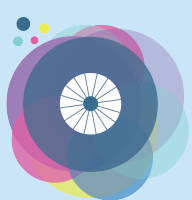


EMPOWERING WOMEN IN E-MOBILITY



PRINCIPLES FOR GENDER-INCLUSIVE TRANSPORT SOLUTIONS



**WE DRIVE
CHANGE**
WOMEN IN E-MOBILITY DRIVE CHANGE

EXECUTIVE SUMMARY

Need for Action

Improving gender equality in transport is crucial as three out of five women globally face sexual harassment in public transport, which hampers their access to jobs, education, and economic opportunities. Women are also underrepresented in the transport workforce, making up less than 20% of the global workforce and often facing violence and harassment at work. To address these issues, increasing women's involvement in transport is essential. The transition to electric vehicles (EVs) offers a chance to promote gender inclusivity, as demonstrated in Nepal.

Kigali Gender-Inclusive E-Moto Project

In Kigali, the SOLUTIONSplus project introduced a gender-focused approach in its electric motorcycle taxi pilot. This initiative involved collaboration among UN-Habitat, the City of Kigali, the University of Rwanda, the Urban Electric Mobility Initiative (UEMI), the Wuppertal Institute, Ampersand (an electric mobility company), GIZ, and Jali Finance (an asset financing firm).

Positive Results

The project led to the successful training and certification of 24 women out of 35 participants, who received electric motorcycles in November 2022—a remarkable achievement in Kigali. Ongoing monitoring and research highlighted critical factors for success, including planning, training, retention, evaluation, and dissemination. These insights are crucial for scaling up similar projects in Kigali and East Africa.

SOLUTIONSplus Policy Advice

Purpose: This report aims to share insights to:

- Support Kigali-based initiatives enhancing women's roles in electric mobility as taxi or delivery service operators.
- Foster dialogue and knowledge exchange among East African companies with a gender-inclusive focus, particularly in Kenya, Uganda, Sierra Leone, and Togo.

This paper was made possible through the generous funding of the SOLUTIONSplus project, supported by the European Commission's Horizon 2020 programme.

Original paper: Improving Gender Equality Through Electric Mobility, Learnings from the SOLUTIONSplus Pilot in Kigali, Rwanda, Year: 2023

Authors: Emilie Martin, Vera-Marie Andrieu, Judith Owigar, Annika Berlin, Moise Bitangaza, Clive Irambona



This project has received funding from the European Union Horizon 2020 research and innovation Programme under grant agreement no. 875041

CHECKLIST FOR A GENDER-INCLUSIVE E-MOBILITY PROJECT

Key Recommendations for Scaling Up in Kigali and East Africa

1. Planning

- Context Mapping: Analyze previous projects, literature, and stakeholders.
- Understand Gender Norms: Identify local social norms in transport.
- Co-Design: Develop a vision and strategy with experts in relevant areas.
- Monitoring: Create a plan for evaluation and learning.

2. Training

- Trainee Selection: Choose and recruit a suitable cohort with clear criteria.
- Driving School: Select a school through competitive bidding with experience in training women and anti-harassment policies.
- Supportive Conditions: Ensure accessible training, financial support, and address harassment.
- Exam Conditions: Ensure exams are conducted in a safe environment.
- EV Training: Include specific training on electric vehicles.

3. Retaining

- Address Challenges: Clarify physical demands, involve family support, and encourage peer support.
- Service Type: Evaluate passenger vs. delivery services; consider safety and market opportunities. Implement women-only spaces or partner with platforms that allow women riders.
- Monitor Operations: Track issues and create safe spaces for discussion.
- Continuous Training: Offer ongoing skills and rights training.

4. Evaluating

- Beneficiary Feedback: Collect insights from trained women about barriers and motivators.
- Wider Perceptions: Compare feedback with perceptions from the broader female population.

5. Disseminating

- Scale Up: Share successes through exchanges and media; discuss policy implications.
- Replicate: Implement successful elements in other cities or regions.
- Explore Value Chain: Consider roles in vehicle assembly, maintenance, and STEM education.
- Other Vehicles: Evaluate other types like electric three-wheelers and address barriers in walking and cycling.

CHALLENGES FACED BY WOMEN IN THE TRANSPORT SECTOR

Women globally face severe challenges in transportation, including underrepresentation in the workforce and numerous mobility constraints such as insecurity, harassment, and intimidation.

Challenges for Women as Transport Passengers

Sexual Harassment: Globally, three in five women experience sexual harassment on public transport. In Nairobi, 54% of women and in Kampala, 45% of young women report similar issues. In India, up to 91% feel unsafe on public transport, and 89% of women in Buenos Aires have faced harassment.

Mobility Constraints: Women often restrict their travel, avoid public transport, or walk longer distances due to safety concerns. This limits their access to jobs, education, and social opportunities. In Malawi, harassment by transport workers has led to teenage pregnancies and interrupted studies, with blame often placed on the girls themselves.

Physical Constraints: Women, especially mothers, face difficulties with transport infrastructure not accommodating children or lacking necessary facilities.

Lack of Participation in the Transport Industry

Under-Representation: Women make up only 17% of the transport workforce in many countries. Barriers include social norms, fear of harassment, safety concerns, and lack of access to financing. This low representation leads to gender biases in transport planning and operations.

Workplace Violence: Even within the sector, women often face verbal or physical abuse. In Europe, 25% of female transport workers report regular violence.

Cultural Barriers: The transport industry is often viewed as a male domain, which hinders women's participation. Increased awareness and government commitment are needed to address these barriers and support women's entry into the field.

SITUATION IN SUB-SAHARAN AFRICA

In Sub-Saharan Africa, women frequently encounter gender-based violence and harassment (GBVH) in public spaces and across all transport modes.

Safety Concerns: In Lagos, only 5% of female students feel safe walking to and from feeder stations at night. In Nairobi, 58% of women in the matatu sector report daily sexual harassment, with 32% staying silent about it. Similarly, in Kigali, over 50% of women avoid traveling after dark due to safety concerns, with prevalent blame placed on women for harassment (UN Women, 2013).

Underrepresentation in Transport: Women are significantly underrepresented in the transport industry. In Nairobi, only 7% of drivers and conductors are women, and in Rwanda, women made up just 2.6% of the transport workforce in 2019-2020. The moto-taxi sector in Rwanda reported no female drivers in 2017. Women face barriers such as lower access to finance and vehicle ownership (Flone Initiative, 2018; Ministry of Infrastructure, 2021).

Limited Research: Data on gender-based violence in urban transport is scarce, with most research focusing on household or rural violence. Recent studies by organizations like the Flone Initiative and international groups are beginning to address these issues, highlighting gaps in current transport policies and the need for gender-specific considerations (Priya Uteng et al., 2021; UNEP, 2022).

Efforts are underway to integrate women more effectively into the transport sector and address these challenges, but significant barriers remain.

IMPROVING GENDER EQUALITY IN THE TRANSPORT SECTOR

As women's economic participation grows in Sub-Saharan Africa—rising from 30% to 60% of female-headed households between 1989 and 2011—it is crucial to address mobility barriers that impede their empowerment and equality.

Key Recommendations for Stakeholders:

Decision-makers and Government: Remove legal barriers for women in transport, legislate against harassment and mandate GBVH policies for companies.

Transport Providers and Contractors: Implement gender-inclusive policies, recruit more women and develop mechanisms for confidential reporting of GBVH.

Digital Platforms: Utilize tracking tools and digital reporting mechanisms.

NGOs and Research Institutions: Advocate for increased female participation and develop specific financing programs for women.

Infrastructure and Vehicle Design: Improve lighting, add baby-changing facilities, and design vehicles with features for women, such as individual seating and accessible designs for strollers.



GENDER-INCLUSIVE ELECTRIC MOBILITY PROJECT IN KIGALI

To address women's under-representation in transport, the SOLUTIONSplus project in Kigali integrated a gender-focused approach to electric mobility. The initiative trained women to become moto-taxi drivers and equipped them with electric motorcycles, aiming to understand and overcome barriers for women in the transport sector.

Project Timeline:

2021, Q2: UN-Habitat funded Ampersand to develop and provide electric motorcycles for female drivers.

2021, Q3-4: Flone Initiative, UEMI, and UN-Habitat assessed gender-inclusive project success factors and past failures in Kigali.

2022, Q1: GIZ joined to lead driver training with the United Driving School.

2022, May: Official project launch in Kigali.

2022, Q2-3: Thirty-six women received ten weeks of training with internal combustion engine motorcycles. Attendance was high, with one dropout for personal reasons.

2022, Q3: Jali Finance provided additional financial support as more women than expected passed the driving exam.

2022, Q4: Women completed driving exams under protected conditions with a 68% success rate.

2022, Aug-Sept: Initial surveys assessed barriers and perceptions of moto-taxi driving.

2022, Oct: Women received ten days of additional training on Ampersand electric motorcycles.

2022, Nov: Twenty-four electric motorcycles were distributed to successful candidates.

2022, Nov-Dec: Surveys gauged public perception of female moto-taxi drivers, and a cooperative was formed.

2023, Feb: Follow-up surveys evaluated progress.

Ongoing monitoring and stakeholder engagement aim to scale and replicate the project.

PRINCIPLE 1: PLANNING

1. Contextual Analysis:

Conduct a thorough baseline assessment before project implementation. This includes:

Review of Past Projects: Analyze previous gender-inclusive projects in the area to understand their outcomes and learn from their successes or failures. This involves desk research and interviews, ensuring a safe environment for honest feedback.

Literature Review: Examine local characteristics, such as women's involvement in the transport sector, gender-based violence, and existing policies. Key questions include:

- Are certain vehicle types more or less conducive to women's participation?
- What economic activities around transport involve women?
- Where is gender-based violence most likely to occur?
- Are there supportive policies in place?
- Stakeholder Mapping: Identify key local stakeholders, including civil society, public authorities, and organizations focused on gender and transport.

2. Refining the Analysis:

Understand social norms affecting women's participation. This includes:

- Negative Norms: Identify barriers such as harassment or biased attitudes.
- Positive Norms: Leverage supportive attitudes or innovations that might favor women's involvement.

3. Co-Designing the Project:

Develop the project with a clear strategy and vision:

- Strategy: Define the project's aims, expected impact, and alignment with local context and past experiences.
- Implementation: Address vehicle types, risks, training needs, and costs. Collaborate with partners, ensure adequate equipment, and secure funding. Consider creating female-only cooperatives or using delivery platforms to improve operating conditions for women.

4. Monitoring and Evaluation:

Establish a monitoring plan with regular feedback and transparent information. Ensure safe reporting conditions for any issues and address challenges over time to achieve meaningful impact. Principle 2: Training

1. Select a Cohort:

PRINCIPLE 2: TRAINING

1. Select a Cohort Size

- **Cohort Size:** Start with a smaller group to ensure effective training and individual attention. In Kigali, 35 women were trained, which was manageable compared to larger groups in previous projects.
- **Beneficiary Criteria:** Set clear selection criteria to ensure candidates are fit for the training and role. Address health and physical requirements upfront to avoid issues like those encountered in Kigali.
- **Participant Recruitment:** Choose motivated candidates through collaboration with industry and NGOs. Consider a small commitment fee to ensure dedication.

2. Choose a Driving School

- **Selection:** Use a competitive bidding process and prioritize schools with experience in training women and those with gender-conscious policies. Ensure the school has sufficient vehicles to minimize waiting times.
- **Safety:** Ensure the driving school provides insurance for trainees and the vehicles. In Kigali, insurance and maintenance were covered by UN-Habitat, and safety gear was provided.
- **Accessibility:** Ensure the training location is convenient and financial support is available for transportation and other needs. Kigali's training site was easily accessible, and allowances were adjusted based on feedback.

3. Ensure Supportive Training Conditions

- **Monitor Training:** Regularly oversee training and address any issues of harassment or gender-based violence. Ensure gender-sensitive policies are in place.
- **Awareness:** Conduct gender sensitization training for driving school staff.

4. Conducive Exam Conditions

- **Protected Environment:** Hold exams in a controlled environment to reduce pressure and distractions. In Kigali, exams were conducted in a female-only setting with familiar training grounds.
- **Electric Motorcycle Training:** Provide additional training on electric motorcycles covering their operation, maintenance, and benefits. This was implemented in Kigali to familiarize women with electric vehicles.

PRINCIPLE 3: RETAINING

1. Address Challenges Early

- **Clear Communication:** Clearly outline the physical, organizational, and financial demands of being a moto-taxi driver during recruitment. In Kigali, better communication of these demands was recommended.
- **Supportive Spaces:** Create safe spaces for women to discuss challenges and solutions related to long hours, physical demands, and personal responsibilities.

2. Evaluate Service Types

- **Passenger vs. Delivery:** Assess the pros and cons of passenger and delivery services for women. Delivery services are often safer and less physically demanding, as seen in Kigali where women preferred and thrived in delivery roles. Consider partnerships with logistics companies or ride-hail platforms to enhance safety and flexibility.
- **Operational Hours:** Prefer daytime operations to reduce risks and align with caregiving responsibilities. Flexible arrangements, like sharing motorcycles, should be managed carefully to maintain gender inclusivity.

3. Monitor and Adapt

- **Ongoing Monitoring:** Regularly track and address issues such as health concerns, gender-based violence, and operational challenges. In Kigali, challenges included health-related issues and pressure to share motorcycles.
- **Safe Reporting:** Establish confidential reporting mechanisms and safe spaces for women to discuss problems and seek support.

4. Continuous Training

- **Skill Development:** Provide ongoing training on rights, safety, and business skills. In Kigali, additional training covered rights, English, map navigation, customer service, and self-defense.

PRINCIPLE 4: EVALUATING

1. Understand Perceptions

- Pre-Training Survey: Women cited economic empowerment, long-term stability, and societal impact as motivations to become moto-taxi drivers. Barriers included road safety, lack of experience, and long working hours. Many sought additional technical and safety training.
- Post-Training Survey: Most women rated the electric motorcycles positively. Challenges included high repair costs, accidents, health issues, and fatigue. Safe spaces for feedback and support are recommended.

2. Broader Female Perceptions

- General Survey: A wider study revealed that 83% of women prefer not to drive at night due to family care, and 80% noted lack of family support. Gender-based harassment and road safety were significant concerns. Motivation factors include financial improvement and career opportunities.
- Support Measures: Recommended strategies include subsidized loans for women (88%), targeted driver training campaigns (85%), and special training exams (84%). Awareness campaigns for gender harassment, while important, were less emphasized (72%).

PRINCIPLE 5: DISSEMINATING AND SCALING

1. Exchange and Scale

- **Organize Exchanges:** Facilitate discussions among organizations with similar gender-inclusive projects. In Kigali, partners like UEMI and Flone Initiative have collaborated with local e-mobility companies. Future projects should establish platforms or committees with city and government partners to share findings.
- **Scale Successful Components:** Replicate effective project elements and seek funding for regional expansion. Focus on smaller cohort sizes, safe operational models, and creating supportive communities. Integrate gender-based violence awareness and safety in training.

2. Policy and Broader Implications

- **Policy Contributions:** Share project findings with policymakers to address gender disparities in transport policies. Projects can support Rwanda's goal to increase female transport sector workers to 30% by 2034/35.
- **Replication Opportunities:** Expand successful models to other cities or regions, leveraging existing organizations and networks. Consider roles in vehicle assembly, maintenance, and battery swapping for women.

3. Explore Other Segments

- **Value Chain Roles:** Involve women in various industry segments like assembly, maintenance, or battery swapping.
- **Vehicle Types:** Evaluate the potential of electric three-wheelers or bicycles, which offer safer and more flexible options for women. Promote cycling through awareness campaigns to counter negative perceptions.

4. Address Barriers and Opportunities

- **Broaden Vehicle Types:** Consider diverse vehicles like electric tricycles for rural areas. Ensure awareness-raising campaigns support all sustainable transport modes, including bicycles.

REFERENCES

1. Aloï, 2021. Safa-tempo-The past, present & the future of EV industry of Nepal! URL <https://aloi.global/safa-tempo-the-past-present-the-future-of-ev-industry-of-nepal/>
2. BCG Green Ventures, 2022. Women-focused customer research for electric two-wheelers.
3. Bijuli Power, 2023. Providing accessible financing to electric vehicle mobility for micro-entrepreneurs in the informal sector in Nepal.
4. Cassidy, A., 2020. How Women Are Driving Change in Kathmandu. Climatelinks. URL <https://www.climatelinks.org/blog/how-women-are-driving-change-kathmandu>
5. Dusabemungu, A. (2022). City of Kigali, Safi Universal Link E-mobility Company join hands to increase the number of female motorcyclists in green transport. Top Africa News, <https://www.topafricanews.com/2022/06/02/city-of-kigali-safi-universal-link-e-mobility-company-join-hands-to-increase-the-number-of-female-motorcyclists-in-green-transport/>
6. EMPOWER Consortium, 2022. Tackling Sexual Harassment in sub-Saharan African Transport: Changing Attitudes, Meeting Needs.
7. Empower Project, 2023. SHE CAN Tool. URL <https://shecan-tool.info>
8. European Bank for Reconstruction and Development (EBRD), CDC Group plc (CDC), International
9. Finance Corporation (IFC), 2020. Addressing Gender-Based Violence and Harassment (GBVH) in the Public Transport Sector.
10. Flone Initiative, 2022a. Improving Training Outcomes and Employability of Women in the Public Transport Industry: Kigali Case Study. Urban Pathways.
11. Flone Initiative, 2022b. Integrating Women in the Uptake of Electric Mobility in the Two- and Three-Wheeler Sector. UN Environment Programme.
12. Flone Initiative, 2018. Report on Gender Equity Assessment of Nairobi's Public Minibus Transport Services. Flone Initiative Trust.
13. GGGI, 2019. Driving the grassroots green economy. Inter Press Services. URL <http://www.ipsnews.net/2019/09/driving-grassroots-green-economy/>
14. ITF panel on gender-inclusive data collection in African cities, n.d.
15. Leon-Himmelstine, C., Munive, A., Samuels, F., Stuckert, A., 2020. Safe Ride – Tackling Gender Norms and Preventing Sexual Harassment on Public Transportation. UK: Plan International.
16. MIGEPROF, 2021. The fight against GBV concerns every Rwandan. URL <https://www.migeprof.gov.rw/news-detail/the-fight-against-gbv-concernsevery-rwandan>
17. MINEDUC, 2019. 2019 EDUCATION STATISTICS. MINEDUC.
18. Mito, W., 2020. Kenyans Share Ordeal in Hands of Rogue Boda Boda Riders.
19. Ng, W., Acker, A., 2020. The Gender Dimension of the Transport Workforce (International Transport Forum Discussion Papers No. No. 2020/11), OECD Publishing. International Transport Forum, Paris.
20. Odhiambo Opondo, V., Kiprop, G., 2018. Boda boda motorcycle transport and security challenges in Kenya (No. NCRC Research Report No. 14). National Crime Research Center.
21. Otu, Smart.E., Aguga, A.O., 2020. Lagos, Nigeria, in: Transit Crime and Sexual Violence in Cities. International Evidence and Prevention.