" type="checkbox"/> Swapping <input type="checkbox"/> Charging	Direct online sales (website) Physical retail outlet	Online marketing (social media, website, SEO) -Offline marketing (company shop)

4.6 EMERGING COMPETITORS OR DISRUPTIVE FORCES SHAPING THE EV MARKET LANDSCAPE

Emerging players/Disruptive force (policy, funding, player, markets)	Context & Data	Impact (foreseeable impact or effect)
Roam Electric	Roam focuses on electric motorcycles and buses, recently raising \$24 million for expansion (CleanTechnica) (WeeTracker).	Increased local manufacturing, job creation, improved EV adoption rates. Supportive policy needed for infrastructure and incentives.
BasiGo	Specializes in electric buses with a pay-as-you-drive model, partnering with BYD Auto (THE ORG).	Cost-effective public transport, reduced emissions, and increased demand for local bus assembly. Policy support for bus financing.
Ampersand	Expanding from Rwanda to Kenya with a focus on electric motorcycles and battery swapping stations (THE ORG).	Increased accessibility to EVs via battery swapping, job creation, and market growth. Need for investment in charging infrastructure.
Kiri EV, Ecobodaa**, eBee	New startups in the electric motorcycle sector, attracting significant investments and focusing on local assembly (WeeTracker).	Boost in local EV production, job creation, and market competition. Need for supportive regulatory frameworks and funding options.
Government Policy on CKD Units*	Duty and VAT exemptions on CKD units making EV assembly cheaper by approximately 25% (WeeTracker).	Encourages local assembly, lowers EV costs, stimulates market growth. Requires sustained policy support and regulation adjustments.
Fintech and Pay-as-you-ride Models	Companies like M-Kopa and B-Boxx providing financing options for EVs (THE ORG).	Increased affordability and accessibility of EVs, especially in rural areas. Need for robust financial regulations and support.
International Collaborations	Siemens Stiftung and GIZ providing research, coaching, and networks for e-mobility (Siemens Stiftung).	Enhanced knowledge transfer, improved market testing, and stronger stakeholder networks. Policy support for research and innovation.
Local Battery Manufacturing**	Local production of batteries by startups to reduce costs and improve supply chains (THE ORG).	Cost reduction, job creation, and supply chain stability. Policy and funding support for local manufacturing initiatives.
Chaji energy	eSOKK - IOT smart socket Cloud platform - Intelligent cloud-based management platform for charging assets.	Policy and funding support for local manufacturing initiatives.

The background of the slide is a blurred street scene. In the foreground, the rear of a dark car is visible on the left, and the front wheel and handlebars of a bicycle are visible at the bottom. In the background, there are other cars and buildings, suggesting an urban environment.

5.0

**FINANCING
MECHANISMS FOR
2 & 3 WHEELER EV
PLAYERS**

5.1 OVERVIEW OF FINANCING MECHANISMS

Financing mechanism	How it works	Who it targets	Financiers examples	Requirements for financing
Directly working with investors	Debt financing, equity, grant investments from venture capitals / DFIs	Operators (fleet, players) Kiri EV, Roam, Ampersand	Vcs/Investor firms (At One Ventures, Equator Africa)	Early stage venture, growth stage venture, / green mobility
Fundraising from investors	Debt financing, equity, grant investments from DFIs	Operators (fleet, players) Kiri EV, Roam, Ampersand	DFIs (Developp, P4G, Shell foundation, Africa Go Green)	Early stage venture, growth stage venture, / green mobility
Innovation programs / accelerators bootcamps	Grant investments, technical support	Operators (fleet, players) Kiri EV,	Smart city innovation program Hindsight ventures Project Ninja	Early stage venture, growth stage venture, / green mobility
Partnerships with microfinance institutions	Consumer financing	Riders/customers	Mogo/WATU/MKOPA	-
Partnerships with private ltd companies	Financial & technical support	Operators (fleet, players) Arc ride	Musashi Seimitsu Industry Co., Ltd. (partnership with Arc ride)	Early stage venture, growth stage venture, / green mobility
Direct impact investments into e-mobility businesses	Entrepreneurs apply for funding to impact investors.			
Results-Based Financing (RBF) with repayable grant Here	<p>The financing is provided in parallel to the debt and/or equity. Used for de-risking the process for the fund's investors, to assist the players to repay their loans while at the same time improving revenue collection from the already pre-existing business.</p> <p>pre-agreed milestones that the RBF financing will be measured against include:</p> <ul style="list-style-type: none"> • Number of EVs deployed. • Amount of CO2 emissions replaced. • Jobs created (directly and indirectly). • Gender-related milestones achieved 	Players	EEP Africa Shell Foundation	Growth stage ventures.

Blended finance with key instrument as Debt Here	Triggered at specific inflection points of a venture depending on the venture's cash flow features.	Players (for-profit companies or social enterprises)	Repayable grant/interest-free debt: <ul style="list-style-type: none"> • EEP Africa • DFC Commercial debt: <ul style="list-style-type: none"> • Symbiotics • Yunus Social Fund • PG Impact • Oiko Credit • Crowdfunding platforms 	For profit companies or social enterprises with a 12 month period of revenue generation and stable cash flows.
Blended finance with key instrument as Equity Here	To improve project management and cost effectiveness thus reducing project risks.	Players	Factor-E Infraco DFC	For profit companies or social enterprises with a 12 month period of revenue generation and willing to provide preferential equity non controlling stake.

Sources and links:- financing mechanisms available for 2 & 3 wheeler drivers and operators

- ⊗ [Intellcap](#) (DESIGNING A FINANCING MECHANISM FOR THE E-MOBILITY SECTOR IN EAST AFRICA).
- ⊗ [UNDP](#) (CLIMATE AGGREGATION PLATFORM).
- ⊗ [Sustainable Mobility for all](#) (E-MOBILITY IN LOW-INCOME COUNTRIES IN AFRICA: FINANCE, GOVERNANCE, AND EQUITY).
- ⊗ [Independent Global Stocktake](#) (USING THE RIGHT MIX OF FINANCIAL INSTRUMENTS TO PROVIDE AND MOBILIZE CLIMATE FINANCE).
- ⊗ [Blended Finance Taskforce](#) (Blended Finance in Clean Energy: Experiences and Opportunities).
- ⊗ [International Finance Corporation](#) (Using Blended Concessional Finance to Invest in Challenging Markets).

5.2 FINANCING MECHANISMS BY MICRO-LENDERS

	Loan rate	Players they work with	Deposit	Upfront buying	Lipa Pole Pole	Relevant info
Mogo	20%	Roam , Spiro , Stima , Bolt , FIKA , Arc Ride, Spark	<p>Electric 2-wheelers - New: KES 20,000. Second-hand: KES 15,000. And pay Ksh 470 per day. Here</p> <p>Ampersand (TURACO 2) - KES 220 000 Deposit - KES 20 000 - Weekly payment 24 months - KES 530 18 months - KES 614</p> <p>Spiro (Commando) - <i>(available in Mombasa only)</i> KES 170 000 Deposit - KES 20 000 - Weekly payment 24 months - KES 461 18 months - KES 398</p> <p>Roam (Air) - with one battery KES 292 000 Deposit - KES 25 000 - Weekly payment 24 months - KES 707 18 months - KES 820</p> <p>Arc Ride (Bidii) - KES 185000 Deposit - KES 20 000 - Weekly payment 24 months - KES 438 18 months - KES 507</p> <p>Spark - KES 190 000 Deposit - KES 20 000 - daily payment Kes505 for 18 months.</p>	YES	YES	<ul style="list-style-type: none"> - Offers loans with flexible terms for new and second-hand vehicles, including electric two-wheelers. - Mogo in partnership with Car and General launched their first electric tuktuk in Mombasa at Mombasa Express Store. Here, Here - MOGO Opens First Fully E-Bike Showroom In Kenya. Here Spiro, Mogo, electric tuk tuk

	Loan rate	Players they work with	Deposit	Upfront buying	Lipa Pole Pole	Relevant info
Watu		ArcRide , GOGO Electric (Uganda), Ampersand ,	Arc Ride - Daily payment of KES 450	YES	YES	The company has financed close to 100 electric assets in Kenya and aims to encourage the adoption of EVs by the motorcycle (bodaboda) community. Here
M-Kopa		Roam . Ampersand ,	Ampersand - KES 250 000 Deposit - KES 20 000 - Daily payment - KES 560 Battery swap from KES 240 Roam - KES 240 000 Deposit - KES 25 000 - Daily payment - KES 750 (single battery) KES 1000 (two battery) Battery swap from KES 250 (for one)	YES	YES	
Hakki		eBee , Arc Ride	Nyuki - KES 111,999 Here Daily Payment: KES 246 Weekly Payment: KES 1,845 Here eBX - KES 89,999 Here Daily Payment: KES 195 Weekly Payment: KES 1,466 Here ARC Ride (the Adventurer) - can now get financing from Hakki Africa for as low as 249/day	YES	YES	
Mosmos		Arc Ride	-	YES	YES	Customers who need help saving towards their Hakki deposit can now start saving towards their deposit through Mosmos.
4G Capital		Spark	Spark - KES 190 000 Deposit - KES 25 000 - daily payment Kes518 for 12 months.	YES	YES	

5.3 FINANCING MECHANISMS BY BANKS

	Location	Markets/Portfolio	Relevant info/ Target consumer	Company invested	Investment	Year	Use for investment Afreximbank	Missing information
NCBA Bank	Nairobi	Banking, Investment solutions, Asset financing	Bodaboda Sector		2 Billion	2022	Financing electric vehicles. Here	Overview information
KCB Bank	Kenya	Banking, Investment solutions, Asset financing	Bodaboda and tuk tuk sector	In partnership with UNITAR. Here	Not specific		Financing acquisition of electric vehicles including electric 2 and 3 wheelers. Here	Overview information
Afreximbank	Africa	Intra and extra African Trade		Spiro	\$ 50 Million		Enhancing operational capabilities and helping in expanding to more African countries. Here	Overview information
Family Bank	Nairobi	Banking, Investment solutions, Asset financing		Basi Go	Not Specified		Targeting public service vehicles.	Overview information

5.4 FINANCING MECHANISMS BY BIG FINANCIERS

	Overview	Location	Markets/Portfolio	Company invested	Investment	Year	Use for Investment
International Development Finance Corporation	Established in 2019, DFC , US' Government's development finance institution, partners with the private sector to finance solutions to the most critical challenges facing the developing world today	United States	<ul style="list-style-type: none"> -Infrastructure & Critical minerals -Energy -Food security & Agriculture -Health -Small business and financial services 	Roam	\$10 million debt commitment)	2024	<ul style="list-style-type: none"> -To scale the production of motorcycles and buses -Research and tooling to deepen the vertical integration of their products
				Ampersand	\$9 million Loan	2021	Expansion of electric motorcycles

	Overview	Location	Markets/Portfolio	Company invested	Investment	Year	Use for Investment
Enel Green Power	Enel empowers sustainable progress		Energy sector	Powerhive	\$12 million	2015	Building and operating mini grids
Persistent Energy	Persistent Energy provides essential support including finance, strategic guidance, governance, technical and legal expertise to early-stage companies committed to creating sustainable impact	USA Switzerland Kenya	Climate solutions	Ecobodaa	Undisclosed	2021	Business growth
Untapped Global	Untapped plays a catalytic role in financing tech-enabled companies in emerging markets.	USA Kenya South Africa		Ewaka	Undisclosed	2024	Business growth
ImpactAssets	A non profit impact investing firm , leading in impact investing firm, they offer deep strategic expertise to help clients define and execute on their impact goals	United States	Climate solutions Racial Equity Gender equity Health & wellness Education Poverty Alleviation Reducing inequalities	Ampersand	\$250,000 (Debt financing)	2020	Business growth
AlphaMundi Group (Alphajiri Investment Fund (AJIF))	The AlphaJiri Investment Fund LP (Mauritius) is a debt, mezzanine and equity investment vehicle to fuel the resilience and growth of impact ventures	Mauritius	Sustainable food Renewable energy Climate smart solutions Gender lens	Ampersand	\$1 million (Equity investment)	2023	For expanding its motorcycle fleet and battery swap stations in Rwanda and Kenya
Africa Go Green Fund (Managed by Cygnum Capital)	AGG is designed to support activities that mitigate GHG emissions in Africa. The fund provides debt financing to businesses and projects across the spaces of industrial energy efficiency, green buildings, clean transport, and green appliances.	London Nairobi Dubai Lagos Amsterdam	Industrial energy efficiency Green buildings Clean transport Green appliances.	Ampersand	\$7.5 million (Equity round and debt facility)	2023	Business growth support - Working capital and capital expenditures for electric bikes, batteries & charging stations

	Overview	Location	Markets/Portfolio	Company invested	Investment	Year	Use for Investment
Shell Foundation	Shell Foundation is an independent UK registered charity that enables millions of underserved people to earn a living income with clean energy access in Africa and Asia.	UK London	Small holder farmers Urban transporters Micropreneurs	Ampersand	\$600,000 grant	2020	Business growth
P4G	P4G contributes to green and inclusive growth in low- and middle-income countries by helping early-stage businesses become investment ready and supporting country climate transitions in food, water and energy systems.	Kenya	Climate transitions in food, water and energy systems.	Charge up Sun Run(E-safiri & Kiri EV partnership)	\$295,041 (Grant) \$130,280 \$402,071	 2022 2024	Business growth Business growth
Developp	develoPPP is a funding programme of the German Federal Ministry for Economic Cooperation and Development (BMZ). It is aimed at companies that want to invest sustainably in a developing or emerging country and expand their local operations.	Germany	Sustainable development	Kiri EV Mazi mobility (TBC)	100K Euros Grand investment	2022	Business growth
Project Ninja (Accelerator, non equity assistance)	Project Ninja supports entrepreneurship development activities, business matching and policy recommendations.	Japan		Mazi mobility	access to mentoring, networking, and fundraising opportunities,	2023	Business growth

5.5 FINANCIERS - DEBT/VCS

	Overview	Location	Markets/Portfolio	Relevant info/ Target consumer	Company invested	Investment	Year	Use for investment
At One Ventures	At One Ventures backs early-stage companies that are using disruptive deep tech to upend the unit economics of established industries.	United States	-Agriculture & Food -Buildings, Construction & Manufacturing -Energy & transportation -Ecosystem restoration	Early stage venture, Seed	Roam	\$7.5 million (\$5 million - equity \$2.5 million- grant)	2021 **	-Investment targeted scaling up and mass manufacturing
Equator Africa	Equator Africa is A venture capital firm investing in tech-enabled, early-stage ventures that are accelerating an equitable climate transition in Sub-Saharan Africa.	USA London Kenya	Energy Agriculture Mobility	Seed & Series A series	Roam	\$14 million (Series A Equity funding)	2024	-Expansion of production off locally designed and assembled electric motorcycles and buses
Factor E Ventures	An innovation factory that identifies and invests in solutions to some of the world's toughest climate and development problems.		Climate Development	Early stage ventures	Ampersand Roam		2018 2018	
Beyond Capital Venture	Beyond Capital Ventures is a diversified emerging markets venture capital firm	Nairobi	Financial services Healthcare Climate	Emerging new markets (India & East Africa)	Ampersand	Undisclosed	2024	Business expansion

	Overview	Location	Markets/Portfolio	Relevant info/ Target consumer	Company invested	Investment	Year	Use for investment
KWF DEG	KFW DEG offers financing, advice and support to private sector enterprises operating in developing and emerging-market countries.			Debt, Early Stage Venture, Grant, Late Stage Venture, Private Equity, Venture	Kiri EV			
Ecosystem Integrity Fund(EIF)	The Ecosystem Integrity Fund (“EIF”) is an early growth stage investor in companies contributing to environmental sustainability.		Renewable Energy Electric vehicles Sustainable agriculture Renewable energy	Early growth ventures	Ampersand	\$4 million (Invested With Total Energies)	2021	Expansion of electric motorcycles
Hindsight Ventures								
Satgana			Climate tech solutions Transportation Energy Food & Agriculture Circular economy Industry & Buildings Carbon removal	Early stage startups Invests in Europe & Africa Investment size: 100K-300K Euros	Mazi mobility	Undisclosed Beyond capital, hands on operational and strategic support	2022	Business growth

A person is riding a bicycle on a city street. The background shows a blurred urban environment with buildings and other vehicles. A large teal rectangular overlay is positioned in the center of the image, containing the text '6.0 DISTRIBUTION CHANNELS FOR 2- AND 3-WHEELERS EVS'.

6.0

**DISTRIBUTION
CHANNELS FOR 2- AND
3-WHEELERS EVS**

6.1 EV BIKES: DISTRIBUTION CHANNELS

Player	Online	Dealership / 3rd party	Bundled eg. financiers	Showroom
Ebee	Ebee have an online distribution channel here for Nyuki bicycles and here for Ebx bicycles.	N/A	The Ebee-Hakki partnership is designed to provide riders with an affordable and convenient way to own an eBee e-bike. eBee Africa has partnered with microfinance partner, Little Pesa , to provide riders with competitive financing: Little Pesa offers competitive interest rates, ensuring that financing electric bicycles is hassle-free & affordable over a period of 3 to 12 months.	They also have a container shop in Nairobi, Westlands. The location provides sales, service and support to their delivery fleet.
Ewaka	E-waka sell their bicycle products on their website here showing the different pricing and plans for the Shujaa e-bike.	N/A	They have also partnered with Fortune Credit Ride to own with fortune credit Deposit Ksh 11,500 ksh 511 daily for 18 months. The collaboration introduces a groundbreaking financing product that enables riders on the eWAKA platform to attain full ownership of the Shujaa 2.0 electric bike at a daily cost of just 396 KES. The electric bikes also come with an embedded comprehensive cover, protecting against damage and loss. Kenyan technology start-up eWaka has signed a deal with financial and energy company Powerbase to optimise the manufacture and marketing of its electric mobility solutions.	Plot LR2/311 Ngong Road (Opposite Quiver) in Kilimani, Nairobi (00505).
Bike is best		Ebikes Africa		Mombasa at Sote Hub on Moyne Drive Road
Ebikes Africa	Ebikes Africa sell their bicycle products on their website here showing the different payment options	Ebikes Africa sell Arcride bicycles on ttheir platform Partnering with Momaxs as their go to shop in Nairobi Partnership with Bike is Best as go to shop in Mombasa	Aspira - Provide the lipa pole pole option	Mombasa at Sote Hub on Moyne Drive Road
Arcride	N/A	Collaborating with Ebikes Africa to sell on their behalf	Their financial partners; <ul style="list-style-type: none"> • Mogo • Watu • Hakki Africa • Aspira • Mosmos 	N/A

6.2 EV MOTORCYCLES: DISTRIBUTION CHANNELS

Player	Online	Dealership / 3rd party	Bundled eg. financiers	Showroom
Arcride	On their website	N/A	Their financial partners are: Mogo, Watu, Aspira, Mosmos, Mogo, 4G Capital, Hakki Watu, ARC Ride Launch Charging Infrastructure for Electric Motorbikes	MOGO Boda Boda Branch
Roam	Sell their motorbikes products on their website highlighting the key features	Collaboration with Ridewell	Roam and MOGO partner opening 20 in-store locations Roam and M-Kopa sign first major supply agreement for deployment of electric motorcycles in AFRICA	Located directly opposite the Safari Park Hotel along the Thika Super Highway
Ampersand	Can be attained through Watu	Collaborating with Total Energies	Micro Finance Partners: Mogo Partnership with Bolt and M-KOPA	Arc Ride Kenya HQ (Whatsapp sales) Afriq Centre, Warehouse No. 4, Masaai Road, Off Mombasa Road, Kenya MOGO Boda Boda Branch
Powerhive/ Spark	Description of the motorbike but no direct distribution from the website	4G Capital	Micro Finance Partners: Mogo Strategic partnership with 4G Capital , a pioneering asset financing company A strategic collaboration with Mobius Motors	Powerhive's flagship showroom is on Ngong Road, a major road in Nairobi where it has partnered with Lexo Energy, one of the large retail fuel firms in Kenya. MOGO Boda Boda Branch
Stima/One electric	N/A	N/A	Mobius Motors Signs Multimillion Deal with Stima, Others to Manufacture Electric Motorbikes in Kenya	N/A

6.3 EV TUK TUKS: DISTRIBUTION CHANNELS

Player	Online	Dealership / 3rd party	Bundled eg. Financiers	Showroom
Biliti	Describe their tuktuk products on their website highlighting the key features	N/A	N/A	N/A
Kisii Smart Community				
Car & General	Online shop selling electric and ICE 3 wheelers	N/A	From their website here , it seems Watu Credit sell their products on their behalf in Nyali.(to be validated)	They have showrooms in New Cargen House Lusaka Road, Industrial Area Other showrooms in Kitengela, Kisii, Mombasa, Bungoma, Kitale, Voi, Nakuru, Thika
Mombasa- Based Solutions Africa	N/A	N/A	N/A	Alisa House, Tangana Rd, Mombasa



The background of the slide is a blurred street scene. In the foreground, the lower half of a person riding a bicycle is visible, including their legs and the wheels. The person is wearing a dark shirt and shorts. In the background, there are cars parked or moving on a street, and buildings with balconies. The overall scene is bright and sunny.

7.0

**MARKET DRIVERS,
CHALLENGES AND
OPPORTUNITIES IN 2&3
WHEELER EV MARKET**

7.1 KEY MARKET DRIVERS AFFECTING MARKET DYNAMICS

Driver (tentative)	Context	Impact
Funding & Investment	Increase in funding and investment in e-mobility as a sector, and in clean energy and climate.	High - increase of EVs in the market, better value to EV users and more awareness leading to more uptake.
Petroleum & Fuel Costs	The analysis in this paper also finds that the lower daily fuel cost of E2Ws can benefit taxi drivers in relation to increase in daily profit, increase in ownership rate of motorcycles, or both. The reduced daily cost could also lead to reduced fares for taxi passengers, which would mostly benefit those making short-distance trips (less than 5 km) because of the higher-than-average fare per kilometer	High - Clear value proposition to riders and logistic operators, thus increase in use of EVs.
Infrastructure	Investment in key infrastructure set up by Government and other key actors in areas such as energy, charging and swapping stations, roads opens up opportunities for drive uptake.	High - Potential for collaboration among e-mobility players in aspects such as interoperable charging and swapping stations, low costs of set up and operations and better value proposition to EV users.
Conversations and investments in climate	The need to transition to greener sources of energy, and to mitigate effects of climate change by reducing GHG emissions and key investments in the sector is driving uptake of EV solutions.	High - more actors in EV, better interventions to users, better returns to investors.
Technology	Technology allows for optimization of solutions, data collection for decision making and gathering of insights to inform better designs of EV solutions	High - Opportunities for better incomes for EV riders, and clear value proposition to investors and other key stakeholders.
Policy	<p>Kenya has launched a national e-mobility draft policy to promote the local manufacturing and assembly of electric vehicles (EVs). The initiative arrives when Kenya lacks the factories or expertise to build EVs entirely within the country. If approved, the policy will enforce zero-emission vehicle (ZEV) sales targets and investment criteria for car manufacturers and assemblers to qualify for government incentives.</p> <p>Kenya has started issuing green-coloured number plates. The initiative aims to “raise awareness about EVs among the general public and encourage more people to consider switching to e-mobility,”</p>	High - enabling environment to drive investments and innovation.

7.2 KEY CHALLENGES AFFECTING MARKET DYNAMICS

Challenges	Context & Impact
Infrastructure	<ul style="list-style-type: none">➤ Limited Charging Infrastructure:<ul style="list-style-type: none">⊗ Charging station availability remains limited, especially in rural areas. This lack of charging infrastructure raises concerns about range anxiety and the convenience of recharging➤ Infrastructure Adaptation:<ul style="list-style-type: none">⊗ Adapting roads and building infrastructure to accommodate EVs and charging stations is essential. Revision of policies regarding road infrastructure to address specific challenges faced by EVs, such as lower ground clearances, will be instrumental as EV adoption increases.➤ Home Charging:<ul style="list-style-type: none">⊗ Urban planners, architects, developers, policymakers, and utility companies should collaborate to integrate home charging stations into residential building designs, potentially mandating their inclusion in the National building codes on a fraction of the parking spaces provided. Doing this with the highest safety standards is critically important.➤ Investment in the Electrical Grid:<ul style="list-style-type: none">⊗ Investment in the national grid is crucial for ensuring renewability, accessibility, and stability. Kenya Power’s investment in extending and metering the grid up to charging stations is critical for supporting the infrastructure needed for EV adoption.➤ NMT Infrastructure:<ul style="list-style-type: none">⊗ Kenya’s EV adoption faces challenges due to inadequate NonMotorized Transport (NMT) infrastructure, like cycling lanes. The lack of dedicated lanes makes cycling unsafe, discouraging its use. Improved NMT infrastructure, including separated cycling lanes, is essential to encourage cycling, complementing EV adoption and reducing carbon emissions.➤ EV Parking:<ul style="list-style-type: none">⊗ In many markets, EVs have preferential parking spaces. In Kenya, limited EV parking facilities, especially bicycle racks at public buildings, hinder EV adoption in Kenya. The lack of secure and convenient parking spaces makes using bicycles and EVs for commuting difficult. More bicycle and EV parking, especially in urban areas and near public buildings, can incentivize cycling and EVs over traditional vehicles, promoting a sustainable transportation system. <p>Source: EMAK: Electrifying Kenya’s Transportation Sector</p>

Skills & Knowledge	<ul style="list-style-type: none"> ➤ Maintenance and Repairs: <ul style="list-style-type: none"> ⊗ Lack of specialized maintenance and repairs centers for EVs in some areas create a barrier to proliferation of EVs. Investing in training programs for local technicians, encouraging partnerships with global EV service providers, and establishing regional service hubs can address concerns about service accessibility and reliability. ➤ Lack of Skill Sets: <ul style="list-style-type: none"> ⊗ Training programs to develop the necessary skills for EV maintenance and repair and safety are essential. Investing in education and vocational training can ensure that mechanics, electricians, technicians and first responders are equipped to service EVs reliably and safely, thereby increasing reliable service options and enhancing consumer confidence in the technology. <p>Source: EMAK: Electrifying Kenya's Transportation Sector</p>
Cost of Uptake & financing mechanisms	<ul style="list-style-type: none"> ➤ High Initial Cost: <ul style="list-style-type: none"> ⊗ The upfront purchase price of EVs is generally higher compared to traditional internal combustion engine (ICE) vehicles. (The vehicle itself is typically the same price as an ICE vehicle, but batteries typically cost an additional 35-50% on top of the vehicle cost). This higher upfront cost of the battery can deter price-sensitive consumers, despite the long-term cost savings associated with EVs. Fortunately, customer financing options and battery leasing programs are available which are able to smooth out this initial CAPEX. Nevertheless, reducing product cost is critical to increasing adoption rates. ➤ Import Duties and Excise Duties: <ul style="list-style-type: none"> ⊗ Despite recent VAT reductions, high import duties (10-35%, particularly on components purchased by local assemblers) and 10% excise duties impact EV prices to the end consumer, curtailing adoption. Collaborating with the government to reassess duties on EVs and aligning them with the country's sustainability goals can make EVs more accessible. <p>Source: EMAK: Electrifying Kenya's Transportation Sector</p>
Consumer behavior & perceptions & awareness	<ul style="list-style-type: none"> ➤ Lack of Awareness: <ul style="list-style-type: none"> ⊗ Many consumers lack information about the benefits of electric vehicles. A targeted awareness campaign, involving collaboration between government agencies, manufacturers, distributors, media, academia, influencer 19 community and advocacy groups, can dispel myths and educate the public about the advantages of EVs. Of particular importance is informing customers about battery lifecycle management, including safe battery handling, battery care to optimize longevity and performance, end end of life options. <p>Source: EMAK: Electrifying Kenya's Transportation Sector</p>

Policy & regulatory gaps

- **Incentive Programs:**
 - ⊗ The absence of stable, long-term government incentives and subsidies for EVs hampers adoption. Introducing tax incentives, rebates, and subsidies (beyond one-year budgetary measures) can create a more favorable environment for potential buyers.
- **Comprehensive E-Mobility Strategy:**
 - ⊗ Kenya's lack heretofore of a comprehensive e-mobility strategy and clear implementing bodies leads to fragmented efforts and short-term opportunistic policies. Establishing a unified strategy, clearly defined roles, and a collaborative approach among stakeholders can streamline efforts and promote sector growth.
- **Regulatory Framework for Charging Infrastructure:**
 - ⊗ The absence of clear and comprehensive regulations for the establishment and operation of charging infrastructure poses a challenge, as does unclear policy regarding allocation of land for such endeavors. Policies should be developed to streamline the licensing, safety, and technical and real estate management standards for charging stations, promoting their widespread deployment.
- **Regulatory Framework around Carbon Credits:**
 - ⊗ EVs can have a significant impact on CO2 reduction. Monetizing carbon credits through a compliance based marketplace can have a very material impact on unit economics which can drive down the costs of acquiring and managing EVs. A sustainable, long term approach to taxing carbon credits is equally important.
- **Absence of Circular Economy Policies:**
 - ⊗ Like most industries, the electric vehicle industry generates various waste streams, including end-of-life batteries. The lack of policies and regulations promoting a circular economy, including recycling and proper disposal of EV components, poses environmental and sustainability challenges. Policies should encourage responsible end-of-life management for EV components.
- **Financial Barriers for Consumers:**
 - ⊗ The absence of stable, long-term financial incentives for consumers, such as subsidies or tax breaks or low-interest loans, hinders widespread EV adoption. Developing policies that provide direct financial benefits to consumers, coupled with awareness campaigns, can address economic barriers and drive consumer interest in EVs.

Source: [EMAK: Electrifying Kenya's Transportation Sector](#)

7.3 OPPORTUNITIES AFFECTING MARKET DYNAMICS

Opportunities	Context
Online Commerce and SMEs	The growth for ondemand logistic solutions especially driven by online commerce (social commerce) and the SME industry has the potential to drive uptake of EV solutions (e-bicycles and ev-motorcycles) given the cost benefit to businesses. Innovative approaches by logistic operators would be key in driving demand for EVs.
Move toward local manufacturing and assembly	The local manufacturing and assembly industry for EVs has potential to drive uptake of 2 & 3 wheeler EVs especially the retrofitting industry, availability of spare parts and reduction of costs and time of importation. Incentivising the local industry can also drive investments and innovations.
Innovative Financing	<ul style="list-style-type: none"> ⊗ Patient capital and contextual investments can open opportunities for the EV industry. Partnerships in areas such as asset financing, user-ownership financing models, insurance provision partnerships, and other forms of innovative financing would be critical in addressing barriers faced by e-mobility companies. ⊗ Watu Credit has confirmed its corporate plans to invest more than \$9.8million in accelerating efforts to transition from financing fossil-powered motorbikes to electric bikes progressively. <p>Source: CIO Africa</p>
More potential use cases for EVs - leisure, commute,	<ul style="list-style-type: none"> ➤ Rural e-mobility <ul style="list-style-type: none"> ⊗ Currently, 500 million Africans still experience poor rural mobility* which has an adverse effect on economic development, health, and education. Rural households struggle to find mobility solutions that are affordable and appropriate in meeting their needs. In parallel, most rural mobility players struggle to achieve scale while improving the accessibility, safety, efficiency, or sustainability of transport solutions. ⊗ Rural e-mobility start-ups are often hindered by thin margins, inconsistent demand, and low levels of defensibility, as well as poor transport and energy infrastructure. Market shaping could play an important role in developing this market. Actors can fund market studies to create an evidence base for investors and entrepreneurs to identify opportunities and refine business models. ⊗ Supporting incubators/accelerators to build and refine rural mobility models can also help to prepare the ecosystem for commercial investment. ⊗ Grant funding or concessional capital can further catalyze ecosystem growth, by de-risking innovation and business model development. Finally, building industry platforms that connect decision-makers, innovators, financiers, and suppliers can encourage shared learning and the creation of a more conducive policy environment. <p>Source: <i>Feasibility of Transition to Electric Mobility for Two-Wheeler Taxis in Sub-Saharan Africa: A Case Study of Rural Kenya</i></p>

More potential use cases for EVs - leisure, commute,

➤ **Micro-mobility**

- ⊗ Offers a large and growing market, as the sector is forecast to grow at a CAGR of ~13% in the next 5 years. There is a favorable policy environment, with cities like Nairobi and Kigali creating cycle lanes to ease congestion. Complementing this picture, there are few players relative to the size of the market, offering an opportunity for new entrants. Business models must reduce or spread costs to ensure that micro-mobility is competitive to walking as the alternative. In addition clear communication on the benefits of micro-mobility can overcome cultural barriers (e.g., often seen as less desirable). Market shaping efforts can thus focus on investing in and advocating for e-MaaS models that allow consumers to avoid purchase costs and use micro-mobility on demand, and supporting promotional campaigns that raise awareness of the benefits of micro-mobility and target cultural barriers.

➤ **Business model innovations**

- ⊗ At present, three main business model innovations could drive longer term growth of the e-mobility sector in Africa and the Middle East: (1) batteries for energy storage; (2) the development of common charging standards; and (3) the exploration of carbon credits.

Source: [PREO-Dalberg](#)



A person is riding a bicycle on a city street. The background shows a blurred urban environment with buildings and cars. A large teal rectangular overlay is positioned in the center of the image, containing the text '8.0' and 'FUTURE TRENDS IN EV MARKET'.

8.0

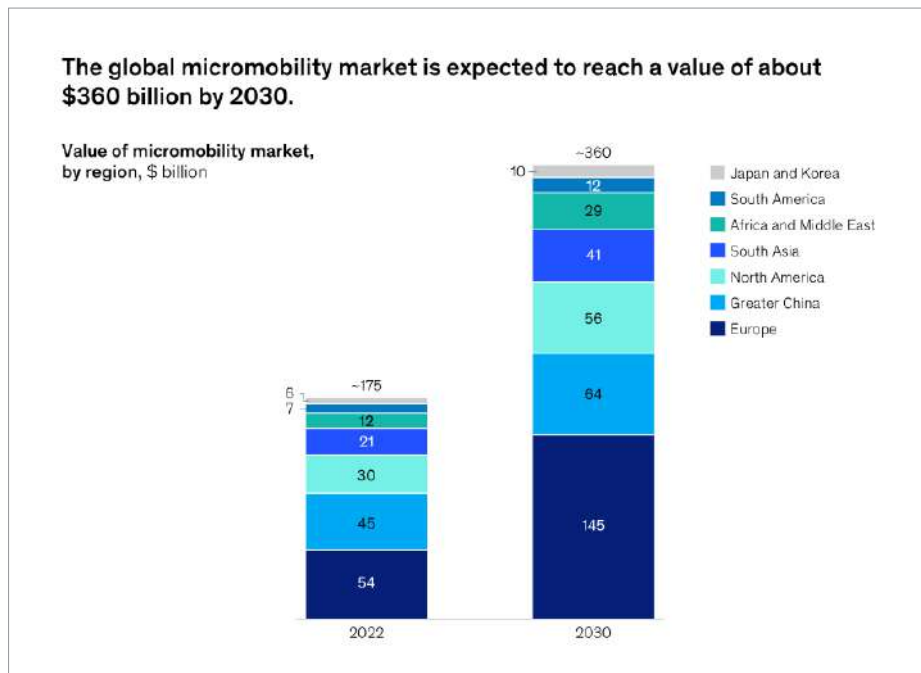
**FUTURE TRENDS IN
EV MARKET**

8.1 FUTURE TRENDS ON EV ADOPTION AND USE

MICRO MOBILITY

This is a transformative trend in urban transportation that centers on the use of small, lightweight vehicles for short trips within cities and urban areas. It represents a shift away from traditional car-centric transportation in favor of more sustainable and efficient modes of mobility.

- ⊗ McKinsey estimates that the global micromobility market will reach about **\$360 billion** by **2030**, up from about **\$175 billion** in 2022—mainly driven by e-bike sales.



Sources: (McKinsey)

CHARGING INFRASTRUCTURE

- ⊗ Increase in charging infrastructure.
- ⊗ Renewable energy integration.
- ⊗ **Smart Charging:** Charging infrastructure is becoming smarter, allowing for optimized charging times, grid balancing, and cost savings for users.
- ⊗ **Urban Integration:** Charging stations are increasingly being integrated into urban planning and infrastructure, making them more accessible to city dwellers.
- ⊗ **Wireless Charging Expansion:** Wireless charging technology is expected to become more prevalent, simplifying the charging process for EV users.

INTERNET OF THINGS (IOT)

This is a game-changing technology that is revolutionizing various industries, including electric mobility. In the context of electric vehicles (EVs) and their supporting infrastructure, IoT is playing a pivotal role in shaping the future of transportation.

Its applications include:

- ⊗ **Connected EVs:** IoT enables EVs to connect to the internet, providing real-time data on battery status, range estimation, and charging station availability.
- ⊗ **Charging Infrastructure:** IoT is integral to smart charging stations, enabling remote monitoring, energy optimization, and payment processing.
- ⊗ **Fleet Management:** IoT technology is critical for managing fleets of electric vehicles, offering insights into vehicle performance and scheduling maintenance.

- ❁ **Predictive Maintenance:** IoT sensors monitor vehicle components and send alerts when maintenance is required, reducing downtime and repair costs.

BIG DATA AND ANALYTICS

- ❁ **Optimized Charging Infrastructure:** Analyzing traffic patterns, charging station usage, and grid capacity can help strategically locate charging stations, minimize wait times, and balance the load on the electricity grid.
- ❁ **Enhanced Battery Management:** Data on battery performance, temperature, and charging habits can be used to optimize charging cycles, predict battery lifespan, and improve overall efficiency.
- ❁ **Smart Grid Integration:** Integrating e-mobility data with smart grid systems allows for dynamic pricing, demand response programs, and efficient use of renewable energy sources.
- ❁ **Improved Vehicle Design and Performance:** Analyzing data on vehicle usage, driving behavior, and component wear and tear can inform design improvements, optimize performance, and enhance safety features.
- ❁ **Personalized Mobility Solutions:** Data on individual travel patterns and preferences can enable personalized recommendations for routes, charging stops, and even vehicle selection.

ARTIFICIAL INTELLIGENCE IN E-MOBILITY

The integration of AI technologies in electric vehicles (EVs) and their associated infrastructure is transforming the way we think about transportation.

Its Applications include:

- ❁ Range Optimization.
- ❁ Energy Management.
- ❁ Life cycle services.
- ❁ Life cycle services. OEMs that incorporate applied AI into vehicles' onboard systems can analyze consumers' infotainment preferences and then make personalized recommendations. Additionally, a consumer survey has revealed that about 40 percent of respondents are very interested in personalized, real-time recommendations from navigation systems that are familiar with their driving patterns.⁷
- ❁ Charging Infrastructure:
- ❁ [Autonomous EVs](#)
- ❁ Fleet Management:



Procurement

⊗ As climate change accelerates, OEMs are using applied AI to identify environmental, social, and governance risks along the supply chain. For instance, algorithms can analyze news items about suppliers to identify potential problems, such as a history of pollution or recent scandals involving corruption, much more quickly and thoroughly than a human can. Improving sustainability might appeal to car buyers, since a recent consumer survey showed that 70 percent of respondents considered sustainable manufacturing to be an important consideration during vehicle purchase.⁶ In the future, AI may also help companies forecast risks more accurately and proactively suggest improvements, such as using more sustainable resources.

⊗ Traffic Management

Marketing and Sales

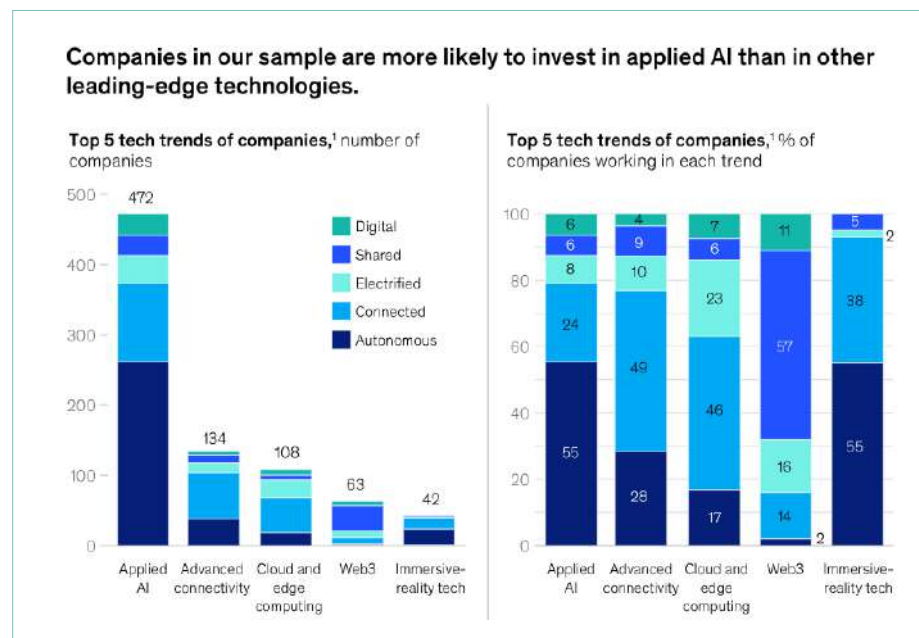
⊗ Companies can use applied AI to identify customers who are at risk of being lost to a competitor and then create incentives to increase their satisfaction, potentially reducing churn and decreasing costs. Beyond customer retention, companies hope to use the tech to improve customer experience and increase their customers' loyalty to their specific products and brands.

⊗ Applied AI has a firm lead over generative AI within mobility because it enhances so many processes and addresses long-standing pain points, including those related to engineering, R&D, procurement, manufacturing, marketing and sales, and life cycle services.

Sources: ([Mckinsey](#))

⊗ Companies, for instance, can use AI to identify customers who are at risk of being lost to a competitor and then create incentives to increase their satisfaction, potentially reducing churn and decreasing costs. Since many mobility stakeholders just began seriously exploring generative AI in 2023, it might soon gain more traction.

Sources: ([Mckinsey](#))



Sources: ([Mckinsey](#)), ([Mckinsey- Technology trends shaping mobility sector](#))

ELECTRIC MOBILITY AS A SERVICE

Electric Mobility as a Service, often abbreviated as eMaaS, is a pioneering concept that merges electric vehicles (EVs) with the principles of Mobility as a Service (MaaS). It's a holistic approach to urban transportation, offering convenient, sustainable, and flexible mobility solutions to individuals and communities.

- ⊗ **Expanded Service Coverage:** More cities and regions will adopt eMaaS, providing comprehensive electric mobility services to a broader population.
- ⊗ **Technological Advancements:** Integration with emerging technologies, such as autonomous vehicles, will further enhance eMaaS offerings.

- ⊗ **Sustainability Initiatives:** eMaaS will continue to play a pivotal role in urban sustainability efforts, reducing pollution and traffic congestion.
- ⊗ **Personalized services:** eMaaS platforms will offer increasingly personalized recommendations, tailored to individual user preferences.

Source: [\(link\)](#),[\(link\)](#)

8.2 FUTURE TRENDS IN TERMS OF INVESTMENTS (FUNDING & INFRASTRUCTURE FOR EVS)

- ⊗ In 2023, however, global VC investments in clean energy start-ups fell considerably relative to 2022, and EVs and batteries were no exception.
- ⊗ Early-stage investments (i.e. seed and series A, referring to the first rounds of financing and the earlier stages of development) in start-ups developing EV and battery technologies dropped 20% to USD 1.4 billion in 2023.
- ⊗ Growth-stage investments (i.e. series B and growth equity, which refer to the later rounds of financing as start-ups increase activity) dropped 35% to USD 10.1 billion.

Reasons:

- ⊗ As competition intensifies in EV and battery markets, and as incumbents ramp up their own investments and manufacturing plans, barriers to entry for new actors get higher, and so do investor perceptions of risk.

- ⊗ The front-running start-ups that raised funds over the 2015-2020 period are now maturing and transitioning to other sources of capital, leaving fewer alternatives for newcomers – early-stage VC for electric carmakers dropped radically in 2023.
- ⊗ We also observe a cooldown following the post-Covid-19 boom of 2021-2022, which was fuelled by investment restraint during the pandemic and the expectation of significant economic recovery packages afterwards.

Source: [\(IEA\)](#)





ANNEXES

DATA SOURCES - MARKET SIZE IN TERMS OF INVESTMENTS & FUNDING (FOR EVS) (EXCEPT GOVERNMENT)

Roam Funding in 2021/ 2024

2021 - US\$ 7.5 million

- ⊗ \$5 million seed round from [At One Ventures](#).
- ⊗ \$2.5 million grant.

Source: [\(Crunchbase\)](#)

2024 - US\$ 24 million

- ⊗ Raised \$14 million in a Series A funding round. The funding was led by [Equator Africa](#), The funding round is comprised of \$14 million in equity.
- ⊗ \$10 million debt financing from [U.S. International Development Finance](#).

Source: [\(AFEMA,LinkedIn\)](#), [\(Disrupt Africa\)](#), [\(Crunchbase\)](#)

TOTAL RECEIVED - USD 31.5 MILLION

Ampersand Energy Funding in 2020/2021/2023/2024:

- ⊗ 2020- US\$ 850,000
- ⊗ USD \$600,000 grant from Shell Foundation
- ⊗ USD \$250,000 Debt Financing from ImpactAssets

Source: [\(Crunchbase\)](#)

2021- US\$ 12.5 Million

- ⊗ Has just secured a **\$9 million** loan facility from the US International



Development Finance Corporation (DFC) to expand its operations in Rwanda and Kenya.

- ⊗ Electric motorbike company Ampersand Rwanda Ltd has secured a **US\$3.5 million** investment from Ecosystem Integrity Fund (EIF).

Source: [\(Link\)](#), [\(USAID\)](#), [\(Link\)](#), [\(Crunchbase\)](#)

2023 - US\$ 19.5 Million

- ⊗ The investment includes a **\$7.5M** debt facility from the [AfricaGoGreen Fund](#) managed by [Cygnum Capital](#).
- ⊗ **\$12M** in equity led by the [Ecosystem Integrity Fund](#).

Source: [\(AFEMA,LinkedIn\)](#), [\(Ampersand\)](#), [\(Crunchbase\)](#)

2024 - UNDISCLOSED

- ⊗ Raised an undisclosed amount / Series Unknown from Alphamundi, [Beyond Capital Ventures](#) and 3 other investors.

Source: [\(Crunchbase\)](#), [\(Link\)](#)

TOTAL RECEIVED - USD 34 MILLION

Arc Ride Funding in 2022/2023

2022- UNDISCLOSED

- ⊗ Investment from Musashi Seimitsu Industry Co., Ltd.
- ⊗ Undisclosed grant from P4G to test the commercial viability of their battery-as-a-service model. The grant was for a partnership that included a collaborative project between *Energy 4 Impact*, *Arc Ride*, *Fika Mobility*, *Imperial College London* and *Strathmore University*.

Source: [\(Link\)](#), [\(P4G\)](#),



2023- UNDISCLOSED

- ⊗ Investment from Watu Credit.

Source: ([pitchbook](#)), ([link](#))

TOTAL RECEIVED - UNDISCLOSED

Kiri EV Funding in 2021/2022/2024:

2021- UNDISCLOSED

- ⊗ Investment from [Smart Cities Innovation Programme](#).

Source: ([Crunchbase](#))

- ⊗ Undisclosed support from Seedstars and Shell Foundation (TBC if Funding was provided).

Source: ([Seedstars](#))

2022- US\$ 100,000 and Above

- ⊗ Grant from [KFW DEG](#).

Source: ([Crunchbase](#))

- ⊗ Grant from P4G This is a partnership comprising two start-ups, E-Safiri and Kiri E.V., who will structure a joint venture called Sun Run.

'P4G awarded this partnership with US \$130,280 in grant funding in 2022 and US \$402,071 'in 2024.

Source: ([P4G](#))

- ⊗ Undisclosed grant from develoPPP Ventures (TO BE CONFIRMED)

Source: ([cbinsights](#))





2023- US\$ 5,000

- ⊗ Grant from [Hindsight Ventures](#).

Source: ([F6S](#))

2024- UNDISCLOSED - TBC

- ⊗ Grant from P4G This is a partnership comprising two start-ups, E-Safiri and Kiri E.V., who will structure a joint venture called Sun Run.

*'P4G awarded this partnership with US \$130,280 in grant funding in 2022 and **US \$402,071 'in 2024.***

Source: ([P4G](#))

TOTAL RECEIVED - US\$ 100,000+

Mazi Mobility funding 2021/2022/2023:

2023- UNDISCLOSED-TBC

- ⊗ Undisclosed Non Equity assistance from [Project Ninja](#).

Source: ([crunchbase](#))

2022- UNDISCLOSED-TBC

- ⊗ Undisclosed grant from develoPPP Ventures (TO BE CONFIRMED)

Source: ([develoPPP](#))

2021- UNDISCLOSED-TBC

- ⊗ Undisclosed Non Equity assistance and Grant from [Smart Cities Innovation Programme](#).

- ⊗ Undisclosed Pre Seed round from [Satgana](#).

Source: ([crunchbase](#))

TOTAL RECEIVED - UNDISCLOSED

PowerHive (Spark E-Motorcycles) Funding in: 2014/2015/2016/2019

2014- US\$ 2.5 Million

- ⊗ USD \$2.5 Debt Financing

Source: ([Crunchbase](#))

2015- US\$ 12 Million

- ⊗ \$12M in equity led by the [Enel Green Power](#).

Source: ([Crunchbase](#))

2016 - US\$ 20 Million

- ⊗ \$20M in Series A by [Prelude Ventures](#).

Source: ([Crunchbase](#))

2019 - US\$ 9.3 Million

- ⊗ \$9.3M in Series B by [Toyota Tsusho](#).

Source: ([Crunchbase](#)), ([Link](#))

TOTAL RECEIVED - USD 43.8 MILLION

SpiroNet Funding in 2024/2023/2020:

⊗ 2024 - US\$ 50 Million

- ⊗ Spiro, the largest electric vehicle company in Africa, is pleased to announce it has signed heads of terms for a US\$50 million debt facility with the [African Export-Import Bank \(Afreximbank\)](#).

Source: ([Afreximbank](#))

2023 - US\$ 63 Million

- ⊗ Spiro announced a \$63 million debt funding round with [Societe Generale and GuarantCo](#), in a deal designed to expand the company's footprint in Benin and Togo.

Source: ([Guarantco](#))

2020 - US\$ 20 Million

- ⊗ Venture round with [Africa Transformation and Industrialisation Fund](#).

Source: ([Crunchbase](#))

TOTAL RECEIVED - USD 130 MILLION

eWAKA funding in 2023/2024:

2023- Swiss Franc 500,000 +

- ⊗ **Swiss Franc 500,000** Debt Financing with [SECO Start-up Fund](#).
- ⊗ **Undisclosed** Non Equity assistance from [Google for Startups](#).

- ⊗ **Undisclosed** Non Equity assistance from [The Future is Female Mentorship Programme](#).

Source: ([crunchbase](#)), ([NTV](#)), ([Techcabal](#)), ([eWaka](#))

2024- UNDISCLOSED

- ⊗ Undisclosed amount from [Siemens Stiftung](#) for eWAKA to research the benefits its transportation solutions can have for smallholder farmers in the Kiambu district.

Source: ([Siemens-Stiftung](#)), ([Siemens Website](#))

- ⊗ Undisclosed amount from [Untapped Global](#) to finance the addition of its 'Shujaa' electric cargo bicycles to its fleet. This financing will support the company's expansion within Kenya's urban centers, that have a thriving delivery sector, but air pollution poses a significant challenge.

Source: ([Untapped Global](#))

TBC*

- ⊗ **US\$ 10,000** - Angel Investor Jerry Davis

- ⊗ **US\$ 30,000** - Angel Investor Pauline Koelbl
- ⊗ **SWISS FRANC 250,000** - Pre-Seed Investor Alexander Vogel

TOTAL RECEIVED - SWISS FRANC 500,000 PLUS

STIMA Mobility funding 2023:

2023 - 100,000 Euros +

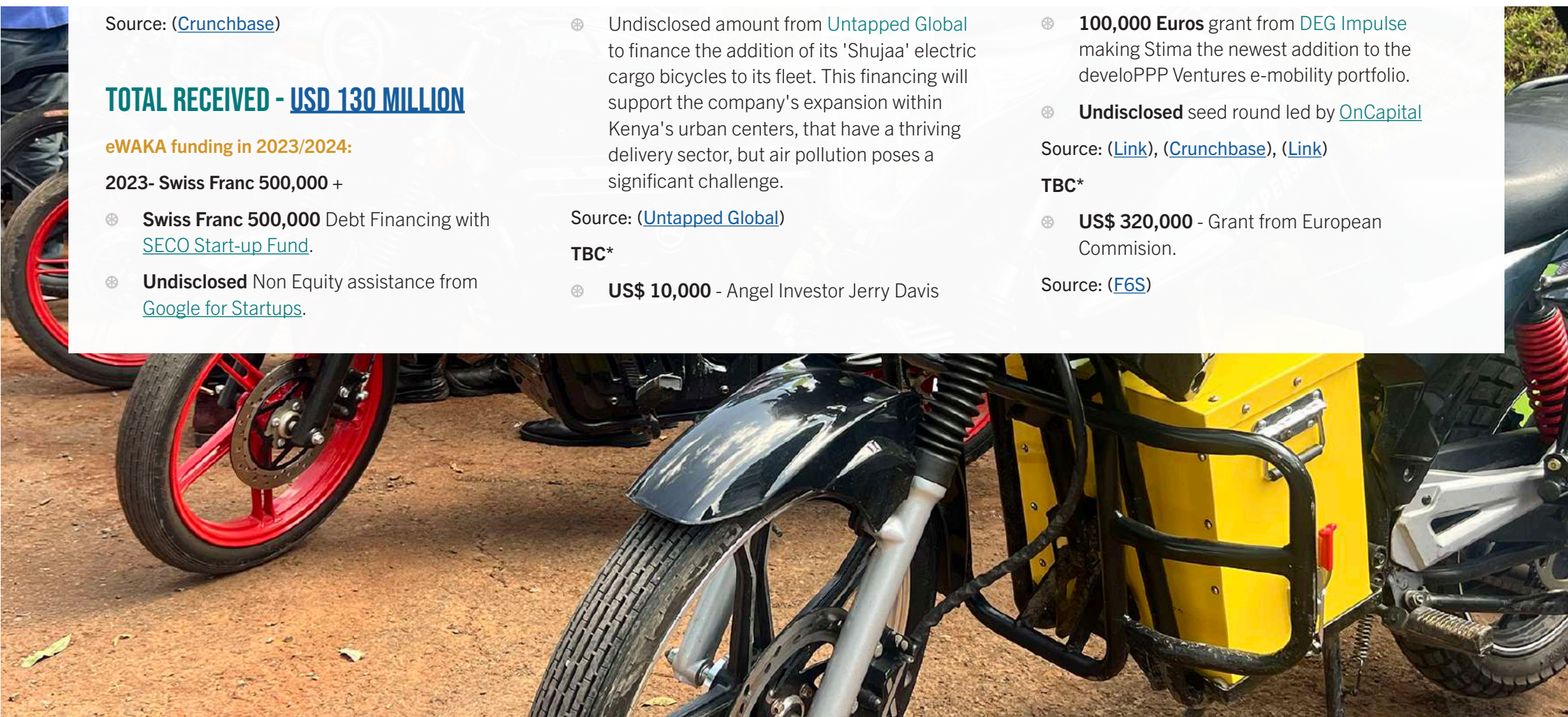
- ⊗ **100,000 Euros** grant from [DEG Impulse](#) making Stima the newest addition to the develoPPP Ventures e-mobility portfolio.
- ⊗ **Undisclosed** seed round led by [OnCapital](#)

Source: ([Link](#)), ([Crunchbase](#)), ([Link](#))

TBC*

- ⊗ **US\$ 320,000** - Grant from European Commission.

Source: ([F6S](#))



TOTAL RECEIVED - EUROS 100,000 PLUS

Ecobodaa funding 2021/2023/2024:

2021 - UNDISCLOSED

- ⊗ E-mobility start-up Ecobodaa secures funding round from [Persistent Energy Capital](#).

Source: ([Link](#)), ([Persistent Energy](#))

2024 - UNDISCLOSED

- ⊗ [Siemens Stiftung](#) - have selected three Kenyan enterprises ...ecobodaa planning to develop a platform for e-mobility and energy solutions. [Kiri EV LTD](#) and Transboda will serve as use cases for the project.

Source: ([Siemens-Stiftung](#)), ([Siemens Website](#))

2023 - UNDISCLOSED

- ⊗ British grant by [PREO Powering Renewable Energy Opportunities](#) -The Nairobi-based mobility startup has just secured £900,000 (\$1.1 million) in funding with four other African companies to roll out 1,000 electric bikes by 2024, as well as expand its digital pay-per-rent solutions in several Kenyan cities.

Source: ([PREO](#))

TOTAL RECEIVED - UNDISCLOSED

EBikes Africa funding 2023:

2023 - US\$ 555,000

- ⊗ **US\$ 555,000** pre seed round

Source: ([Crunchbase](#))

TBC*

- ⊗ **US\$ 20,000** - Founders Capital Robert Boehm.
- ⊗ **US\$ 25,000** - Founders Capital Jorgs Mbugua.

Source: ([F6S](#))

TOTAL RECEIVED - USD 555,000 PLUS

Little funding 2018/2020:

2018 - US\$ 10 Million

- ⊗ **US\$ 10 Million** venture round.

Source: ([Crunchbase](#)), ([business daily](#))

2020 - US\$ 3 Million

- ⊗ **US\$ 3 Million** seed round led by [Craft Silicon](#).

Source: ([Crunchbase](#)) ([GFA](#))

TOTAL RECEIVED - USD 13 MILLION

Missing companies from key player list

- ⊗ E-Bicycles Funding Missing Companies:
 - Ebee Africa** - Undisclosed/Private company and have not begun public fundraising.
 - Retrofitting Players**- Both Baiskeli Centre and E-Trails Kenya
- ⊗ E-Motorcycle Funding Missing Companies:
 - Fika Mobility** - Data not found publicly
- ⊗ E-Tuktuk Funding Missing Companies:
 - ALL KEY PLAYERS LISTED**
- ⊗ Rural Mobility Funding Missing Companies:
 - ALL KEY PLAYERS LISTED***

Other funding emobility players not identified as key:

- ⊗ **YnA Kenya - (2023) US\$10,000** from [Because Accelerator 2023](#).
Source: ([F6S](#))
- ⊗ **GECSS - (2023) Undisclosed** from [Untapped Global](#).
Source: ([Untapped Global](#))



DATA SOURCES - TRENDS IN INFRASTRUCTURE INVESTMENTS (FOR EVS) BY GOVERNMENT AND DEVELOPMENT AGENCIES

2024 -

- ⊗ **The US International Development Finance Corporation (DFC)** announced a more than **\$250 million** (Sh32.5 billion) new financing package for Kenya during President Ruto's visit to the US, that includes investments to advance e-mobility in the country.
- ⊗ \$10 million (Sh1.3 billion) cheap loan to Basigo.
- ⊗ \$10 million (Sh1.3 billion) loan for Mogo Auto Kenya, which offers motor vehicle and motorcycle financing.
- ⊗ \$10 million (Sh1.3 billion) loan for Roam Electric Ltd. to support the design and development of electric motorcycles and buses as well as charging stations for motorcycles and buses throughout Kenya.
- ⊗ \$51 million loan to MKOPA*.

Source: ([Standard Media](#))

Kenya Power

- ⊗ The country's electricity distributor, has announced a significant investment of **\$1.93 Million** (Ksh 258 Million) over the next three years to boost the adoption of electric vehicles (EVs) by buying electric vehicles and setting up related infrastructure.

- ⊗ They also this year set up at charging station that cost **Ksh.6.5 Million** that comprises of two chargers (50 kW DC charger - 1hr charge time, and 22kW AC charger - 2hr Charge time).

Source: ([Link](#)), ([Business Daily](#)),

P4G

- ⊗ **US\$100,000** catalytic grant funding in **2020** to Accelerate E-Mobility Solutions for Social Change is accelerating the shift to e-mobility in rural Africa.

(Private sector partners Opibus, Bodawerk, WeTu and Anywhere)

Source: ([P4G](#)), ([P4G Partnerships](#))

- ⊗ **US\$792,500** catalytic grant funding in **2022 (TBC)** to The PayGo for E-bikes partnership to accelerate the adoption of electric motorcycles (electric bikes/e-bikes) in Kenya through digital pay-as-you-go (PayGo) technology and a **public light-charging infrastructure**, which will be available to any e-bike.

a rider partnership led by M-KOPA and Shell Foundation.

Source: ([P4G](#)), ([P4G Partnerships](#))



- ⊗ **US\$130,280** grant funding in **2022** to 'The Sun Run - Sustainable Transport Africa partnership' will bring the e-mobility transformation to rural Kenya through the sale of electric motorcycles, battery swapping stations and charging stations that also function as cold storage hubs.

E-Safiri (lead business partner); Kiri E.V. (lead business partner); Sustainable Transport Africa (lead administrative partner); Glasgow Caledonian University (lead research and capacity building partner).

Source: ([P4G](#)), ([P4G Partnerships](#))

- ⊗ **US\$402,071** grant funding in **2024** to 'The Sun Run - Sustainable Transport Africa partnership' will bring the e-mobility transformation to rural Kenya through the sale of electric motorcycles, battery swapping stations and charging stations that also function as cold storage hubs.





E-Safiri (lead business partner); Kiri E.V. (lead business partner); Sustainable Transport Africa (lead administrative partner); Glasgow Caledonian University (lead research and capacity building partner).

Source: ([P4G](#)),([P4G Partnerships](#))

- ⊗ **US\$295,041** grant funding in **2022-2023** into 'Charge Up!' to establish a network of charging stations in Nairobi, Kenya which charge at a flat battery swap fee for electric two- and three-wheelers. The partnership analyzed the commercial viability of a Battery as a Service (BaaS) model and provided recommendations for key stakeholders accelerating e-mobility.

Charge Up! worked with e-mobility companies, including ARC Ride and Fika Mobility, to establish charging stations in Nairobi that enable drivers

to conveniently swap out their batteries quickly and affordably.

Source: ([P4G](#)), ([Charge Up!-P4G Report](#)),([P4G Partnerships](#))

- ⊗ **US\$347,684** grant funding in 2024 into the The BasiGo – 'Practical Action partnership' to accelerate the transition to electric mobility in Kenya and the rest of sub-Saharan Africa (SSA) through a solution that integrates e-bus sourcing, charging & service infrastructure & expertise, and Pay-As-You-Drive (PAYD) financing.

Source: ([P4G](#)), ([P4G Partnerships](#))

IKEA Foundation

- ⊗ **US\$100 Million (Ksh 13 Billion)** The IKEA Foundation has announced an investment of

Sh13 billion (\$100 million) to support a four-year initiative seeking to supercharge zero-emission road transportation across Africa, Latin America, and Southeast Asia and Kenya is among emerging markets set to benefit from a Sh13 billion drive electric campaign.

- ⊗ The initiative is powered by the Drive Electric Campaign and hosted by ClimateWorks Foundation.

2023

Total Estimated Funding

- ⊗ **US\$52 million** in capital financingThe African E-Mobility Alliance. (AFEMA) estimates that 40 Kenyan e-mobility start-ups have so far raised **\$52 million** in capital financing, the highest in Africa, yet there are only 350 electric vehicles on Kenyan roads as of March 2023.

Source: ([East African](#))

AFDB

- ⊗ **US\$1 Million (Ksh 129.3 Million)** grant funding from African Development Bank (AfDB) under their special fund Sustainable Energy Fund for Africa (SEFA) to boost the shift to electric mobility.

Source: ([Business Daily](#)), ([AfDB](#))

European Union Partners

- ⊗ **EURO €347.6 million** financing from European partners for and Electric BRT in Nairobi.
- ⊗ **€45 million (Ksh.6.7 Billion)** grants from the EU budget.
- ⊗ **€236.3 million (Ksh. 33.9 Billion)** financing jointly from the European Investment Bank and the French Development Agency AFD

Source: ([Business Daily](#)), ([European Union](#)), ([East African](#))

Millennium Challenge Corporation

- ⊗ **US\$12 Million** blended finance for BRT for Kenya's urban mobility. The Blended Finance for BRT Project aims to catalyze private financing to support the acquisition of electric (or other low emission) buses to operate one or more lines of the bus rapid transit (BRT) system, currently being prepared for the Nairobi metropolitan area.

Source: ([Millennium Challenge Corporation](#))

2021

- ⊗ Total Estimated Funding
- ⊗ **US\$26 million** invested by a total of 60 Unique investors in Kenya.

Source: ([Catalyzing Investment in Electric Mobility by: FMO Ventures and Dalberg](#)), ([power africa](#))

Sources and links:- financing mechanisms available for 2 & 3 wheeler drivers and operators

- ⊗ [Intellcap](#) (DESIGNING A FINANCING MECHANISM FOR THE E-MOBILITY SECTOR IN EAST AFRICA).
- ⊗ [UNDP](#) (CLIMATE AGGREGATION PLATFORM).
- ⊗ [Sustainable Mobility for all](#) (E-MOBILITY IN LOW-INCOME COUNTRIES IN AFRICA: FINANCE, GOVERNANCE, AND EQUITY).
- ⊗ [Independent Global Stocktake](#) (USING THE RIGHT MIX OF FINANCIAL INSTRUMENTS TO PROVIDE AND MOBILIZE CLIMATE FINANCE).
- ⊗ [Blended Finance Taskforce](#) (Blended Finance in Clean Energy: Experiences and Opportunities).
- ⊗ [International Finance Corporation](#) (Using Blended Concessional Finance to Invest in Challenging Markets).



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