

E-MOBILITY PROJECT REPORT NO. 03 The Transformative Power Of Electric Mobility Technology In Kenya: Understanding And Empowering Women Entrepreneurs

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PROJECT BACKGROUND

Electric mobility (e-mobility) technology presents a significant opportunity for socio-economic transformation in Kenya, particularly given the country's reliance on renewable energy sources. However, the e-mobility sector is predominantly male-dominated, with women comprising only 1 in 25 employees globally. This underrepresentation hinders gender equality and economic empowerment for women, who face institutional, cultural, and technical barriers to entry. This project explored the business pathways for women entrepreneurs in the e-mobility sector by assessing their needs and generating evidence through quantitative and qualitative research, to enhance their skills. Key activities include conducting large-scale surveys and in-depth interviews with women and men in e-mobility for a comparative assessment. Ultimately, this initiative aspires to increase awareness of gender gaps in e-mobility entrepreneurship and contribute to a more inclusive socio-economic landscape, thereby enhancing individual empowerment and societal well-being across Kenya. By addressing systemic barriers and fostering an inclusive entrepreneurial ecosystem, this project aspires to create lasting socio-economic benefits for women, aligning with Sustainable Development Goals (SDGs) such as Gender Equality (Goal 5) and Decent Work and Economic Growth (Goal 8) while contributing to Kenya's Vision 2030 objectives.

Over a 24-month period, this initiative generated:

1. Mapped the transformative pathway of electric mobility technology in Kenya for business opportunities through a gender and inclusivity lens (Report 1)
2. Identified individual and systemic factors that enhance or constrain high-growth e-mobility entrepreneurship activities related to women within Kenya's unique institutional and cultural context, by focusing on women's needs and challenges and collected quantitative and qualitative evidence (Reports 2 and 3)
3. Developed e-mobility focused entrepreneurship training programme for pre-startups and early startups for incubators, pilot trained 18 women entrepreneurs and assessed short-term impact of the training (Report 4)
4. Developed policy and industry focused report on e-mobility and women's entrepreneurship that outlines necessary support mechanisms and recommendations (Report5)

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Report 3

Challenges and needs of women in E-Mobility in Kenya: Qualitative results from an entrepreneurial ecosystem perspective and recommendations for gendered policy and practice

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1. Introduction

Background and Aim of the Report

Electric mobility technology is a transformative technology not only for its environmental but also socio-economic effects on individuals and the society in low-income countries (LICs). Kenya, most of its energy sourced from renewables, has great potential to exploit the production and effective consumption of e-mobility technology in all sectors through entrepreneurial activity. E-mobility technology can be catalyst in achieving Kenya Vision 2030 targets of macroeconomic and social pillars. Although the sector has been thriving in Kenya in recent years supported by the Kenyan Government, the sector is almost wholly male dominated with only 1 in 25 employees being woman, globally this is 1 in 5 (ILO, 2024). This suggests that in Kenya large proportion of female workforce that can add value through production and use of e-mobility remains untapped, increasing gender inequality, and hindering alleviation of poverty. Moreover, women entrepreneurs in Kenya often lack adequate support, facing institutional, cultural and technical barriers that hamper their success. As it seems now, the e-mobility sector is poised to grow fast, however without the inclusivity aspect in the design of emerging policy which is likely to skew the positive socio-economic outcomes.

Driven by these gaps, this report aims to further identify the challenges women face in the e-mobility value chain and entrepreneurial ecosystem in Kenya from the eyes of stakeholders in the sector. It also aims at providing recommendations for how to address these challenges again by relying on the narratives from the stakeholders. To this aim, this Report 3 in a series of five reports complements Report 2 and provides in-depth explanations through rich narratives to the 'how' and 'why' of challenges women encounter in the sector. To do these, it utilises unique and original interview data that focuses on the perceptions of women and men entrepreneurs, riders; industry experts working in companies, innovation hubs, NGOs; financiers and regulators who are engaged in advancing women's participation in Kenya's e-mobility sector. 34 interviews have been conducted during October to December 2025. The data were analysed thematically using NVivo, generating in-depth insights into sector dynamics and participation patterns that influence women.

Drawing on stakeholder perspectives, the report outlines actionable recommendations to address these barriers. These include interventions by external actors as well as strategies to strengthen women's agency and participation.

Structure of the Report

The report is structured as follows. The report begins with an overview of Kenya's e-mobility landscape, followed by an assessment of women's participation across various roles within the e-mobility sector. It identifies significant participation gaps, particularly in certain function, job roles and leadership levels. The analysis then explores the broader challenges affecting the women and subsequently the sector, with a specific focus on barriers limiting women's equitable involvement. These challenges are categorised into two: (1) individual/agency level challenges such as those related to women's preparedness, education and skills, societal expectations, and specific needs; and (2) challenges posed by the external/systemic environment.

Finally, the report provides recommendations, as taken from the narratives of participants, to address these challenges at the meso ecosystem level for what support mechanisms can be used and at macro ecosystem level for wider policy, education, institutional remedies. This report complements Report 2 by using the same conceptual framework and brings forward more elaborative recommendations from agents active in the e-mobility ecosystem.

2. CONCEPTUAL FRAMEWORK AND METHODOLOGY

This qualitative report builds on the previous Report 2[1] for conceptual framework of an entrepreneurial ecosystem and enhances its findings for the ‘how’ and ‘why’ of challenges faced by women in e-mobility sector in Kenya bringing a narrative richness.

An entrepreneurial ecosystem is the set of interconnected entrepreneurial actors and processes which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment (Mason & Brown, 2014; Spigel, 2017, Stam, 2015)[2]. These actors are: (i) Organisations (e.g., firms, venture capitalists, business angels, banks, universities, public sector agencies, support organisations: incubators, accelerators), (ii) Structure, institutions (e.g., culture, norms, policy, innovation system, etc.), and (iii) Entrepreneurial processes (e.g., the business birth rate, numbers of high growth firms). It is non-linear, systemic, dynamic, and focused on the conditions and the holistic environment that allow entrepreneurs to start, grow, and scale businesses.

The purpose of this report is to map the challenges specifically women face in the newly emerging e-mobility ecosystem through the eyes of ecosystem stakeholders and provide recommendations based on their opinions. Therefore, it puts the emphasis on the agency aspect that is in the core of a wider ecosystem. The report does not aim to investigate any relationships between the agency and structure that shapes an ecosystem. On the contrary, the report pursues an inductive approach to the analysis of qualitative data, by driving themes from the interview narratives that explain the ecosystem from an agency as well as a structure perspective. The conceptual framework to map the challenges for a woman in the e-mobility ecosystem is proposed as below:

1. AGENCY (Stakeholder in the ecosystem, i.e. Entrepreneur, regulator, expert)

Perceptions of stakeholders to voice challenges for a woman in the ecosystem. We deliberately did not impose any sub-categories for individual/agency related challenges, but we report the inductive themes in Section 5.

[1] Yoruk, E. Kingiri, A. Kilelu, C., Chitechi, E. and Gitu, Y. (2026). E-Mobility value chain and entrepreneurial ecosystem in Kenya: Results from a quantitative survey and recommendations for gendered policy. 2nd Report prepared for the British Council and UK Department for Science, Innovation & Technology funded project ‘The transformative power of electric mobility technology in Kenya: Understanding and empowering women entrepreneurs’. August 2026. Report is available for download on <https://acts-net.org/publications-and-resources/>

[2] Mason, C. & Brown, R. (2014). Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship, Background Paper Prepared for the Workshop Organised by the OECD LEED Programme and the Dutch Ministry of Economic Affairs on Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship, The Hague, Netherlands [online] <http://www.oecd.org/cfe/leed/Entrepreneurial-ecosystems.pdf>.

Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, Vol. 41, No. 1, pp.49–72, DOI: 10.1111/etap.12167.

Stam, E. (2015). Entrepreneurial ecosystems and regional policy: a sympathetic critique. *European Planning Studies*, Vol. 23, No. 9, pp.1759–1769.

2. STRUCTURE/SYSTEM

Perceptions of stakeholders to voice hurdles in the environment surrounding e-mobility that prevent women from participating actively in the ecosystem. We did not impose any sub-categories but grouped the findings under meso and macro levels in line with Report 2 conceptual framework to enhance the wider results for the quantitative and qualitative analyses in this project.

- a. E-mobility System Support (Meso level): Finance, Human capital, Networks, Incubation
- b. Framework Conditions (Macro level): Institutions & Regulations, Infrastructure, Culture, Markets

The Sample

Purposive sampling of stakeholders in the e-mobility sector was applied. NGOs and networks in the Ministry of Transport and Energy have been used to reach out potential participants in the first place. Then after, snowballing technique was used to reach out more respondents by way of being put into contact by the participants. A key strength of this study lies in its comprehensive stakeholder representation, incorporating perspectives from riders (5), entrepreneurs (14), regulator (1), and experts (15). This approach provides a holistic, future-oriented understanding of the sector, highlighting both progress made and opportunities for improvement. The report ultimately serves as a practical guide, offering evidence-based recommendations and potential pathways to accelerate inclusive growth in Kenya's e-mobility sector. Table 1 presents the 35 participants by role, profession and affiliation (disclosed by organisational category due to ethical compliance).

Table 1. Interview participants by stakeholder role, profession and affiliation

Participant Code	Job role	Designation (Former or current)/Profession	Gender	Interview date (2025)	Organisation Category
P1	Expert	Project manager in e-mobility and social entrepreneurship	F	21st Nov	NGO
P2	Expert	Project Manager	F	18th Nov	NGO
P3	Expert	Civil Engineer	F	11th Dec	Local government authority
P4	Regulator	Director of Energy Efficiency	M	1st Dec	National government authority
P5	Expert	Transportation Engineer/University Lecturer/Consultant	F	30th Oct	NGO
P6	Rider	Independent rider	M	13th Oct	Company
P7	Rider	Independent rider	F	10th Oct	Company
P8	Rider	Delivery rider	F	14th Oct	Company
P9	Rider	Former delivery rider	M	14th Oct	Company

P10	Rider	Delivery rider	F	12th Oct	Company
P11	Entrepreneur	Sale of 2/3W EVs	M	14th Oct	Company
P12	Entrepreneur	Manufacture of e-bike frames and assembly of e-bikes with other parts exported from China	F	27th Oct	Company
P13	Entrepreneur	Fleet management; EV service & maintenance	M	14th Oct	Company
P14	Entrepreneur	4W EV sales	F	9th Oct	Company
P15	Entrepreneur	EV transport research, pilot projects management and consultancy	F	16th Oct	Company
P16	Entrepreneur	Improving cookstoves & clean cooking, e-bikes with renewable energy	F	17th Oct	Company
P17	Entrepreneur	Transport services to people with disabilities and reduced mobility using e-vehicles	M	15th Dec	Company
P18	Entrepreneur	Installation and management of charging stations	F	11th Nov	Company
P19	Entrepreneur	2/3/4W EV sales powered by solar energy	F	16th Oct	Company
P20	Entrepreneur	Owner of a delivery company	F	9th Nov	Company
P21	Entrepreneur	Maintenance and services for EVs	F	17th Oct	Company
P22	Entrepreneur	Upskilling and empowering women in renewable energy, particularly in the areas of solar, clean cooking, and e-mobility	F	11th Nov	Company
P23	Entrepreneur	Business development and fleet management	F	17th Oct	Company
P24	Entrepreneur	Charging infrastructure deployment and digital solutions to battery charging	F	9th Dec	Company
P25	Expert	Gender Equity and Social Inclusion Specialist	F	9th Dec	NGO
P26	Expert	Vehicle Assembly Specialist	F	13th Nov	State-owned company

P27	Expert	Sustainable Development Consultant	F	4th Dec	Company
P28	Expert	Operations Manager	F	8th Nov	Company
P29	Expert	Global STEM Mentor; Mobility Network Mentor; Lead Navigator	F	30th Oct	Accelerator
P30	Expert	Lead Technical Support	F	14th Oct	Company
P31	Expert	Motor Inspection Technician; EV bike programmer	F	28th Oct	Company
P32	Expert	EV operations assistant	M	2nd Nov	Company
P33	Expert	Transportation and urban mobility expert, E-mobility Advisor	F	6th Nov	Local government authority
P34	Expert	Communications & Programs Lead	F	16th Nov	NGO
P35	Expert	Mentor in upskilling women in e-mobility	M	9th Oct	Innovation hub

Data Collection

Data were collected in October- December 2025 either in person or online via MS Teams. Data collection process strictly abided by the ethics procedures and rules of Coventry University that provided ethical approval for anonymised interview conduct and data collection. Hence, all participants are anonymised. Participants have given consent for interview and have been informed prior to interview that they can withdraw their consent at any time. None of the interviewees have withdrawn. Altogether 35 interviews were conducted by six interviewees who received a short training prior to the interview process. The shortest interview took a minimum of 20 minutes whilst the longest interview was around 2 hours. The interview transcripts altogether amount to 206 pages (12 font, single spaced) and on average 6 pages per interview. The interview protocol is provided in the Appendix.

3. THE E-MOBILITY SECTOR IN KENYA: AN OVERVIEW

A Growing E-mobility Sector

The e-mobility sector is fast growing in Kenya. Report 1 of this project informs on the latest statistics on the uptake of 2/3 wheeler EVs (2/3W EV) which is driving the e-mobility marketplace. [3] This third report's findings corroborate the prospects for a growing e-mobility sector in Kenya, and not only in the capital Nairobi but also in rural areas.

[3] Kenya's uptake of e-mobility paratransit vehicles has doubled from 2024 to 2025. The Electric Mobility Association of Kenya (EMAK) reported in June 2025 that there are approximately 9,144 EVs registered in the country currently, with 796 and 4048 registered in 2023 and 2024, respectively. Most recent unpublished figure is 35661 registered EVs as of July 2026 (verbal communication with Carl Otweak, Project Coordinator in sustainable infrastructure policy at Kenya Ministry of Energy and Petroleum) In line with the e-mobility trends across Sub-Saharan Africa, 2W e-bikes and e-motorcycles account for almost 92% of total EVs in Kenya.

Participants reflect their views as below:

“Companies coming up in the 2-wheelers, 3-wheelers, 4-wheelers sector. Draft policies have been developed. E-mobility associations are coming up. The sector has really been growing! The market is at a point where two- and three-wheelers are reaching a majority. Two-wheeled [e-mobility] vehicles are now competing with internal combustion engines, with market penetration of 20-30%. You probably will find that in every 10 bikes, three or four are likely to be electric in the urban ecosystem (P13, Entrepreneur, Male)

An expert notes that the uptake of e-bikes is increasing outside Nairobi:

“The numbers [of e-mobility vehicles] have significantly grown. The awareness is much better. Even outside of Nairobi, in Eldoret and Kisumu, we are starting to see more e-bikes just as we do here. So that's amazing and commendable. (P5, Expert, Female)

Why E-mobility? Why Now?

Major reasons for increasing uptake of 2/3W EVs is supported by their affordability in operational costs compared to ICE counterparts, the effective battery swapping system unique to Kenya and the ongoing advances in charging infrastructure. Prior advances in renewable energy sector helped raise environmental awareness in EVs. Participants' views align with these reasons.

A rider as a commercial user of these vehicles echoes the current sentiment among many riders and highlights their operational affordability as one of the main reasons for their popularity:

“I can say people are positive. Almost 50% the riders now in Nairobi are using the electric bikes. Almost everyone is changing to electric bikes, because they find them cheaper than petrol ones. Swapping electric batteries is much cheaper than buying fuel. People are realizing they can save more using e-bikes.” (P10, Rider, Female)

The uptake of 2/3W EVs has also increased after manufacturer companies attached affordable financial plans for consumer to buy these EVs (since the capital costs are high) and introduced a battery swapping system integrated to the manufacturer's services (since the costliest item is the battery). An entrepreneur puts it as below:

“So, we noticed that most companies were bringing in the two-wheelers because now there is an easier financial plan. With a battery swapping system, the motorbike rider or owner can board a bike, but then they keep reaping the benefits.” (P14, Entrepreneur, Female)

A favourable investment environment to charging stations are reported to be driving the growth of this industry, not only in Kenya but also across the wider African region. An expert notes that one of the major underlying reasons is the continuously improving charging infrastructure in Kenya led by the government:

“The charging infrastructure has been well placed along various roads outside Nairobi. It's not the best yet, but there's been a lot of advocacy and campaigns to boost the space. And it's not just in Nairobi, even beyond Nairobi.” (P5, Expert, Female)

Such infrastructural improvements pave the way for uptake of 4W EVs and especially e-buses in Kenya. Indeed, there is conscious efforts by the government to establish e-buses and e-matatus (small buses) as the major public transport vehicles for both environmental and public safety reasons. Some elements which do not exist in old ICE vehicles can be incorporated into e-buses during their new manufacturing phase. An expert explains the benefits for pregnant women and those with disabilities, prefer e-mobility vehicles for their commutes:

“For passengers, inclusive bus design such as designated seats for pregnant women, adults with children, and persons with disabilities also benefits women by making public transport safer and more dignified.” (P3, Expert, Female)

Participants also note that the region's abundant solar energy is one reason the trend is common there. Kenya invested heavily in renewable energy investments in the recent decade. Access to a clean energy source for e-mobility vehicles, they argue, drives efforts to promote this industry:

“In Kenya, we have plenty of renewable energy sources—for example, the sun. So, companies are using solar energy at charging stations. The availability of about 90% of renewable energy in Kenya makes it favourable for them to enter the sector. (P15, Entrepreneur, Female)

An entrepreneur summarises the value added by e-mobility sector for all stakeholders in the value chain as follows, i.e. fuel and maintenance affordability and environmental impact:

“So, several things led us to shift from the ICE to hybrid and now eventually to electric vehicles. The first thing is affordability. Fuel accounts for almost 30% of our service costs. And so, we thought it wise to transition to electric vehicles, as we are looking for more affordable options to make it even cheaper for our clientele. We're also making the service more affordable by pursuing carbon credits. Thirdly, we are improving transport for everyone, and we also want to join the cause of improving the environment for everyone. We're looking at using electric vehicles to make transport accessible for everyone and even making a better place for everyone to live in.” (P17, Entrepreneur, Male)

The next section presents stakeholders' insights into women's participation in the E-mobility sector in Kenya.

4. WOMEN AND THE E-MOBILITY SECTOR IN KENYA

Women in E-mobility: Limited Representation but Emerging Growth

Women are notoriously underrepresented in Kenya's e-mobility sector. All participants in this study agree with this sentiment. However, they also state that with the increasing visibility in e-mobility market opportunities, support of the government and stakeholders in the value chain, women are entering the sector. An expert and an entrepreneur share their views on the status and scope of the sector for women as follows, although they believe there is a lot of work to do:

“There is now a deliberate intention to ensure women are part of the system. This shift has increased professionalism and made the working environment more conducive and safer for women. While we are not yet at parity, there is visible progress in the number of women engineers, planners, and managers involved in transport and E-Mobility-related initiatives.” (P3, Expert, Female)

“Women are coming up, wanting to be part of the system, because [they feel] it's a better, it's a nice ride. It's smooth. It's a class of its own. So, they feel they can be part of this sector.” (P14, Entrepreneur, Female)

The progressive shift to include women in e-mobility replicates across Africa. The growing representation of women in the e-mobility sector is not only observed in Kenya but also reported as a broader regional pattern. Participants in the study, who attend international conferences as entrepreneurs in the sector and experts who routinely observe and compare these patterns, provide several examples of these developments. Examples of best practice coming from neighbouring countries are recognised with aspirations to be replicated in Kenya:

“In Rwanda, to reduce safety-related cases, they have ‘women only’ buses. I think in Mozambique or Nigeria, they launched a “She can” tool to show how women can join the E-Mobility space and the broader transport sector. They have an academy to train women to assemble E-bikes. In South Africa, UYILO trains women to be drivers in the E-Mobility sector.” (P15, Entrepreneur, Female)

“A lot is happening in North African countries and the MENA region. Kenya, of course, is considered a leader in the space. E-mobility for Africa is Zimbabwe! Uganda also has many e-mobility projects. They have projects in electric mobility that help many women in rural areas. They have bicycles, cargo bikes - Afri Cruisy, a bike company, and then there's the buses. The UNEP also had a gender project in Uganda. In Tanzania, the Solutions Plus and CESA projects have a whole component on gender representation in start-ups. In universities, students are learning about E-Mobility. Oh, in Ghana, we have this CEO of Wahoo, an electric bicycle company.” (P5, Expert, Female)

Why can E-mobility Work for Women?

A range of factors are influential on women's sustained entry into the e-mobility sector. Participants in this study expressed very interesting factors for why e-mobility works for women facilitating their engagement with this technology, and how it can work in a sustained pace in the future.

For instance, an expert explains that savings in fuel and maintenance costs, made possible by e-mobility vehicles, enable operators to provide better working conditions, such as shorter hours, thereby making the sector more attractive to women:

“E-mobility allows operators to save on fuel and maintenance, leading to shorter working hours and better conditions for crews, which in turn makes these jobs more attractive and accessible to women.” (P3, Expert, Female)

An entrepreneur points out the ease of repairing e-mobility vehicles as compared to the ICE vehicles, suggesting that this less complicated technical aspect of EVs may indeed be an advantage for women taking on technical roles:

“The opportunities now are massive, as we move away from traditional automotive. ICE repair is tricky, requires heavy lifting; EV work is simpler - fixing batteries, managing wiring, repairing charging systems... It's “clean work,” which makes the industry more attractive and sophisticated for women.” (P21, Entrepreneur, Female)

Another entrepreneur highlights the ease of operating them compared to ICE vehicles:

“With electric bikes being easier to operate, I believe it’s only a matter of time before more women join.” (P6, Rider, Male)

Another female entrepreneur agrees that EVs offer better opportunities than traditional ICE –based transport sector for women to get involved in manufacturing and maintenance jobs, provided they receive relevant training. Technical opportunities also extend to vertically related technical areas such as battery charging, swapping, assembly and maintenance, as well as horizontally related areas such as marketing and sales, consultancy, finance, logistics, etc.:

“There are many opportunities - on the technical side, battery assembly, charging, and maintenance. With training, women can handle these roles just as effectively as men. Beyond technical work, there are opportunities in customer service, data analysis, marketing, and energy management. Besides, e-mobility touches so many sectors, such as finance, logistics, and urban planning, that women can fit in almost anywhere. Also, with the shift toward local assembly, we’re seeing more need for production managers, safety officers, and operations coordinators, roles where women excel.” (P24, Entrepreneurs, Female).

An entrepreneur argues that women can be naturally better communicators to build trust and this can help with increasing EV adoption rates or training more women in the sector:

“Women have a natural advantage in building trust with communities, especially when introducing new technologies, which improves adoption. For example, when we train Boda Boda riders about electric bikes, women trainers often communicate more patiently.” (P24, Entrepreneurs, Female)

All in all, the views expressed above suggest that women can hold different job roles in the sector. Based on these comments, the next section discusses women's participation across hierarchies in this sector.

Women in E-mobility – Growing but Fractured Participation in Job Roles

A growing participation of women in different roles is acknowledged by study participants who provide insights on how representation of women, resulting from regulatory initiatives and the sector-specific characteristics, has improved in recent years. Additionally, support from international agencies, such as the UN, NGOs such as GIZ, local women’s networks such as Flone Initiative are contributing to women’s growing presence in the industry. These initiatives focus on advancing gender parity at all levels of the organizational hierarchy by fostering a more supportive work environment.

Yet, women’s representation is not uniform across hierarchies and roles. Moreover, information about in what job role women are better represented on the sector is not readily available or clear. Opinions differ:

“The managerial positions were largely occupied by women, such as the fleet managers. Women are well represented in HR, sales, marketing, and video production within the E-Mobility sector. The only male employee apart from the riders was the watchman.” (P6, Rider, Male)

“From what I've observed, women are heavily represented in technical roles—technicians doing maintenance and assembly. A few workshops even have almost a 50/50 gender balance. Women are also in marketing and management roles.” (P20, Entrepreneur, Female)

“In policy, research, and sustainability, there's higher representation [of women]. Operations and fleet management are moderate, and many women work in customer service, communications, and community engagement. However, in manufacturing and assembly, women are underrepresented. The same goes for charging infrastructure.” (P7, Rider, Female)

Some participants feel the need to improve women's representation further. An expert reports low participation of women in industry events and fractured representation in job roles:

“I can count on my fingers the ladies in the E-Mobility space. Cause in the e-mobility network, every time we have meetings, a max of 30 women show up. Some women may not have worked in technical roles in e-mobility; they may have worked in administrative roles. So, in this space, women are very few.” (P5, Expert, Female)

The next sub-sections further elaborate on the role- and hierarchy-specific views on women's representation in the sector, as shared by the study participants. They suggest that women are more concentrated in sales, administrative and managerial roles as compared to technical, research and rider roles. These findings well align with the findings from our quantitative survey results that are presented in Report 2 of our project.[4]

Pre/Post sales, customer-facing and administrative roles

Women's participation is reported to be higher in pre- and post-sale services and in customer-facing roles, but not in technical manufacturing and operations roles. In administrative and non-technical roles, women's representation is also visibly higher compared to that of technical roles:

“I see them mostly in after-sales services, such as marketing and sales departments. You will find women in the front offices in companies, but rarely in the mechanical divisions.” (P2, Expert, Female)

“The sector is still emerging but growing rapidly. You see more women in administrative or communications roles rather than in technical positions where they are significantly underrepresented, especially in roles like EV maintenance and engineering.” (P18, Entrepreneur, Female)

“Women, we are good at convincing people to just buy something, so that's another opportunity for women in sales and marketing, customer service, and the supply chain. Again, for startups, in administrative roles like HR and Finance, I'm sure you've seen what is happening currently: at WYRE - Women and Youth in Renewable Energy, the head of operations is a lady. So, many of these “soft roles” are held by women.” (P15, Entrepreneur, Female)

[4] We refer interested readers to Report 2 which shows differences between women and men employees at different job roles as well as women and men entrepreneurs in e-mobility. Report 2 is available at <https://acts-net.org/publications-and-resources/>

Similarly, as a rider explains, in battery swapping stations in sale and service roles women are in relatively higher numbers, but they remain in limited numbers in technical roles:

"I can say women are more, maybe in swap stations, I think you can find more women there. But I'm not sure about other companies. Maybe 40 percent in technical roles." (P10, Rider, Female)

An entrepreneur supports this view and shares:

"They are also being encouraged to be in the technical team, marketing, and staff, and they are also deployed at the swapping hubs." (P20, Entrepreneur, Female)

Decision-making and leadership roles

Where women are not present is the decision-making and higher-level leadership roles in large established companies and sector organisations as well as entrepreneurship roles, i.e. running their own business. Experts and regulators in the sector widely agree that women's representation in entrepreneurial ventures, innovation, and strategic decision-making roles in large corporates remains very low:

"Most decision-makers on the boards of e-mobility companies are men. Women are also left out of the e-mobility entrepreneurship space. The same in innovations. That's another under-representation. Their participation in entrepreneurial ventures is essential." (P35, Expert, Male)

"I would say, especially in leadership roles, women are mostly used as flower girls just to fill in the gender gap but not really given positions of decision-making or influence in decision-making. There's a huge gap in women leadership, especially in the EV sector. It is very male dominated" (P27, Expert, Female)

"There's still a big leadership gap. But we are starting to see more companies focusing on gender inclusion and promoting women into leadership roles." (P7, Rider, Female)

"In repair shops and unit-building, there are very few women. In decision-making, less than 14% of task force members are women. It's a male-dominated industry. There's a need to think about women and empower them. They can participate in charging, retail shops for batteries and accessories, and investments. Women can do very well if empowered." (P4, Regulator, Male)

"From my level of observation from all the forums I've attended in the past five years, I would give (men to women leadership roles) a 90-10 representation, but now I'm looking at 80-20 representation. The number has grown but not as rapid as the sector is growing" (P27, Expert, Female)

"When I walk into a room at an e-mobility event, I always count. A rough estimate - women are around 10 percent. That's not nice. At the African population week, there were no women on the panels. And often, to make it look like there's representation, there would be just one female moderator or entrepreneur. When we held the Women in E-Mobility dinner, we had about 30 people in attendance. At an event with more than 350 people!" (P5, Expert, Female)

Similarly, as a rider explains, in battery swapping stations in sale and service roles women are in relatively higher numbers, but they remain in limited numbers in technical roles:

"I can say women are more, maybe in swap stations, I think you can find more women there. But I'm not sure about other companies. Maybe 40 percent in technical roles." (P10, Rider, Female)

An entrepreneur supports this view and shares:

"They are also being encouraged to be in the technical team, marketing, and staff, and they are also deployed at the swapping hubs." (P20, Entrepreneur, Female)

Decision-making and leadership roles

Where women are not present is the decision-making and higher-level leadership roles in large established companies and sector organisations as well as entrepreneurship roles, i.e. running their own business. Experts and regulators in the sector widely agree that women's representation in entrepreneurial ventures, innovation, and strategic decision-making roles in large corporates remains very low:

"Most decision-makers on the boards of e-mobility companies are men. Women are also left out of the e-mobility entrepreneurship space. The same in innovations. That's another under-representation. Their participation in entrepreneurial ventures is essential." (P35, Expert, Male)

"I would say, especially in leadership roles, women are mostly used as flower girls just to fill in the gender gap but not really given positions of decision-making or influence in decision-making. There's a huge gap in women leadership, especially in the EV sector. It is very male dominated" (P27, Expert, Female)

"There's still a big leadership gap. But we are starting to see more companies focusing on gender inclusion and promoting women into leadership roles." (P7, Rider, Female)

"In repair shops and unit-building, there are very few women. In decision-making, less than 14% of task force members are women. It's a male-dominated industry. There's a need to think about women and empower them. They can participate in charging, retail shops for batteries and accessories, and investments. Women can do very well if empowered." (P4, Regulator, Male)

"From my level of observation from all the forums I've attended in the past five years, I would give (men to women leadership roles) a 90-10 representation, but now I'm looking at 80-20 representation. The number has grown but not as rapid as the sector is growing" (P27, Expert, Female)

"When I walk into a room at an e-mobility event, I always count. A rough estimate - women are around 10 percent. That's not nice. At the African population week, there were no women on the panels. And often, to make it look like there's representation, there would be just one female moderator or entrepreneur. When we held the Women in E-Mobility dinner, we had about 30 people in attendance. At an event with more than 350 people!" (P5, Expert, Female)

Participants contend that most women who are visible in e-mobility conferences, workshops, and broader industry discourse either own or have founded businesses or head government departments:

“Most of them [women] are business owners. Some are founders of their own organisations, and a few are the heads of departments. For example, some government-led organisations, public works....” (P14, Entrepreneur, Female)

An entrepreneur provides additional estimates of women in leadership roles in the industry that are already very small and concedes that women remain mostly in middle management roles because of the challenges associated with manufacturing and operational roles:

“Women are very few in leadership and technical positions. Most are found in entrepreneurship roles rather than technical or managerial ones... Mostly in entrepreneurship. Men dominate leadership and technical areas.” (P19, Entrepreneur, Female)

A female entrepreneur reflects on her experience participating in conferences, workshops, and meetings in this industry at the beginning of her professional journey, compared to the present, and reports the change, even though the gender gap remains completely unplugged:

“When I was entering the sector, I never saw many females. At a conference, a workshop, or a meeting, just two or three. But now I see them in conferences and workshops. And that is really encouraging. At the African Mobility Week, they're having sessions on women in e-mobility. Just women. There's a good representation of women now. Though the gender gap is still there.” (P15, Entrepreneur, Female)

Based on the above accounts, compared to the blue-collar roles, women's representation in leadership roles may be relatively higher. However, a gender gap exists across hierarchies. Most importantly, there is consensus among the participants that women in technical roles are missing.

Riders

One of the areas where women's representation continues to lag is among riders. Riders are mostly in delivery and logistics sectors, but they, in increasing rates, are adopting 2W EVs. Many riders represent low-income households in Kenya. This is even more so for women riders. For many women in low-income households, delivery using 2W EVs is a way out of poverty. Therefore, riders are one category of job roles which can elevate women from poverty, to owning their own EV and then to establish their own company. Many rider women aspire to this route.

However, while riders acknowledge that women's participation is improving, women are still underrepresented among riders:

“I can now see more women taking up electric bikes, which shows growing potential... But riders were mostly men” (P6, Rider, Male).

A female rider explains that male riders mostly use ICE vehicles, while women riders use e-bikes. Some e-mobility companies capitalise on this best practice by recruiting only women to ride e-bikes. She even suggests that women riders have been the pioneers in the delivery sector as the first users of e-bikes:

“When I got employed, it was only women who were employed with electric bikes. The men were using their own fuel-powered motorbikes, while the women were using electric ones. So, you find some companies just want female riders with e-bikes” (P10, Rider, Female)

An entrepreneur agrees, acknowledging the growing participation of women in this sector, but notes that women riding an e-bike is still rare and far from sufficient. Most importantly women riders on e-motorbikes or e-boda-bodas[5] are hardly seen:

“Overall, participation is well spread—quite balanced... But very few [women riders]—maybe less than 1%. It’s rare to see women riding Boda Bodas, whether electric or petrol.” (P20, Entrepreneur, Female)

An expert informs that the low rates of women riders is mainly due to mindset that women cannot ride boda bodas. To challenge this some companies are innovating ways to showcase women as riders in all e-vehicles:

“Women’s participation as riders is also very limited. One major barrier is mindset many people perceive boda bodas as a man’s job and not something women do. Some companies, especially in western Kenya, are trying to challenge that narrative by empowering women through financing for both conventional and electric motorbikes and showing that riding is not just for men.” (P1, Expert, Female)

Despite a favourable landscape that promotes the e-mobility industry and women’s participation in it, and is duly supported by policy change, practitioner commitment, and supportive regional influence, the participants in the study acknowledge several challenges that prevent adequate representation of women in the industry. These are presented in the next sections.

5. CHALLENGES FOR WOMEN IN E-MOBILITY IN KENYA

Despite growing opportunities for women and their increasing numbers in E-Mobility, the study participants report major concerns that hamper robust and sustained engagement of women in e-mobility. Placing the women in the core of the sector, these challenges arise at both personal/individual and external/systemic levels. They stem from diverse reasons that range from difficulty in accessing resources, unfavourable socio-cultural norms & practices, safety issues, lack of regulatory initiatives, to lack of relevant skills and education, physiological limitations potentially worsened by inadequate infrastructure, and psychological issues which result from a combination of other factors.

An e-boda boda rider summarises the challenges as follows:

“Lack of education, skills, and funding. If more institutions offered courses on E-Mobility, women would gain the knowledge needed to enter manufacturing, assembly, and battery technology.” (P7, Rider, Female)

This section presents participants’ views on these imminent challenges as the sector is fast progressing and growing.

[5] ‘Boda boda’ is the phrase used in Kenya for motorbikes.

Individual Challenges

In e-mobility sector women face challenges uniquely experienced by the individual albeit most often compounded by external environmental factors. A female entrepreneur sums them up as follows:

“Several factors come into play. There’s a skills gap because most technical training is male dominated. Cultural expectations and gender norms also discourage women from pursuing technical careers. Funding is another challenge; women entrepreneurs often struggle to access investment compared to men.” (P18, Entrepreneur, Female)

Many of these limitations may require addressing at the individual level to enable women to feel confident, and others may need changes in the wider external environment. This section next discusses these challenges before presenting potential solutions in Section 6 of the report.

A lack of confidence where ample opportunities exist yet with uneven representation of women

Technological change is reframing participation possibilities for women in e-mobility:

“You don’t need to be very strong to do mechanical work... only to have the right tools. Because of this... many women now work on the assembly line.” (P26, Expert, Female)

This suggests that e-mobility disrupts traditional physical barriers, opening new entry points. Another expert emphasises the sector’s inclusivity potential:

“It’s a space where everyone is given room to flourish... especially for women, it’s a space that allows for empowerment and development. There are so many opportunities.” (P28, Expert, Female)

Technologically, the sector provides many opportunities for expansion, currently male-dominated, but women can exploit confidently if received relevant training for instance in battery technology where old batteries used in e-mobility transport is put into a second life in other sectors:

“I’ve also noticed interesting integrations, for example, in clean cooking. Electric pressure cookers use electricity, and some companies are now reusing waste batteries from e-bikes to power these cookers. When you buy an e-bike, after some time, its battery wears out. Some companies are now redesigning those used batteries for electric pressure cookers, so that users have backup power for cooking when off grid. This presents a new opportunity where women and youth could engage in collecting used e-bike batteries for reuse. That would create a circular economy where waste is recycled into productive use, and women are part of the process. You could also think about e-charging stations. This area still needs development. For instance, in Kisumu, we only have two charging stations, yet the demand for electric vehicles is rising. Most companies currently charge their bikes within their own premises after riding certain kilometers; users return to the center to recharge. So, what happens to independent entrepreneurs? There’s potential to explore how this can become a productive business opportunity, expanding charging networks and engaging women in the process.” (P11, Entrepreneur, Male)

If you have an electric vehicle, and the battery is not giving you the kilometres you need, you can bring it to have the battery removed, put a new battery into the vehicle, and put the used battery into the Second Life application, and zoom you go. Here, we break batteries, repurpose them, and put them into a Second Life application. It is being done for schools, residential energy, clean cooking, and even commercial battery storage systems. (P13, Entrepreneur, Male)

The sector provides a level playing field for men and women, as awareness and background knowledge levels are generally the same across genders:

“EV maintenance and repair is the next big thing. It's high time women embrace this shift. No one knows more than the other, so it gives women a better chance to jump in, learn, and become experts. So electric vehicles are giving both men and women a level playing ground.” (P17, Entrepreneur, Male)

These reflections present more optimistic narrative and underline a perceived openness and opportunity expansion. The shift reflects how technology can disrupt traditional gender exclusions, particularly in physically intensive sectors. However, a male entrepreneur highlights the entrepreneurial opportunities in e-mobility as different to solar industry and predicts why women may not be eager in exploiting opportunities due to a lack of proactiveness and risk-taking traits embedded in entrepreneurship activity and the e-mobility business model is identified by high capital barriers:

“... anything new has challenges. Women might be lagging because they don't want to risk investing in innovations. They might be waiting to see whether it will succeed first. Another reason might be resources; capital to acquire or invest in e-mobility is high. Currently, most of the people in the business are manufacturers, unlike in the solar industry, where manufacturers produce and distribute to sellers. In e-mobility, manufacturers sell directly to end-users, so the high capital is a barrier.” (P11, Entrepreneur, Male)

Uneven distribution of roles for women

Few experts acknowledge that women are increasingly more visible in leadership now, which encourages others to join. The change reflects a growing meritocratic inclusion of women, with more equally accessible opportunities.

An expert provides a detailed account of how women are distributed unevenly across roles:

“You find ladies are mostly in office... more of sales... but not more handy when it comes to the technical parts. I've personally, been involved in spearheading a department, so at least I've gotten a chance to be involved in the setup of a charging infrastructure. But the getting to find ladies in that space. You find that it's difficult...So, the installation has kind of been left to men... the troubleshooting also...Because it's difficult to find ladies on the field doing that.” (P30, Expert, Female)

Similar observations are stated by a male entrepreneur:

“One of the manufacturers in Kenya, called Roam, (is) based in Nairobi. In their assembly department, which is dominated by males about 80%, they assemble various components of bikes. But in management, there are more females.” (P11, Entrepreneur, Male)

These deeply embedded perspectives and realities of the E-Mobility sector, presently, illustrate the horizontal segregation, where women cluster in less technical roles despite sector growth. Another expert confirms this segmentation from an organizational perspective:

“Women are more represented in our customer service department... about 80/20. Where they are less represented is our technical-service department... we don’t have women there. So, ladies are mostly in office... more of sales... research and awareness while technical roles remain male-dominated.” (P32, Expert, Male)

This reinforces that technical exclusion is not incidental but systemic across firms. The expert attributes this partly to training pathways, noting that women have not yet been included in technical training programs. This highlights how organizational decisions around training and skills development shape gender distribution across roles.

However, due to a range of reasons such as historical perceptions of the transport sector, perceived incongruity between women’s descriptive and prescriptive rules and characteristics of the sector and associated jobs, a lack of STEM-related educational qualification [which are generally, although erroneously believed to be necessary] or relevant skill set, women may not always feel as confident about joining this sector as their male counterparts do.

“Opportunities are many. But now even the ladies don’t have self-confidence that they can do this kind of work.” (P9, Rider, Male)

A lack of confidence may also stem from the resource crunch, as women who aspire to work in the sector may need money/funds to obtain training or licenses.

“They haven’t gone to driving school. Some of them say that that is men’s work. And for those who are interested, maybe they don’t have money. And maybe they don’t have licenses. So, they may lack the courage to ride on the road.” (P8, Rider, Female)

The sector’s gendered perception continues to deter women from actively participating.

“So, it’s not that they’re being knocked off [from the sector] when they come. They could have started earlier, but women still think that our place is not here. There could be different inhibitors. The biggest one is social and the social trends.” (P13, Entrepreneur, Male)

The expert emphasises women need to be proactive in their participation:

“The space is always there... but ladies have to rise up and pick that. You have to research... make your case... because men outshine ladies in participation.” (P30, Expert, Female)

The perception that there are only mechanical jobs, for which women may not have relevant skills, continues to restrict their participation.

“Many still perceive E-Mobility as a highly mechanical field, and that discourages those who don’t have a technical background. But E-Mobility is much broader than that; there are opportunities in operations, entrepreneurship, maintenance, and even advocacy.” (P22, Entrepreneur, Female)

Those who participate in this sector often have backgrounds in E-mobility, whether as field experts, mechanical engineers, or renewable energy experts. Therefore, women without these backgrounds feel less confident about being able to contribute to those courses.

“I’ve had the biggest imposter syndrome in the E-Mobility space. I still have. I still struggle. Because my background is not in it. When I walk into the room full of electric mobility experts, I hear most people have mechanical engineering, renewable energy [expertise], and electrical mechatronics.” (P5, Expert, Female)

However, the participant acknowledges that women need to be more proactive and clearly demonstrate their interest in these opportunities.

“I know this can sound a bit controversial, but sometimes I feel like, ‘What do you want? I can’t force-feed you.’ Opportunities in the mobility space exist. But are women also interested? is the question. I wouldn’t fault the organizations for not having women. Sometimes I would also fault the women for not being proactive. Women also need to know whether they want to be in this space or not.” (P5, Expert, Female)

Experts provide a narrative of individual responsibility, highlighting confidence and preparedness gaps. Another issue the expert emphasises is the importance of structured capacity building.

“We are still struggling with the absence of structured organisations that mentor and support women entering the e-mobility sector. Some of us are trying to fill this gap through personal initiatives like Green Women Accelerator and STEMi Mobility Network, but these efforts remain small-scale”. (P29, Expert, Female)

These scenarios introduce a counterpoint: participation is not just about agency but also institutional support and ecosystem readiness. From a technical perspective, participation is also linked to confidence and ownership. The Expert explains that *“ladies may need to rise... and show that they are actually aware”* and that there is sometimes a tendency to *“shy away from taking responsibility”*. (P30, Expert, Female). The Expert argues that success requires deep technical knowledge and a willingness to take accountability for decisions.

However, the limitations that women experience may not be solely psychological; they may also be physiological.

Physiological challenges

Participants indicate that, for women with child-bearing and rearing responsibilities, it may be harder to enter and remain in the industry.

A regulator in the sector shares a few anecdotal accounts of these challenges:

“My friend had a newborn, and it was very tough for her. Because she sometimes had to leave meetings in the middle to express milk. Another friend also went through the same experience. They cannot think of taking a career break when they are at the peak of their career or about to get a big job. But then, it’s still very sad. You don’t know when you can stop, live your life, have a family, and have a husband. People don’t understand the impact that it has on the future for you as a woman here.” (P5, Expert, Female)

The shifts for riders may not be suitable for women, particularly given the lack of infrastructure in remote areas.

“Shift System was a bit hard for them to employ, so now you find that once you start your shift, maybe at 6:00 AM, the number of routes and number of rides you’re doing in a day are so many that they don’t even have time to go to the bathroom. Maybe, for women, having their monthly period makes it hard to level up and even move into the driver sector. As a woman, they need some privacy. You know some dignity. They need a bathroom. Yeah, that’s the public transport sector.” (P14, Entrepreneur, Female)

Participants note that the women leading the space either have made personal sacrifices and dedicated themselves to professional development in the industry or have fulfilled their child-rearing responsibilities and are now devoting their time to the industry.

“I’m 35 years of age, not married. No child. I would really want to have a baby, but then I’m thinking when I should be pregnant, and then take maternity leave. And when I come back, will my boss be waiting? Half of the women in the E-Mobility space are the same. No children or maybe single mothers. They’ve put it on the shelf. So, we put a lot of effort into getting a seat at the table. There’ll always be something that would suffer in your personal life as a woman. And it’s a very young space. And instability in a very young space can make many women shy away. Women want stability....” (P5, Expert, Female)

A female entrepreneur states the possible reasons for why women hesitate to take on demanding technical roles as below:

“Our number one challenge is that we’re not dealing with a workforce that’s necessarily at the stage of parenthood, so I wouldn’t fully describe it as a duty-of-care issue, though, to some extent, it is. There have been instances, especially in our earlier days, where technical assignments required travel outside Nairobi or even abroad. Such trips can take a toll, particularly when they extend longer than expected, say, beyond three days or a week.”

Another factor is that there aren’t many women taking up these roles in universities or colleges, and for those who do, their hands-on skills and mindset may not always align with the demands of technical work. Someone may start as a technician, but over time, perhaps due to natural inclination or organizational dynamics, you find that they don’t remain in the field for long.

In addition, technical work often involves a lot of manual labour. For instance, when we started as a solarization company, our work meant spending up to eight hours on rooftops, which can be quite demanding. As a result, even male colleagues sometimes delegate lighter or support tasks to the women—things like stock counting, material management, or work in the power room where the workload is less strenuous. These are some of the reasons contributing to the lower number of women in technical roles.” (P19, Entrepreneur, Female)

Availability and access to sanitation facilities is also reported as a constraint that prevents women from taking up jobs such as a rider.

“You know, a guy on the motorbike will stop somewhere and go and pee. But for a woman, it's a whole story. It's a whole operation. So maybe they could also be some of these things that we don't see.” (P13, Entrepreneur, Male)

The natural frame of women also requires modifications to vehicle design that are not always integrated, making it harder for them to adapt to E-Mobility as consumers and further preventing their familiarisation as professionals in the sector. Participants explain that in countries where these aspects have been addressed, adoption of technology and women's participation are higher.

“When I was in China, I was impressed to see that some motorcycles are specifically designed for women. So, you'll find that many women are actively involved in E-Mobility. The motorcycles they use are not as large or bulky as those we have here.” (P22, Entrepreneur, Female)

Even though the sector does not require an extensive educational background in technology or mechanical engineering, an understanding of STEM subjects can help build confidence in aspiring to those roles.

A lack of relevant education and skills

The sociocultural factors continue to shape opportunities for women not only in professional choices but also in their access to education.

“They don't get the best teaching because people still have the mentality that women should be at home.” (P9, Rider, Male)

Not having adequate educational qualifications also undermines the investor confidence required to bring in capital to start and grow businesses.

“When I speak to venture investors, they say their goal is to make money. Our girls are often Form Four leavers. I hope to push them to a degree. They are passionate, but their backgrounds, being from the Jua Kali sector, having children, or surviving GBV, put them at a disadvantage.” (P21, Entrepreneur, Female)

Inadequate educational qualifications also lead to initiatives aimed at increasing their participation not being successful. Now, in most hierarchies in the sector, the participation averages 15%; further improvement may be possible only if women acquire technical competence.

“Women often didn't have the technical competence to handle complex projects. So that was the first challenge in increasing their participation to 15%. In order to take it to the next 20%, the women who will achieve that will need a certain level of technical competence.” (P13, Entrepreneur, Male)”

There is also necessity now, to combine the e-mobility technical knowledge with digital skills. Therefore, women need to be trained in digital technology element of e-mobility and e-vehicle production:

“In Roam, there are women managers, but they are not in the assembly unit. So, it raises the question, what could be the barrier? Perhaps women fear the physical or technical aspects, or maybe it's the lack of knowledge. In Kenya, I don't think we have a school that offers training specifically on e-bikes. Maybe some universities are trying to develop one, but generally, the biggest challenge is knowledge. Most e-bikes are computerized, and they require understanding chips, recordings, and systems. Without technical knowledge, it's hard to manage or participate fully in e-mobility.” (P11, Entrepreneur, Male)

A participant summarises the challenge of missing relevant education among women and how that impacts women's participation in E-Mobility.

“It goes back to the educational system. Specialization in E-Mobility is only starting now. You look at the traditional automotive value chain and see how many women there are. We start losing them at the education level. By the time they enter the job market, they aren't there. It is similar to the ICE sector. The representation in those courses is just not as high.” (P2, Expert, Female)

Apart from relevant education, suitable skills for the roles in this sector are another key requirement. Women aspiring to join E-Mobility need to upskill themselves, and stakeholders need to facilitate their access to upskilling opportunities and tools. Both the cost and limited avenues for upskilling are significant limitations for women, hampering their representation in E-Mobility.

“Having people with the skills will be hard. Skills are one of the shortages. The institutions that offer these skills are limited. And also, the cost [of upskilling] is high. The other thing for the entrepreneurship part is the funding.” (P35, Expert, Male)

In order to attain strategic roles in E-Mobility, women may need higher education and skills in electrical engineering, as these are the competencies international stakeholders, such as Siemens, seek.

“Yes. So, the gentleman representing Siemens said they had a training programme for women. But then someone asked him what the basic requirement was. They said, ‘electrical engineering’. How many women here have an electrical engineering qualification? Very few. So, on paper, yes, you'll still be training 200 women, but we are forgetting...” (P14, Entrepreneur, Female)

Even in the presence of relevant educational qualifications and appropriate skills there is still a narrow pipeline to e-mobility jobs for qualified, deployment-ready women. An expert further explains that:

“Many qualified women are denied hands-on training opportunities simply because of their gender.” (P29, Expert, Female)

External/Systemic Challenges

Stuck in the past: The internal combustion engine (ICE) legacy issues

Many issues that prevent greater participation by women in this sector today may stem from the legacy of the transport sector, when vehicles were powered by ICE technology. The transport sector has historically been male-dominated, particularly when vehicles were manufactured using fossil-fuel-based technologies, such as ICEs. Therefore, the mindset of all stakeholders may still be shaped by those legacy considerations.

"It is like the ICE sector, where you don't find many female mechanical engineers. It goes back to how the traditional transport sector is structured; things like working hours, the intensity of the work, and working conditions. [There is this perception that] conditions might not be favourable for women. This might change with E-Mobility." (P2, Expert, Female)

Such legacy issues can shape women's perception and experiences in the sector.

"During installations or training, there's often a perception that men are better at handling technical work, and that discourages women. So, in some organisations, women are made to feel like they don't belong. Others drop out because they feel isolated," (P24, Entrepreneur, Female)

Another participant echoes the view and shares as follows:

"Perception and attitude. Many people believe E-Mobility is a male domain. It's traditional, people grow up believing that technical or mechanical work is for men, while women handle domestic roles. That mindset continues to influence participation." (P19, Entrepreneur, Female)

However, as the design of E-mobility vehicles is significantly different from the legacy vehicles, this should, in due course, persuade women and other stakeholders to view women's participation in this space differently.

"In fact, e-motorcycles are actually easier to operate than conventional ones; they're automated and simpler to handle. This presents a great opportunity for women to participate directly, not just as passengers or customers, but as owners, riders, and entrepreneurs." (P22, Entrepreneur, Female)

Because of historically embedded perceptions of the transport sector, it comes to be seen as suitable for and inhabited by men.

"Technical roles have long been viewed as 'male' fields. Girls are generally not encouraged to pursue engineering or mechanical work. So, there's limited exposure for them. [Consequently], women aren't aware of technical opportunities in E-Mobility. Even the training environment is also male-dominated, which can be intimidating. Also, societal expectations and family roles sometimes discourage women from taking technical jobs, which are generally physically intensive." (P18, Entrepreneur, Female)

A widely held perception is that jobs in the transport sector require knowledge and expertise in science and technology. In the case of the E-mobility sector, that is not always accurate. Furthermore, because women's participation in STEM fields is not widespread, such perceptions discourage women and other stakeholders from actively pursuing these roles.

“One major barrier is the perception that E-Mobility is purely a science-based field. Many women shy away because engineering and related technical courses have long been seen as male-dominated.” (P23, Entrepreneur, Female)”

Another study participant agrees and considers this perception a major barrier to their active participation in the sector, despite strong policy initiatives and stakeholder encouragement.

“In the past, motorcycles were heavy and required changing gears, which discouraged women... The mentality that only men can work in the E-Mobility field is a major barrier, and women have many responsibilities of taking care of the family as men are out working.” (P6, Rider, Male)

Participants also note that although several initiatives promote women’s participation in the sector, most potential recipients are not always aware of them.

“Everyone associates vehicles with men. So, women feel it's difficult. In some cases, women also shy away because they think cars are complex. So, we need the women to be aware of how they can contribute to the E-Mobility space.” (P5, Expert, Female).

The next section presents a nuanced discussion of the safety-related challenges that prevent women from actively participating in this sector.

Safety-related concerns

The study findings indicate that ongoing concerns about their safety and well-being at the workplace and in transit continue to prevent women from actively participating in professional spaces, in general, and in the E-mobility sector in particular.

“A big challenge is harassment. Women in the industry have reported facing harassment from colleagues or even clients, which makes the work environment hostile. A hostile work environment can also lead to unequal access to tools and training opportunities. In some workshops, women are not given equal time on the machines or equipment.” (P24, Entrepreneur, Female).

Harassment on public transport, which affects women's participation in general, also affects their representation in E-Mobility.

“There is an issue of safety in transport. Because most of the time, women will get harassed. But even when they report, nothing will be done, even though there are policies to address these issues. So, the perpetrators keep doing it because they know nothing will be done. We need to tighten those laws that act on sexual harassment and assault.” (P15, Entrepreneur, Female)

The safety scenario seems to be impacting specific roles within the E-mobility sector, as discussed in the report earlier, the representation of women is acutely small.

“It’s primarily safety and perceived risks on the road. Women are present in staff/technical roles in these organisations but are almost absent as riders. Mostly because of the risks on the road—navigating Matatus, lorries, and carrying passengers.” (P20, Entrepreneur, Female).

A female rider confirms these concerns and shares her experience:

"I usually work until 9:00 pm. With the e-bike, there are areas you can't access past that time or even in daytime. Due to security reasons." (P9, Former Rider, Male)

The safety concerns are not only when women are commuting or at the workplace, but domestic violence also prevents them from actively participating in the economy.

"It's tricky because the married women may not want to explore the options, because then domestic violence becomes a very big issue. Men become agitated and start thinking women are cheating on them. They're like, oh, you're going to see other men. And then they beat their wives." (P14, Entrepreneur, Female)

Participants in the study also characterised the socio-cultural norms and practices as male-dominated and the industry as masculine. Therefore, the endemic gender- and class-based social practices continue to shape women's participation in the workplace, including in the E-mobility sector.

The study's findings indicate that women's participation is shaped by safety concerns that go beyond typical occupational risks:

"Safety and security issues come up repeatedly. Women operators report being harassed by passengers and by fellow colleagues. Due to lack of accessible charging facilities, they sometimes must go far, which poses security risks. In rural or peri-urban counties, women said they fear travelling at night with a male client and then having the battery run out in a remote area, not knowing what could happen." (P29, Expert, Female)

Experts argue that safety concerns constrain women's economic participation. These risks are compounded by infrastructural gaps such as limited charging stations especially in rural areas. As a result, women often modify their working patterns, avoiding certain hours or routes.

Socio-cultural challenges limiting inclusivity in the sector

The gender perception of the E-mobility sector, shaped by the legacy of the transport sector as a whole, still seems to influence cultural norms.

"The first barrier is existing cultural norms. The mobility sector, whether boda bodas, matatus, or government transport institutions, is still perceived and structured as predominantly male. If women are underrepresented in conventional transport roles, it becomes even harder for them to see themselves in a new and emerging space like E-Mobility." (P3, Expert, Female)

The socially descriptive role of women in the sociocultural context continues to determine professional roles, which are often perceived as gendered.

"When I was at E-Worker, we were almost 90 riders, and only two were women. Some women joined but dropped out due to the male-dominated environment. At EB, there were around 10 women... It's mainly due to mentality. People often think men belong in fieldwork while women should handle office-based roles." (P6, Rider, Male)

Rural areas and the poor socioeconomic sections of the community are particularly impacted by these sociocultural norms, making it harder for women to break them.

"In villages, in poverty-stricken areas, women are highly dependent on men financially. And men act like they own the women. So, women often refuse to attend training because they need their husbands' permission. And sometimes husbands say, 'Are you really going to study? [I think] you're going to cheat on me.' So we had to even talk to the husband, bring them up, invite them in for a conversation." (P14, Entrepreneur, Female)

However, the set sociocultural norms not only affect the poor, remote rural communities but also shape women's confidence in aspiring to attain leadership positions in the sector.

"A lot of men leave us. Sorry to say that. Men will not date a very ambitious woman. It strains your relationship. It strains the family dynamic. If you're going to be in a space where you're taking a leadership role, you're going to have to sacrifice a lot in terms of your personal life." (P5, Expert, Female)

The norms that impact women's participation in the E-mobility sector may not be gender- or socioeconomics-specific; class considerations also seem to play a role.

"It might not just be gender, but also 'class.' When you talk about Roam or Basigo, you are talking about the high-level engineers who speak the same language as the investors. At our Chicx Auto Garage, our highest qualification is a diploma!" (P21, Entrepreneur, Female)

Caring responsibilities often assigned to women also entail that women cannot join at all hours, such as early mornings or late evenings, which limits their ability to choose sectors and rules.

"In operations and fleets, a more conducive working environment is needed. You can't expect someone to start at 5:00 AM if they have small children to take to school, or to finish a shift very late at night. Operators need to think about these dynamics to encourage more women." (P2, Expert, Female)

The sociocultural expectations of women seem to have shaped women's thinking as well. Many women participants report that joining the sector violates societal expectations of them.

"I personally went out looking for women mechanics. I found three. I also found others are hiding behind. I said, 'Why don't you come out?' They said, 'The society is not expecting us to be mechanics'... There is a strong social expectation that their careers will take a particular path." (P13, Entrepreneur, Male)

It is also the opinion of industry experts that male-dominated power structures are prevalent in the sector leading to a gendered sector identity which needs to be challenged now for progress in gender inclusion. Reality on the ground hardly matches surface-level statistics that mask deeper inequalities. One industry expert puts it as below:

"We have a very low percentage of women in the e-mobility sector; in fact, I'd say the actual figures are even lower than what's often reported. Some of us who are actively involved on the ground... can see that the real numbers don't reflect the statistics being shared. We are still far behind, and the percentage of women's participation remains very low." (P29, Expert, Female)

This reflects a critical insight that visibility of women does not equate to meaningful participation, and current narratives may overstate progress.

A sector expert frames e-mobility as inherently gendered, emphasizing how perception shapes participation:

“It’s a very interesting field, given that there are fewer women and given that also it’s a masculine kind of course. Even if you look at those who are doing the advocacy at the top management, we are very few women. But the question would be... do we want women there for numbers or for them to make an impact?” (P34, Expert, Female)

Therefore, the experts argue that the issue is not just representation but depth of inclusion and influence, highlighting tensions between symbolic and substantive participation.

The expert reflects on exclusion not just as a structural issue but as a lived industry reality shaped by informal networks. She explains:

“It is the boys’ club aspect of it. On a more industrial aspect, collaboration is mostly male-to-male. Women are yet to get out of their shell, unite, and come up with a solution” (P27, Expert, Female)

The expert further situates this within a broader system where access is relational rather than merit-based, describing the sector as having a “boys’ club aspect.” This illustrates how participation is mediated through networked gatekeeping, where women’s exclusion is embedded in how opportunities are circulated.

From a policy and systems perspective, gender bias is reported to be deeply normalised within technical domains. An expert notes that:

“if you were to put to people, a young girl and a young man, same age, same class, same grade, and you tell someone to pick one who they feel is more competent to tackle or to deal with a vehicle, the mechanics of a vehicle, 90% will go for the boy, even if the girl was performing better than the boy in class, the girl is more conversant and more passionate about it. They’ll still go with the boy because it’s masculine” (P33, Expert, Female)

Even when women demonstrate competence, perceptions of technical capability remain gendered. The expert adds that “we’ve improved, but no... we are not enough yet,” emphasizing that progress is incremental but insufficient. This highlights how cultural bias continues to structure access to technical credibility. Stigma and bias in the sector further questions women’s skills and abilities.

An expert in motor inspection describes how gender bias manifests in direct interactions with clients:

“They will ask ‘Are you sure you’re going to fix this e-motorbike to perfection?’ So he’s really doubting... they feel like you are not capable of doing it. They are like women cannot do better than men.” (P31, Expert, Female)

This illustrates how technical competence is questioned at the point of service, forcing women to constantly defend their expertise.

In contrast, another expert minimises structural bias but acknowledges subtle forms of it:

“There’s no discrimination; as long as you’re committed and put in the effort, you can grow. Recruitment is based on your capabilities and your qualifications. But some clients... believe that a woman cannot give them information.” (P38, Expert, Female)

The comment from the expert reveals a key tension: while organizations may claim neutrality, bias may persist at the societal level, shaping women’s experiences and confidence in contributing to the business.

Another expert describes how stigma manifests in everyday workplace interactions and explains:

“Automotive work is still viewed as a male field... when women join, they may initially face doubts” (P26, Expert, Female)

However, the expert also highlights a gradual shift:

“Over time, when colleagues see that you are passionate and hands-on, they get used to you and start trusting you with more demanding jobs.” (P26, Expert, Female)

These views reveal a pattern indicating that women’s acceptance often may be conditional, requiring women to demonstrate capability repeatedly. The experience reflects a performance-based legitimacy system, where women must earn trust that is often automatically granted to men.

Experts share that despite being trained and qualified, women often are made to feel they need to constantly defend their expertise. Experts claim that bias may be enacted through customer interactions, directly affecting women’s professional confidence and authority.

Addressing these deeply embedded perceptions is difficult to break, particularly if awareness of the regulatory, practitioner, and social support available is lacking.

A general lack of awareness

The study findings indicate that gender inclusion is yet to be structurally embedded in policy frameworks. From an advocacy perspective, awareness is identified as a key systemic gap. One expert explains:

“I think the biggest challenge that we have right now is awareness because most people don’t really understand what is happening in e-mobility” (P34, Expert, Female)

Therefore, information asymmetry regarding E-Mobility may limit both adoption and participation, particularly for women who may already face access barriers.

Moreover, apart from awareness of what E-Mobility is, the resources and networks available, how women can be involved, and that the sector is not mechanics-focused is largely missing. A participant, a male rider, despite working in the sector, reports that they are unaware of initiatives to promote women’s participation.

“No, I don't know any organization [that can come in and give aid to this sector, either financially or in any other way]” (P6, Rider, Male)

A lack of awareness of the support and initiatives also leads to a lack of aspirations to grow in the sector.

“The shortage is there because people don't know what E-mobility is. So, there are limited aspirations about a career in it. Not many have studied E-Mobility... I think they're there (policies/incentives for gender diversity in E-Mobility), but I've never come across one.” (P35, Expert, Male)

Even entrepreneurs are not always aware of those policy initiatives.

“I'm yet to hear of policies that encourage gender, that are aligned with a gender aspect towards E-Mobility. (P17, Entrepreneur, Male)

An entrepreneur notes that even organisations that are actively promoting these initiatives often do so only after those opportunities have passed.

“You know that event I went to was in partnership with [organisation name]. But they barely post any events? I got that invite through someone in [organisation name]. So, I literally gate-crashed a workshop literally... I see them posting on LinkedIn, saying they DID this.” (P14, Entrepreneur, Female)

Even the regulators in the study participants express a lack of awareness of relevant information about technology, vehicles, job opportunities, and initiatives.

“It was really, really difficult for me because this was a new field. I had to go on YouTube. I remember someone who visited me at my house [and saw my computer]. They were like, “Why is your search algorithm ‘electric cars’?” Because I was just reading and trying to understand what these electric vehicles are, what batteries are... You know.” (P5, Expert, Female)

The lack of awareness of these opportunities also stems from a legacy articulation of what these jobs entail. Women, even with appropriate skills and experience, may not feel confident to apply for these roles because the job ads are not adequately articulated.

“Most job adverts in technical roles have wording that unintentionally discourages women, for instance, emphasizing heavy lifting or field work. That immediately conveys that the job might be physically demanding or unsafe. Then there's the issue of confidence. Some women have the skills but don't feel confident applying for such roles because they think they'll be judged or underestimated.” (P24, Entrepreneur, Female)

Consumers of e-mobility vehicles may not always be aware of the opportunities available in the sector.

“Many people don't fully understand what E-Mobility is. For example, I recently spoke with someone who purchased an E-Mobility bike, but they were not aware of the opportunities. The awareness is very low.” (P22, Entrepreneur, Female)

Awareness is particularly low in rural areas, as opportunities are mainly available in urban centres.

“Most of the training initiatives and activities in E-Mobility are being done in urban areas. Almost every organisation is centred in Nairobi or its surroundings. The areas where E-Mobility is also needed, which actually have the largest populations, have been left out. No real campaign, no advocacy, no training. It’s treated just like any other business.” (P22, Entrepreneur, Female)

The study findings also identify that the challenge is not only a lack of awareness of the initiatives, opportunities, and resources available to women to enhance their participation in the sector, but also of access to those resources.

Lack of financial and other resources

Entering the sector as an entrepreneur requires access to significant resources. The initial upfront costs of 2/3W EVs are very high for aspired women entrepreneurs. In the absence of initial financial resources, women find it difficult to access vehicles. However, contrary to ICE maintenance and operation costs, EV maintenance and operation costs are much lower which may help women own the vehicles in lease-to-own schemes:

“One of the biggest challenges is the initial cost, which is perceived as high. But over the long term, the total cost of ownership for e-mobility is much lower than for internal combustion engine (ICE) vehicles, since charging is less expensive and maintenance is minimal.” (P4, Regulator, Male)

However, especially women riders or fleet owners without initial capital are bound to large companies and small companies struggle where competition is skewed towards the former:

“There is also a challenge around asset financing for the acquisition of EVs. Bigger companies like BasiGo, Roam and others have raised substantial funding, whereas some smaller local players are yet to access capital facilities available in the market. There are skills gaps in financing for e-mobility” (P1, Expert, Female)

Investments in E-mobility businesses owned or led by women are often not forthcoming and are perceived as perilous by investors. Study participants explain that the resource-related challenges that women face are complex, multilayered, and compounded.

“Several reasons. First, many investors still perceive women-led startups as higher risk, especially in technical fields like E-Mobility. Second, women often have smaller professional networks, which limits their exposure to investors. Third, collateral requirements for loans tend to disadvantage women, since fewer women own property or assets. And finally, there’s a confidence gap; many women hesitate to pitch aggressively because of societal conditioning.” (P18, Entrepreneur, Female)

Such businesses may not only be perceived as risky by individual investors but also by financial institutions.

“Those are the key barriers across the value chain. Women may want to open a charging station or operate electric motorcycles, but financing institutions still see it as a risky investment, especially when it’s a woman applying. [A lack of] financing affects women who want to venture into E-Mobility as entrepreneurs.” (P24, Entrepreneur, Female)

Another participant agrees and underscores the difficulty of access to capital, which hampers women’s participation in the sector.

“The most challenging part of this business is getting the start-up capital and other finances for things like workshops. You can organise workshops and invite women to learn about E-Mobility and its benefits. But you can only finance a few to start. Because there are difficulties in capital availability.” (P6, Rider, Male)

Often, women entrepreneurs do not have suitable collateral to pledge to secure financial capital for their businesses.

“Oh, for me as a woman, if I walk into Mogo or MKOPA and I don't have collateral to get financing for that motorbike, I cannot buy at all because there's no collateral. So, financing for women to either own the assets or to start businesses is still a challenge.” (P15, Entrepreneur, Female)

Typically, in the E-mobility sector, it takes two years from starting the business to profitability. Without financial support, women find it harder to sustain the business.

“Retrofitting requires seed capital and takes about two years to become profitable. It’s hard to raise millions as a sole director without partners, especially when I am balancing the business with the social needs of the girls.” (P21, Entrepreneur, Female)

The reluctance to invest in Women-led and women-owned businesses is so strong and deeply embedded that investors often do not examine the merits of those investment proposals.

“I've had stories of people saying that sometimes the funders will just see it's a woman and they wouldn't bother.” (P5, Expert, Female)

A lack of resources not only hampers women’s ability to start and own businesses in this sector but also to develop networks. Most summits have a registration fee, which is not for women, including those who are participating in this sector, although at a modest level, they can afford it. Their inability to join and develop networks hampers their progress in the sector.

“There is an upcoming summit in [Kenya] in November, but the registration fee is \$375. That is way out of our league. I’ve been speaking with GIZ, Flivigo, and the Flone Initiative to see if I can be accommodated under their corporate rates or receive a subsidy. If you don’t have resources, you can’t attend these meetings to learn and network. If the next one [Summit] is in South Africa or Rwanda, the logistics will make it even more complicated...” (P21, Entrepreneur, Female)

However, not all limitations are external, and some challenges may stem from women’s inability to spot opportunities or feel confident about benefiting from them.

The study findings from the interview data of the experts suggest that structural financial barriers are deeply embedded in institutional practices:

“Many financial institutions perceive women borrowers as high-risk. Requirements are tougher for them. The application processes for financial products are also overwhelming for women... If a woman does not have a male guarantor, no facility will engage her. She is told to get her husband, father or brother to sign.” (P25, Expert, Female)

This requirement ties women’s economic agency to male endorsement, limiting independent participation. She further highlights that women are encouraged to join the sector yet lack the financial autonomy to do so. This demonstrates how formal financial systems reproduce patriarchal dependency. Therefore, the existing financial systems reproduce gender dependency, limiting women’s autonomy in entering the sector. Even when women attempt to financial access opportunities, credibility is gendered.

“I feel like a woman (looking for financial support) who has a technical man by her side will be heard more..... vis-à-vis you just going alone”. People still think everything vehicles or electricity is masculine. You’ll still need like a masculine backup for you to be heard.” (P33, Expert, Female)

These perspectives indicate a deeper structural issue of legitimacy in technical sectors still being mediated through male association. From a policy and funding perspective, bias extends into investment decisions. These evidence suggest that even well-prepared business proposals may not be taken seriously without male validation and that credibility in financial and institutional spaces is still gendered. The result is a system where women’s ideas gain traction only when mediated through male authority.

The next section presents participants' perspectives on how these challenges can be addressed.

6. ADDRESSING THE CHALLENGES WOMEN FACE

In general, the advances in e-mobility sector largely driven by the Kenyan Government support is appreciated:

“As of today, I would say the e-mobility space is picking up. When it started, it was just about the devices, but now, with the government picking up the initiative to ensure that e-mobility is recognized as a sub-sector in the energy space, I would say it’s progressing well compared to five years ago. The government has done a lot of sensitization, branding, and given manufacturers space to demonstrate what they are producing under e-mobility.” (P11, Entrepreneur, Male)

Additionally, various organisations have recommended soft targets to increase the number of women in the industry. Apart from promoting awareness of the right educational qualifications and skills for success in this sector, concerted efforts are needed to make those educational and training opportunities available to women.

Meso-level Support: How Ecosystem Support Organisations can Support?

Advocacy and awareness creation for women in e-mobility

Stakeholders in e-mobility (i.e. experts, entrepreneurs, riders and employees who took part as participants in this research) unanimously agree that awareness creation about e-mobility and advocating women’s viewpoints at different levels is the major step to empowering women and increasing their participation rates.

“The number one strategic tool we need is advocacy and behaviour change awareness. This should be implemented through collaboration with all actors in the sector and by working within existing structures. Effective advocacy will help create awareness, foster adoption, and build momentum for the growth of E-Mobility in Kenya.” (P22, Entrepreneur, Female)

“Awareness creation is important. Women need to know e-mobility is suitable for them. They should be given facilities, financial support, and resources to own these technologies.” (P4, Regulator, Male)

It is equally important to make other stakeholders aware of why women’s participation in the sector is critical and how it can exponentially boost the sector's growth.

“This sector has huge potential for women. If we can break barriers around training, funding, and leadership, we can see more women not only participating but also leading Kenya’s green mobility transition.” (P18, Entrepreneur, Female)

However, targeted campaigns and awareness programmes are necessary to develop:

“We need to start actively campaigning and championing to bring more women into the transport and E-Mobility space. We need strong sensitization and awareness programs to help women understand the opportunities available and to overcome the fear of adoption. We can break stereotypes through targeted awareness and training, which will significantly increase women’s participation in the sector. (P22, Entrepreneur, Female)”

Such awareness programmes need to highlight what roles women can have in e-mobility. Making women more aware of the opportunities available and simultaneously sensitising other stakeholders can actually break stereotypes about the sector and women's ability to contribute in different roles:

“I think for women representation we need sector awareness because when most people hear of EV, they only think of the engineering and product development aspect of it, but EV is more than just a sector. EV is a solution to the entire community. Once we look at EV from an industry to EV community solution, women will be able to identify their roles in the sector and join it.” (P27, Expert, Female)”

There are several roles that women can successfully contribute to in the sector, and with a change in the mindset and perspective, they can.

“We need to start looking at them from an angle of suppliers and who does the maintenance, someone who's even coming up with the garages. They need to see themselves as welcome within the whole space, in importation, in fabrication, in adaptation, in repairs...” (P17, Entrepreneur, Male)”

An effective way to approach awareness creation programmes is to assess the needs first for different levels of involvement in the sector:

“First, conduct a needs assessment, which will guide you on how to move because you can say they need financing, or they need skills... Someone who has run a business for 6 years doesn't need an accelerator. They don't need an incubation. So, you need to meet the women where they are.” (P2, Regulator, Female)”

Last but not least, examples of awareness raising activities should be extended to rural areas within collaborative projects:

“In the mobility sector, you can't work alone. So, it's about collaboration, the government, the private sector, the NGOs. So, it's about partnership and like we did last year, which was during the Africa Mobility Week, which was also done this year, the e-mobility parade done by the Electric Mobility Association of Kenya that is EMAK. So, if these parades can be extended to other regions like for example Nakuru, Eldoret, it would really make sense for people to understand what is happening in Kenya rather than just concentrating in Nairobi?” (P34, Expert, Female)”

Financial resources and support

Access to specifically financial resources was reported as one of the main reasons why women (and men) were unable to join the sector for entrepreneurial activities. The sector is currently largely monopolised by large companies, but there are signs of individual entrepreneurial initiatives, given appropriate support is achievable.

“I’ve really had to push my way through because the primary actors in the E-Mobility space are ‘the big boys’ with significant finances, large companies, and access to most of the funding. I have used my own resources to get into this space. The only external financial support I received was from CREAM, which sponsors some of our girls who survived gender-based violence.” (P21, Entrepreneur, Female)

A company CEO weighs in supporting the need for finance to encourage women entrepreneurship:

“Provide more affordable loans in places where normal banks still don’t see the niche. We need better financing and better financing rates. So, better solutions for school fees or the training fees. Maybe women then can be asked to work with EV companies to make sure what they’ve learned in school is being practiced.” (P17, Entrepreneur, Male)

There is a call for financial institutions to lend to women entrepreneurs in e-mobility:

“There’s also a need for financing opportunities targeted at women-led E-Mobility startups. Many women have innovative ideas, for instance, community-based charging hubs, but they lack access to capital. Partnerships with banks, development funds, and NGOs could really change that.” (P32, Entrepreneur, Female)

Finally, support can also be offered by different stakeholders by allowing flexibility in approach, engagement, and repayment models. A flexible repayment model will further enhance their access to financial resources.

“Basigo is implementing a pay-as-you-go model. So, one does not have to pay full price at once to buy the vehicle. Having some of these interesting models gives women a better opportunity to jump onto this new wagon. Even in niche spaces, we can embrace a similar model.” (P17, Entrepreneur, Male)

The study participants indicate that financial barriers can be overcome by informing aspiring women about government- and private-sector programs.

Training and upskilling.

Training, upskilling and educating women in e-mobility is crucial in promoting their participation in the sector. At least a baseline training is necessary to ensure women's numbers in the sector increases.

"Providing training and support structures to enrol women into E-Mobility companies is very necessary. So those who have trained them and are qualified should then advertise women to E-Mobility companies." (P9, Rider, Male)

"Education and training are key drivers for the adoption of E-Mobility, especially among women and youth. Education should also cover E-Mobility accessibility, including the use of charging points and understanding how the system works." (P22, Entrepreneur, Female)

"Let's say, if we wanted to increase this number from 30% to 40% and 50%. But we can only do that when we start the baseline training." (P13, Entrepreneur, Male)

It is paramount that women have equal opportunities as men in accessing training and upskilling opportunities and programmes and as early as possible with conditions specific to their needs.

"If we train women early in E-Mobility skills, they can enter on a more equal footing. We should encourage women to ensure equity in training opportunities. On the operators' side, we can proactively embed principles such as decent work, reasonable shifts, and better working conditions." (P3, Expert, Female)

Training women is important, since women's participation can help the sector grow faster especially when there are technical and financial skills gaps in the sector.

"On the skills side, there are gaps in several areas. There is no local manufacturing of cells or batteries, partly due to limited knowledge on battery manufacturing. There are also skills gaps in financing for e-mobility, in understanding e-mobility business models, and in battery maintenance and end-of-life management." (P1, Expert, Female)

Once women have undergone appropriate training, their likelihood of being recruited by the companies increases. However, the private companies' and government support in facilitating training and putting support structures in place is vital so that women can benefit.

"In my institution, for example, we have about 30 engineers, of whom seven are women. That is progress, but still short of 50–50. The imbalance starts from the classroom, where fewer women enrol in engineering, so efforts to increase women's participation must span education, workplace culture, and sectoral initiatives." (P3, Expert, Female)

Moreover, women's training needs may not be uniform, as different age groups may have different aspirations and expectations, such as getting recruited, becoming a leader or starting a business. Therefore, the training needs to be focused and diversified to meet the expectations of each group.

“Younger women often have a knowledge gap. They attend training mainly to gain skills or enhance their employability, rather than to start a business. So, while the young women focus more on learning and skill development, the mature women are more focused on adoption and investment. Younger women are often eager to attend training sessions and learn technical skills, but they are slower to implement or take on business ownership. Mature women may not actively attend training, yet they are more likely to take up opportunities in business leadership once they understand the benefits. So, we need tailored approaches, training that motivates young women to transition into practical adoption, and flexible capacity-building programmes that make it easier for mature women to participate and lead.” (P22, Entrepreneur, Female)

“We really need to understand and break down the target audience because women are not just one cluster. You have to understand their different backgrounds. Look at the age, look at the education, look at their poverty levels. You might empower graduates from the university, but don't leave out the others who are not able to be in that university but really want to get into this sector.” (P14, Entrepreneur, Female)

Flexibility in training programmes can attract more women.

“Training programmes need to be more flexible and considerate of women's schedules and circumstances. With shorter modules. Held at convenient times. So, more women could benefit from these capacity-building opportunities.” (P22, Entrepreneur, Female)

Training, and experience across different roles in the sector will be helpful. Women aspiring to start a business in the sector may also need a focused or targeted set of learning, for example, on how to acquire carbon credits:

“Women can establish bus operating companies running fully electric fleets and benefit both from fare revenues and from potential carbon credit schemes, which would strengthen their economic empowerment. Women can also enter the mechanical and repair segments. Because E-Mobility technology is new, the skills base is still emerging. This creates a window where women, especially if training is intentionally gender inclusive.” (P3, Expert, Female)

Not only the technical skills in e-mobility, but also skills for financial, social and environmental aspects of e-mobility are necessary specifically for women entrepreneurship.

“What's needed is targeted training and capacity building to help women understand the financial, social, and environmental benefits of e-mobility. If women are empowered with the right skills and resources, they can create their own lines of business, such as women-led transport services, for example, 'Lady Bikes' operated by trained women riders. This would provide safer, inclusive transport options and open new income streams.” (P22, Entrepreneur, Female)

Due to lack of structured and systemic training of women in the sector, some private companies aim at capacity building, training women in e-mobility and moreover equip the women with trainer qualifications in ‘train the trainer’ schemes.

“On our end, one of the key initiatives we’ve implemented focuses on capacity building to address the gap in specialized skills within the EV sector. We’ve established a Battery Repair and Replacement Centre of Excellence aimed at developing technical expertise. In our trainings, we intentionally target at least 50% female participation, sometimes going up to 70%, and we also plan dedicated women-only training sessions to further empower them with technical skills. Capacity building plays a major role in advancing this agenda. To ensure sustainability, we conduct “training of trainers” programs so that those we train can become certified experts and, in turn, pass on their knowledge or even develop their own business models within the e-mobility space.” (P19, Entrepreneur, Female)

As a range of roles is available for women in the sector, skill-focused education and training will enable them to contribute to those roles.

“Currently, many repair technicians have never been trained on how to maintain or manage e-motorcycles specifically. Manufacturers and dealers may provide some guidance, but it is not widespread. Training these technicians is crucial so that the existing workforce can support adoption effectively.” (P22, Entrepreneur, Female)

Last but not least, responding to finance constraints faced by many women who desire to enter the sector, training activity can be linked to financial support through a job opportunity at the end of the training which can benefit both organisations and women trainees.

“And, make that training more affordable for women, maybe even come up with fully paid courses, but maybe what in return the woman then serves at a certain garage for a certain period, and then the school takes up part of the salary.” (P17, Entrepreneur, Male)

Creating awareness about the training opportunities

Among the participants there is consensus that women primarily lack awareness of the programs available to them as training opportunities and enhance their inclusion in the E-mobility sector. Neither the government nor private companies can reach out to women effectively for training opportunities.

“And then I got the scholarship, and I was able to get the important training I needed to be in this space because there were experts from Volvo, BMW, teaching you about electric mobility. And I feel like that is something most people don't have the privilege of getting. So, I would say getting information on the skills is a hassle. It's expensive to pay for the courses, and then also sometimes you don't know where to go.” (P5, Expert, Female)

Another entrepreneur argues that women miss out on opportunities offered by government agencies if those opportunities are not made known to them. A coherent and collaborative approach is needed to reach out women:

“Opportunities are there. Funding is always available from the government or from businesses. But the question is, how do we get it? Information about those opportunities is very closed off. And it's always shared amongst closed circles. So, women don't miss out because they're not there. But because they do not have an access point.” (P14, Entrepreneur, Female)

There is ground for private companies to raise awareness and attract women into the sector, but more effort is needed to reach out women.

“Recently, we had a women-centred workshop focused on battery-swapping technologies at our Nathan Apps lab. If we could have more initiatives like this, not just on the engineering aspect but also through open days at various organisations, women could get firsthand exposure to what happens in the e-mobility space. Additionally, taking these awareness sessions to the community level would help demystify e-mobility and encourage more women to participate and adopt EV technologies.” (P19, Entrepreneur, Female)

Stakeholder partnerships

The e-mobility ecosystem functions only when networks and partnerships among the ecosystem actors are existent and working. Such collaborations and flow of knowledge between e-mobility ecosystem stakeholders generate value for the benefit of the system. Participants widely agree on the benefits of such partnerships increasing communication between the decision makers and practitioners providing more opportunities for women:

“Partnerships are very important. We need strong collaborations between the government, academia, the private sector, and international organizations. When the government offers incentives such as reduced import taxes or EV charging infrastructure support, it helps the entire industry grow, and with it, more job opportunities for women.

“Partnership between the industry and community groups, and industry and academia. This is because industry and academia will bring about innovative and skilled manpower. Partnership between the industry and the community will bring about key products in solving problems for the community. Bringing together industries, academia, and community, it will be easy to influence future policies with the government.” (P23, Entrepreneur, Female)

NGOs have done very effective collaborative work in the space of e-mobility.

“There are a lot of women-focused initiatives for the promotion of women in this space. All these development partners are always taking measures - the World Bank, GIZ, and the UN-Habitat. The UNEP has been doing it for the longest time. They have a whole project called Gender and E-Mobility. [Name of a person] at UNEP is the project's head. All their projects normally have a component that supports women's empowerment in this space.” (P5, Expert, Female)

“I have been to workshops and forums where bodies like UNESCO are really pushing the gender issue, and particularly in the public transport sector.” (P14, Entrepreneur, Female)

There is now need to connect NGOs advances in the area to government initiatives where more can be done.

“As much as we’ve had several forums and collaborative participation of government, NGOs, and the private sector, we are still faced with the silo mentality. NGOs and the private sector are doing well by supporting the transition given the impact. The government, NGOs, and the private sector should come together and agree on working together to achieve the standards of the Chinese market in Kenya. The government should also give incentives for affordability of EV products. The aspect of unifying the e-mobility with the NGOs, the private, and government sector will make it easier to enforce policies attached to the sector. We need to break the silo mentality in EV and join forces. Africa E-Mobility Alliance, the Africa EV Women Alliance needs to be one and have one structural quality component. We also need heavy investment in R&D. This can be achieved through partnership with the academic institutions, private sectors, and community hubs.” (P27, Expert, Female)

Networking.

Networking is mentioned as one important tool at all stages from raising awareness, to accessing knowledge and finance.

“Awareness is key... It’s not about equality alone, but about changing mindsets. Private companies and NGOs could work at the grassroots level, with women’s and youth groups, to create awareness and promote participation... Organising workshops where people from different regions can meet and share experiences. Such interactions would help us learn from one another and grow.” (P16, Entrepreneur, Female)

Networking with those who hold the knowledge of available opportunities and resources is crucial in accessing to those opportunities and resources.

“You have to know where to find these financiers? And to be in those conversations in those rooms with the financiers, you must have an access point to get in. You need to know who can give you access. And whoever has access is leaving you out of that access. (P14, Entrepreneur, Female)

Even if women succeed in getting training and start a business, their success may not be sustainable without getting continued contracts, which can be facilitated through network.

“There’s no longevity unless you’re working for a development partner who gives you a three-year, four-year contract. Most of these companies that give you contracts are small start-ups. But it’s a small growing space that doesn’t have stability. The instability in the e-mobility space is also instability in your life.” (P5, Expert, Female)

A female entrepreneur acknowledges proactive action and suggests that instead of waiting for men to facilitate networks, women are equipped to take the initiative for forging such alliances:

“Women bring a unique perspective, attention to detail, creativity, and resilience. But we need to support each other. Sometimes, we wait for men to open doors for us. We can also create our own networks and platforms to collaborate and grow together.” (P23, Entrepreneur, Female)

Mentorship

Mentorship is mentioned as another important tool especially for accessing knowledge and is regarded as a more sophisticated and deeper phenomenon with longstanding influence. Indeed, those who are successful in the sector and believe in the value of women's participation can mentor aspiring women to ensure that mentees are aware of opportunities and make informed choices about their education and upskilling to join the sector confidently.

"Mentorship can change someone's career. If experienced women in e-mobility could mentor younger ones, it would help them navigate challenges and stay motivated." (P23, Entrepreneur, Female)

An expert states that private companies that support women's participation in the sector are seeking competent women. Mentoring can involve promoting these women and connecting them with potential opportunities:

"[Companies ask me], do you want to recommend for training? Even for jobs, they text me and say, 'We are hiring. Send someone you would think would be the best fit.' If I know an amazing lady, I'm happy to. That is the kind of support these young women need: a silent partnership. Someone who can dream with them, fantasize with them, make the impossible look possible. Mentorship is the word." (P5, Expert, Female)

Such mentorship can take place in more formal settings yet currently is isolated and not structured. Several non-government organisations have started providing formal mentorship to enhance women's participation in the sector.

"There are mentorship programs and short-term technical workshops, mainly organized by NGOs and some private companies. These initiatives help, but they're not yet widespread. I think incubators focused on e-mobility could be a game-changer for women entrepreneurs." (P18, Entrepreneur, Female)

Networking and mentorship can be better organised if systemic tools such as innovation hubs and incubators are set up and used effectively. Although awareness is increasing regarding hubs and incubators, there is not yet any incubator specifically tailored to e-mobility and women in Kenya. The National E-Mobility Policy document does not mention it either. This is one major gap in design of e-mobility ecosystem for women in Kenya.

Innovation hubs and incubators

E-mobility Innovation hubs and incubators are very new phenomena in Kenya. An expert foresees their crucial role in generating the skilled workforce and entrepreneurs in the field despite funding challenges:

“We have hubs though they are not being utilized. Funding for these components and tools is a challenge too. Funding partners and NGOs coming in should partner with existing hubs like the MCIA hubs, because they're all over across the country and they are empty structures. By doing this, access to EV and the sustainability of the sector becomes easy. Youth who did not go through the formal education sector when VETs (Vocational & Educational Training) started due to school fee situations can use the hubs as e-mobility hubs to provide different training in EVs and battery management, training in conversion, maintenance, repair, and merchandising. This can complete the loop in terms of business access, employment, and self-employment.” (P27, Expert, Female)

The very value of incubators for start-up and scaling up is well understood by an expert who wants to see incubators in action for women in e-mobility:

“We need to empower women in a way that most of them with the incubators get to the level of full-blown companies. I want women to get grants of 1,000,000 [Kenyan Shilling] and push themselves. I don't want them to just be another story of failure.” (P5, Expert, Female)

Role models

To send positive signals to aspiring women riders, entrepreneurs, executives, engineers, and others, participants suggest creating role models whom others look up to and are inspired.

Participants contend that successful women in e-mobility who can be role models for the next generation of aspiring women can bring about attitudinal change and, therefore, need to be showcased:

“Awareness campaigns, showing successful women in e-mobility, can inspire others to join. Representation matters...” (P23, Entrepreneur, Female)

A male rider agrees:

“You could also showcase successful women in the sector as role models. That visibility would help others see that it's possible to succeed here.” (P6, Rider, Male)

Successful women in the sector may also have faced and overcome challenges and therefore can also demonstrate to the next generation to strategies to become resilient.

“Overcoming this [culture-driven constraint] requires efforts to share information, highlight role models, and present e-mobility as an economic opportunity for women, with clear environmental co-benefits.” (P2, Expert, Female)

Many private sector entities are also promoting such women to inspire a larger participation of women in the sector.

We are focusing on women who have already chosen careers in the energy and transport sectors and would like them to emerge as experts. And they will be the beacons to others. Looking at their experience, others should gravitate towards the sector. We will equip them to tell their story, and others will use it as an aspiration for what they can do. (P13, Entrepreneur, Male)

Not only the private sector, but also powerful female people at the state level can help with driving the sector for women.

“The government should establish a specific department for e-mobility, like how the First Lady champions clean cooking.” (P11, Entrepreneur, Male)

Macro-level Support: How Government can Support

Policy support

The views on the policy support for women in e-mobility in Kenya differ.

Some participants acknowledge the recent policy-driven rhetoric in support of women and youth in Kenya. A male entrepreneur notes:

“The policy, even the politics in Kenya, already indicated that women would be given preference. There has been advocacy for women in business. It used to be called a YAGPO. There were youth and women policies to facilitate access to procurement opportunities.” (P13, Entrepreneur, Male)

From a female perspective, policy implementations supporting women are not felt at all:

“No, not yet. The government hasn’t offered much direct support. Most encouragement comes from the companies themselves.” (P7, Rider, Female)

Policy gaps further limit inclusion. In response to a question on if there are laws which explicitly promote women’s participation in e-mobility, an expert states:

“No, not explicitly. They need to at the general laws and pick and customize it and run with it. If it’s for women, then what percent [or participation] it requires? Similarly, go to that section that is offering tenders and leverage, but nothing is explicit. For example, for if a woman is importing an EV will 50% of the duty be taken off? No nothing, nothing like that.” (P33, Expert, Female)

More importantly, currently in policymaking, a comprehensive approach with a clear framework is absent. Any policy guidelines prioritise new technology adoption and increase in revenue. Policy measures are top-down focusing on the national level and the alignment between regional and national policies does not exist. Therefore, before promoting greater participation of women in e-mobility addressing the underlying challenges and needs of women is very necessary to ensure their participation in the sector is sustainable in the long run.

“One major issue is the lack of guiding policies, especially in the energy sector. But the biggest problem is that government policy is not implemented. Broadly speaking, county governments lack energy policies, and even when the national government has some, they don’t know how to cascade them effectively. For budgeting, their focus is often limited to initiatives like solarizing markets. Moreover, the policies themselves are designed to promote adoption rather than sustainability, which requires mitigating the underlying issues, such as the significant disconnect between the national government, county governments, community implementers, and even the champions who claim to be advocating for climate change. The focus is often on revenue rather than meaningful mitigation... When policies are absent, and initiatives start without guidance, problems arise. Even manufacturers and businesses in the E-Mobility sector face challenges because countries lack a clear framework for what needs to be done in their areas” (P22, Entrepreneur, Female)

A female entrepreneur who promotes coordinated policy making further elaborates:

“Non-governmental organizations (NGOs) are trying, but they cannot address everything. NGOs and county governments are not working in a synergistic manner toward common goals. NGO projects and proposals are often disconnected from the county’s priorities. After three or five years, when an NGO’s project ends, there is little continuity or sustainability. My view is that to truly champion e-mobility, all stakeholders need to be involved. Currently, these community structures, such as the transport sector, already have millions of people. Yet, we are not fully adopting e-mobility despite this existing framework. Adoption can only succeed if county governments and the national government are aligned and treat e-mobility as a serious climate-mitigation agenda. Right now, everyone is working in silos, which limits progress... We do have policies. (P22, Entrepreneur, Female)

The participants further argue that such policies, even if partly existent, do not support women neither as an EV user/consumer nor as an EV producer:

“Policies should also be developed that support women and make their lives easier or more bearable. We have not yet seen any policy or incentive that supports what we do. For example, when we’re building accessible vehicles, we look at how we make the life of this lady, who is a caregiver, and how we simplify their day-to-day life. You know, how do we make it easier for them to travel?” (P17, Entrepreneur, Male)

Policy support in terms of workplace legislations hardly exist to make working conditions conducive for women in the sector. It is totally left to the discretion of companies to decide upon. *“For women in the workforce, do we have any labour laws that look into women in the transport sector? For example, if a working mother doesn't have someone to leave their child with, is it conducive for them to bring their child to the workplace? I think Safaricom has a ‘Mummy's Zone’. So, mums, without a nanny, can just bring their child to work. These things just encourage women to remain in the working sector and escape economic or financial doom.” (P15, Entrepreneur, Female)*

Some experts argue that there are measures taken elsewhere, such as encouraging universities and electronic media companies to endeavour to provide, preferably, equal space for women as for men. One participant claims that by getting young girls interested in science subjects, they can be equipped to join the e-mobility industry from an early age. However, these are individual, isolated and one-off examples and not coordinated actions within a systemic setting.

“We ensure that women are well represented in the online courses. We try to encourage universities to give them equal representation. If not equal, they can try to have 30% or even 20% [representation]. That will also empower them (women) from a young age and develop their love for the sciences. In countries like Rwanda and Tanzania, women are often doing the simpler (Non-Science) courses. And that's why we struggle.” (P5, Expert, Female)

Overall, with support from organisations such as UNESCO, GIZ, British High Commission and conversations among other stakeholders, including academic institutions, government representatives, and EV companies, a policy and practice initiative is underway in Kenya. Indeed, as a result of this groundwork a National E-Mobility Policy has been announced in February 2026 which provides guidelines for all sections of e-mobility sector. Women are mentioned in this policy document, yet the policy document itself acknowledges that the challenges and needs of women have yet to be identified before formulating how solutions can be provided.

E-mobility education

E-mobility education is different from training and upskilling activities. Whereas the latter can be provided by different stakeholders in the ecosystem, education and its provision is in the domain of government only. Therefore, any action in this area is closely related to education policy and provision. Currently there is no formal education in the area of e-mobility in Kenya. During the recent years GIZ have been developing an agenda for how e-mobility curriculum can be created and incorporated into what levels of education in Kenya. This effort did not specifically focus on women's education but on general e-mobility education aiming to raise skills for e-mobility sector in the future. To that purpose, GIZ promotes vocational education in e-mobility as well as e-mobility modules being incorporated into relevant engineering degrees at the universities. A separate e-mobility degree at universities does not seem to be favoured. GIZ recommendations have been considered for implementation in the National E-Mobility Policy document. However, way for how to do that are largely missing.

Participants in this study suggest practical ways to implement education related activities in raising skills in e-mobility. An entrepreneur suggests learning from formalised training in other areas to be transferred to e-mobility. According to him, radically developing an e-mobility (vocational education) curriculum is essential first task:

“The education system should develop a curriculum on e-mobility. Currently, we don’t have one. I participated in developing a curriculum for stove production and fabrication with the Kenya Institute of Curriculum Development (KICD), and it helped formalize training. Our interest was in having this training offered in one institution. But currently, if you want to gain skills in stove production, you have to go to a specific institution or event. If we can do the same for e-mobility, having local institutions train on e-charging, battery systems, and maintenance, it will build capacity and close the gap. The contribution of vocational training specifically for e-mobility technologies will be key in formalizing this field to ensure it becomes a course starting at institutions and offering certificate modalities.” (P11, Entrepreneur, Male)

Another entrepreneur highlights the importance of aligning the e-mobility curriculum with industry needs:

“... especially on aligning curricula with industry needs and increasing hands-on experience through dual VET (Vocational Education & Training) programs, where students split their time between classroom learning and industry practice. From my perspective, this approach is essential, but we should also start much earlier, even at high school, by introducing sustainability concepts that can help students make informed career choices. At the university level, the orientation period could also be used to hold workshops that help students understand their chosen courses and the kind of careers they lead to.” (P19, Entrepreneur, Female)

Including more women in the process necessitates different set of actions. As an expert aptly puts younger women need provision of STEM education carefully planned and implemented by the government to change cultural stigma on female engineering education:

“As a woman, I want to do electrical engineering, I would be told you know that's a masculine course. So, I believe if we have from the government and even from schools, if we champion for more women to transition to STEM courses, it really makes sense.” (P34, Expert, Female)

Indeed, women who received STEM education/training are confident and content in their roles despite many external challenges. A technician/expert at Arc Ride puts it as below:

“My experience there has been nice, but full of challenges I can say as a lady. I work as a motor inspection technician, an EV bike programmer and wearing harness technician, I like those three roles. Since I have a background in electrical training, so I guess its thumbs up for me, especially doing the motor thing, the programming thing, the wiring thing, nothing is new of course, I’m loving it there.” (P31, Expert, Female)

On route to incorporating e-mobility subjects to education, an expert suggests that such approach focussed on proper education first will in turn increase more participation of women in the long run compared to just giving funding to women.

“[Vocational Education & Training] VETs and academic institutions can really play a key and vital role, especially on transition and sustainability of the sector, by integrating EV into the curriculum. In most colleges, sectors like engineering, mechanics, and electronics should have e-mobility as a component in transition. Once the component is there, students will be more competitive, opening a floor for more inclusiveness in terms of gender advantage.” (P27, Expert, Female)

“NGOs do push for women’s involvement, but mostly through funding rather than training. So, investing more in education would really help. Similar case for incubators and private companies. I think they’re doing a good job overall. Maybe they push a bit too hard for inclusion, for example, some will only fund companies with 50% women, which sometimes leads to hiring based on gender rather than merit. So, I think instead of imposing inclusion through funding, they should focus more on providing training and real opportunities for women to grow. But generally, they’re doing well, and the more funding that comes in, the more companies will see Nairobi as an innovation hub.” (P12, Entrepreneur, Female)

Women education centres can be a transitional pathway to training women technicians and engineers, but government’s support in such training and connecting women to companies for recruitment is essential.

“Government should support local vocational training for women teaching e-mobility skills, like e-bike maintenance and charging. Exchange programs between Kenya and other countries could help too. But if this is left to manufacturers alone, the progress will remain slow due to limited funding.” (P11, Entrepreneur, Male)

“Partnerships are key. For example, if there’s a women’s engineering school or training centre, it could connect directly to mobility companies, creating a pipeline. Recruitment is essential. Once women receive training, companies are eager to hire them, since it also benefits their image. Having a recruiting and training system that links education to employment would be great.” (P12, Entrepreneur, Female)

Creating awareness of relevant educational paths

The choice of educational discipline is made by individuals quite early in their lives. Therefore, it is necessary that women are aware of options and how they lead to different professional choices at an early age so that they can make informed choices. Participants agree that it is important to make young girls aware of the opportunities and relevant educational pathways. It is equally important to make other stakeholders in the sector aware of women's potential contributions. A female entrepreneur says:

"If we capture girls' interest early, before their academic paths are set, we can help more of them pursue these opportunities naturally." (P23, Entrepreneur, Female)

There are examples of such best practices elsewhere in the world.

"Education is also key. The Competency-Based Curriculum (CBC) could introduce electric mobility topics at an early age, just like aviation is offered in some schools. In China, children learn about battery technology at a young age; we could do the same to spark early interest. Universities like Strathmore have been leaders in this field, but public universities should also be engaged." (P23, Entrepreneur, Female)

An expert agrees that the nature of roles and tasks in e-mobility is well-suited to women and shares how he and others are supporting young girls in making early career decisions that will lead them into the industry:

"Interacting with curious minds who want to know the opportunities they can take, curious innovators who are engaged... For me, it has been a fulfilling journey guiding them. The gap is narrowing. Now, more young women are opting for STEM-related careers. So, the change is happening." (P35, Expert, Male)

As a result, familiarity with the technical aspects of the jobs in the sector enhances women's confidence in contributing meaningfully, as a rider elaborates:

"So, you'll find that most women who have done electrical engineering got jobs in companies. Because when you are conversant with electrical engineering, you can be a technician in these E-Mobility bikes." (P10, Rider, Female)

The narrow pipeline: Quotas for women?

In the current setting, it is widely agreed that there are not many women coming through the educational, professional, and investment pathways that produce founders in the sector. As a short-term remedy, some participants recommend a target-based approach, such as implementing quotas for women in training, recruitment, etc. These propositions are based on the argument that the gender gap is so wide and is caused by systemic issues that addressing them promptly will require a mandatory approach rather than a persuasive one.

For instance, to ensure women are represented in entrepreneur/leader roles in an equitable ratio and number, it is critical that women are in adequate numbers in lower hierarchies so that organisations can promote them to higher hierarchies:

“They would say like 30% of the companies you support must be women-led, and then you go to a project like the project in Rwanda right now for E-Mobility, where the women may not even have a company. So, the rule is 30%, but there are no 30% women to support.” (P5, Expert, Female)

“Policymakers should first review how many women are included and then come up with regulations that enforce balance. For example, if a company has 100 employees, at least one-third should be women. This would not only promote inclusion but also create a positive image of women’s involvement in E-Mobility” (P6, Rider, Male)

Such a target-driven approach is mostly appreciated by riders, who suggest that it is necessary to ensure equitable representation of women since their segment suffers from absence of women:

“I think there should be a strategy or policy requiring that at least a third of a company's total stakeholders be women. That would help balance things and reduce bias. In most companies, you’ll find that women’s participation is still low, maybe 2 out of 44 in some fields.” (P6, Rider, Male)

The pipeline of women in mid-level roles is satisfactory but hardly progressing upwards; however, the blue-collar roles, such as riders, as well as leadership/strategic decision-making hierarchies, have a skewed representation of women.

“Another thing I am noticing is that we do have women at the mid-level, but they are not reaching the top. We must ensure we create space for them to add their voices to policy design and the whole process.” (P2, Expert, Female)

“Yes, there is a barrier. The barrier usually is the number of candidates available... We are looking for technicians, but if we just do a quick analysis of the responses, you'll see that. That is the first part. Then, we get the same skills metrics analysis.” (P13, Entrepreneur, Male)

Examples of targeted intervention exist elsewhere in other sectors. Some of these initiatives can be drafted on the same lines as those already implemented for SMEs and women entrepreneurs in general, but with a focus on the E-mobility sector. E-mobility as the strategic and fast-growing sector can benefit from specialised programs.

“There are some government programs for SMEs and women entrepreneurs (in general), but they aren’t specifically tailored to e-mobility. More targeted policies would help, like grants for women-led EV startups or partnerships with technical colleges to boost training.” (P18, Entrepreneur, Female)

These initiatives can also be strengthened by not only recommending (or mandating) that organisations in the sector have more women across hierarchies, but also by policy changes in related areas, such as a preference for bidders with equitable gender representation in their workforce in tender allocations.

“Policy support is key. The government can strengthen the enforcement of the one-third gender rule in E-Mobility-related agencies and projects. For instance, when awarding tenders or contracts in green transport, gender balance could be a consideration. Also, we could have targeted scholarships or training programs for women pursuing EV-related courses.” (P23, Entrepreneur, Female)

In the current context, these issues may require ambitious and multipronged approach to address the challenges. There are already some policies implemented in favour of women quotas. Especially women at lower segments of the sector as they build up capacity and women at higher levels when they need to invest more time at work need extra support for work-life balance.

“Currently, however, there is more encouragement for women to enter e-mobility. For instance, many grants require 50% female participation or at least one woman in a leadership position, demonstrating a clear push for female involvement in e-mobility businesses. However, apart from quotas or financial incentives there’s nothing. In some countries like Sweden and Norway, maternity and paternity leave are treated equally. I think that’s important. If companies offered family-centered benefits, like extending insurance to families, that could help too.” (P12, Entrepreneur, Female)

“There should be associations for female riders. For example, in Kenya, when you hire a bodaboda driver, a whole group usually shows up; it’s a strong community. But it’s hard for women to join that kind of network. So, creating a space for women riders, a community that gives them a voice in policymaking, would be really valuable.” (P12, Entrepreneur, Female)

Some private businesses indeed implement the quotas policy:

“When it comes to advancing women’s inclusion in the e-mobility sector, I believe it’s important to take a structured and measurable approach. For instance, at our organization, we use the JESI framework, which provides a systematic way to monitor, evaluate, and promote gender inclusion. We begin by looking at representation and participation, assessing where women are across different roles. For example, how many female drivers do we have? How many technicians or women in leadership positions? From there, we set clear targets to ensure that at no point do we fall below a minimum threshold, say, 30% female involvement.”

“On the capacity-building side, we also set deliberate targets for our trainings, aiming for 50–70% female participation, and in some cases, organizing women-focused sessions to strengthen technical confidence. Since access to finance remains a major barrier, our operations and finance teams collaborate to identify or design affordable financing options that enable women to participate meaningfully in the sector.” (P19, Entrepreneur, Female)

Despite some real examples of quotas favouring women exist, women entrepreneurs do not feel their effect:

“Even in recent calls for proposals, I haven't seen where they specify that organizations should be women-led. They state that women-led organisations will be prioritized. If they specify that [mandate], it changes things for us. Right now, it is highly competitive. We are applying against established players. However, if they explicitly called for women-led organizations, it would increase our chances, perhaps by 60%, that someone would look into our proposal.” (P21, Entrepreneur, Female)

Moreover, some participants caution that such a mandatory approach should not become a book exercise but should be consistent enough in order to change the mindset.

“Women are fewer, definitely. There is some effort to bring women in, but sometimes it feels like they just want to meet a “gender marker.” (P21, Entrepreneur, Female)

Yet, the quota policy has its own caveats. Some entrepreneurs think that, even when policymakers promote specific targets, it is hard to implement them in practice. One (male) entrepreneur provides insights on why ensuring 50-50 representation of men and women is presently challenging, as applications from women are seldom in equal numbers to men in applications for those opportunities:

“We said, “We are going to train X number of people, and our selection must have 50% men, 50% women. In the applications, it was a 70-30 ratio, or a 60-40 ratio, men to women. But we kept the 50-50 percentage in the final selection. Because the programme is designed to promote that... (indicates towards a banner) in “the African context, that there are a lot of opportunities for everybody to jump in.” (P13, Entrepreneur, Male)

This feeling replicates in (female) entrepreneurs as well. A few female participants in the study expressed reservations about being perceived to have progressed in their profession when subject to a quota. Female participants explain that being successful while the regulator has enforced a target-based approach to promoting women may have an unwanted outcome of successful women being stigmatised:

“They said, ‘women are encouraged to apply’, or they ‘would prefer a woman’. But I would like to go as a human. When you give me the job, I don't want to be thinking you gave it to me cause I'm a woman. I would like to earn it. I would like to earn it as the girl who is a professional. I would want a job where someone says [name of the participant] is the best fit for this job because she has the best qualification. Not because of the [gender diversity] agenda.” (P5, Expert, Female)

What gets measured, gets done: Building statistical data for women in e-mobility

In increasing systemic participation of women in e-mobility, the experts report that a major challenge is the absence of reliable data systems. There are no parameters in place to measure its extent or to assess it periodically across different organisations, hierarchies, and regions of Kenya.

“We don’t have reliable data to show the actual numbers... even if you search, you won’t find credible statistics. No comprehensive data has been collected to represent these spaces accurately.” (P26, Expert, Female)

Without data, experts argue that policy and intervention remain speculative and weakly targeted. Experts stress the critical gap between reported and actual participation. This lack of evidence may even obscure the true scale of inequality, and the absence of data may be a barrier to accountability and intervention. Currently, any available statistics about women’s participation in the sector relies on companies’ own informal declarations if they wish to do so. There is no formal state-led effort to collect any data to this respect, but the recently launched National E-Mobility Policy puts statistical database formation as one of its major targets.

One way, participants suggest, to enhance women's participation in the industry is by adopting a report-and-review approach, in which policymakers can, with scrutiny, tweak regulatory efforts to ensure their objective of higher women's representation is achieved. Such efforts can also help with developing a longitudinal database for women’s participation in the sector in different hierarchies. However, as recently announced in the National E-Mobility Policy document, a cross-ministry effort is necessary to accomplish such huge task.

“Generally, gender is often mentioned as a goal, but there is no deliberate definition of how to measure it or track progress. We need a tangible description of what inclusion looks like in our frameworks, along with a clear outline of how to get there. It’s a multi-stakeholder situation involving the Ministries of Gender and Transport. We need to set realistic, measurable targets.” (P2, Expert, Female)

Metrics and measurement of women’s participation in the sector is not only issue for general statistics that the government can gather, but also private businesses doing their own homework.

“Finally, continuous monitoring and evaluation are key. We track progress, identify challenges, and refine our interventions based on emerging insights. This way, inclusion becomes a sustained and measurable practice rather than a one-time effort.” (P19, Entrepreneur, Female)

Safety

Currently, issues about safety and different needs of women are usually managed by private businesses in an informal format and based on their will to deliver on that.

“We also pay attention to infrastructure and safety. For instance, when setting up charging stations, we ensure the environment is conducive, providing facilities such as rest areas, toilets, or even mothers’ rooms where appropriate. From a policy standpoint, gender inclusion is integrated into planning and budgeting processes, ensuring that it is intentional and adequately supported.” (P19, Entrepreneur, Female)

Several participants highlight the necessity to improve women's safety in general by introducing robust policy on workplace harassment and discrimination:

“A critical area is workplace safety. We need clear policies addressing harassment and discrimination in technical workspaces. When women feel safe and valued, they perform better and stay longer in the field.” (P23, Entrepreneur, Female)

And women in deprived areas suffer more in terms of harassment and discrimination. They need special attention.

“In slum areas, women are more vulnerable. Many girls find themselves pregnant by the age of 14 or 15, and their dreams are put on hold. GBV also puts them back. In the Jua Kali sector, e.g., in garages, a girl, especially one with a child, cannot just work in her overalls without facing harassment. One of our mechanics left three jobs because of sexual harassment from male supervisors...So,. When I place girls in internships in the Jua Kali (informal) sector, I visit them to ensure they aren't being harassed by the men there.” (P21, Entrepreneur, Female)

Just as in training, participants stress the systemic approach to women's safety, i.e. considering it as not separate from workplace culture, recruitment and promotion practices.

“The key is to create a genuinely inclusive and conducive working environment, rather than inheriting unequal systems and expecting them to become equal on their own. That means addressing workplace culture, recruitment and promotion practices, facilities, safety, and the broader conditions that enable women to enter, remain, and advance in the sector.” (P3, Expert, Female).

Interestingly, given the cultural context in Kenya, the paradoxical nature of empowering women in terms of making women safer is brought forward by a female entrepreneur. Efforts meant to make women safer by empowering them can sometimes produce unintended risks and unintentionally create new vulnerabilities.

“When you're empowering women, you may also be opening them up to violence because when these women become empowered and have their own money, their husbands become insecure. So, it's a very sensitive balance. So, we cannot just do it halfway, but empowerment needs to be done holistically” (P14, Entrepreneur, Female)

7.CONCLUSION

This report explored the challenges women in E-Mobility sector in Kenya face. It has provided rich in-depth narratives from women's perspectives who hold different roles in the sector. The report used a conceptual structured approach by first identifying the individual challenges which pertain to lack of confidence in women, educational and skills gaps preventing women taking on roles such as engineers, technicians and physiological challenges that may hinder women's participation in the sector in some roles such as riders. Systemic challenges appear to be more structural. The continued legacy of ICE transport system hindering women's engagement in the related electric vehicle technology seemed prominent. Socio-cultural environment and judgemental perceptions of the society for women taking on men's roles in the sector was criticised.

Support mechanisms to increase women's visibility and engagement in the sector were focused on increasing awareness in the society that women can deliver in this sector in different job roles. More support from the government is needed for upskilling women in different roles. Management, entrepreneurship and engineer/technician roles require different education and training programs for upskilling. To plan and strategise for gender inclusive upskilling, participants highlighted the necessity for e-mobility statistics to be compiled, especially disaggregated by gender, and perhaps considering implementation of quotas for women in areas where women are overlooked to support their access to certain programmes, funding opportunities, networks.

Appendix

Key Informant Interview Guide: Women in E-Mobility in Kenya

Research to assess the status, challenges, and opportunities for women's participation and leadership in the e-mobility sector and its value chain.

Introduction & Consent

Introduce the research purpose, confidentiality, and consent for recording (if applicable).

Please state your name.

Opening question- understanding role and experience in e-mobility.

Could you briefly describe your involvement in the e-mobility sector?

How long have you worked /engaged in this field, and what is your perspective on gender inclusion?

Overview & Trends of the sector and gender dynamics

- How would you describe the current state of the e-mobility sector in [country/region]?
- What key trends do you see in workforce and leadership diversity in this sector?
- Are there specific segments (e.g., manufacturing, charging infrastructure, policy) where women are more/less represented?

Gender Representation & Barriers in entering and advancing in e-mobility

From your observation, what is the level of women's participation in:

- Technical roles (engineering, EV maintenance)?
- Leadership/decision-making roles?
- Entrepreneurship (startups, supply chain businesses)?
- What are the biggest barriers preventing women from entering/growing in this sector?
- (Probe: Skills gaps, cultural norms, recruitment biases, access to funding, etc.)
- Are there challenges specific to certain e-mobility value chain segments?

Exploring strategies and developing strategic recommendations to improve gender inclusion

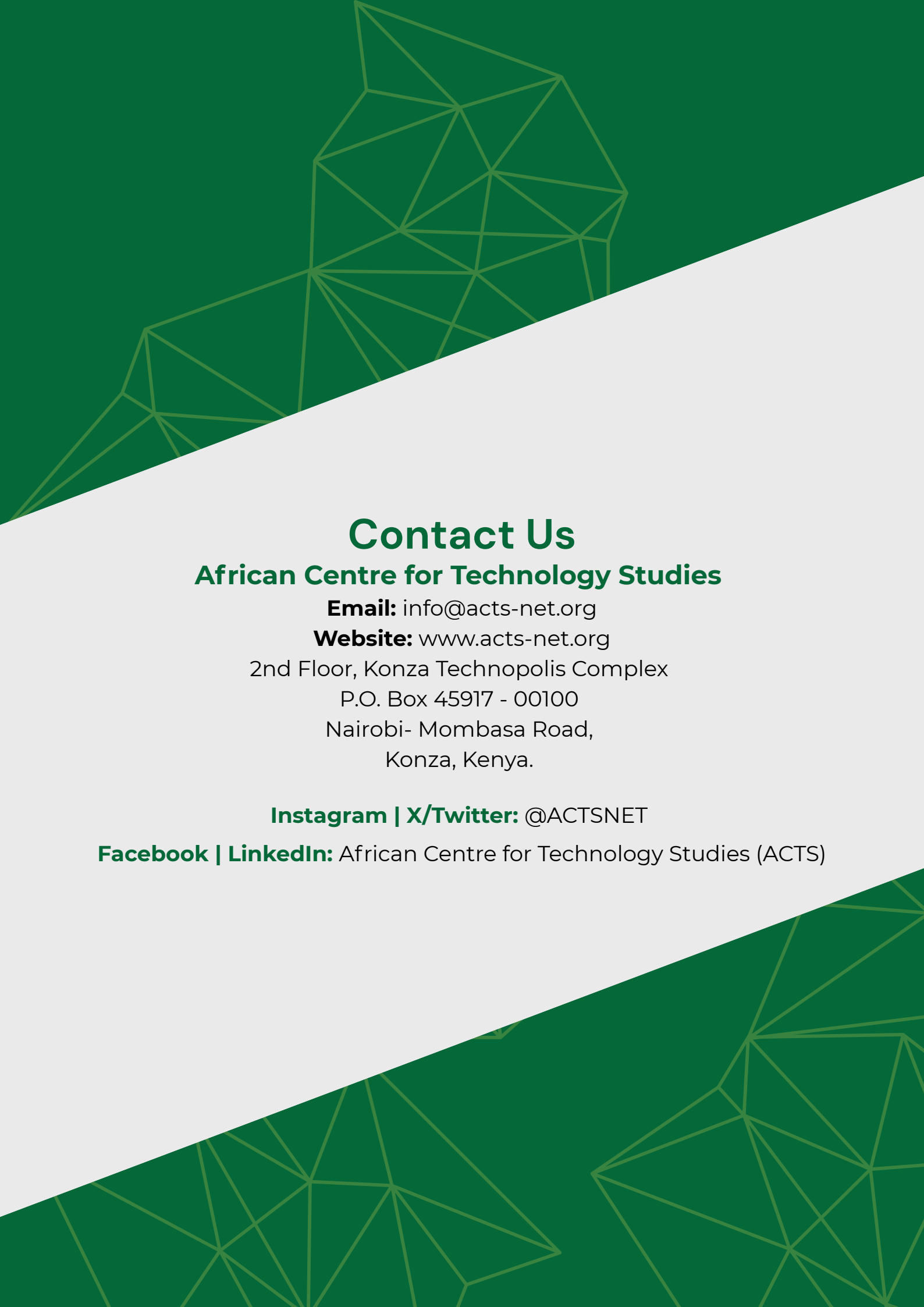
- What opportunities exist for women in emerging e-mobility fields in Kenya? (e.g., battery tech, smart charging, policy)?
- Are there successful examples of initiatives promoting women in e-mobility in Kenya? (e.g., training, mentorship, quotas)
- As an expert in the field, are you aware of any best practices implemented in other African countries? Would such practices be suitable to implement in Kenya? Why? Why not?
- How can the private sector, governments, and NGOs better support women's inclusion?
- What role can education and vocational training play in bridging the gender gap? How?
- In your expert opinion, what would be the most effective strategic tool to address women's inclusivity in e-mobility in Kenya? How can this be implemented?

Policy & Institutional Support- systemic enablers/constraints

- Are there existing policies or incentives encouraging gender diversity in e-mobility?
- Are the existing policies or incentives working for women? If not, why?
- How can policymakers better address gender disparities in this sector?
- What partnerships (e.g., academia-industry) could help advance women's participation?
How?

Closing question

Is there anything we haven't discussed that you think is critical for understanding gender inclusion in e-mobility?



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