

# What's the impact of providing catalytic capital to scale e-buses in Kenya and Rwanda?

## *Insights from BasiGo*



## Evaluation

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|                         |                                                       |
|-------------------------|-------------------------------------------------------|
| <b>BII</b>              | British International Investment                      |
| <b>CBU</b>              | Completely-built-unit                                 |
| <b>CKD</b>              | Completely-knocked-down                               |
| <b>DFIs</b>             | Development finance institutions                      |
| <b>EV</b>               | Electric vehicle                                      |
| <b>EQ</b>               | Evaluation question                                   |
| <b>GHG</b>              | Greenhouse gas                                        |
| <b>ICE</b>              | Internal combustion engine                            |
| <b>KES</b>              | Kenyan shillings                                      |
| <b>KII</b>              | Key informant interview                               |
| <b>kWh</b>              | Kilowatt hours                                        |
| <b>MT</b>               | Metric tonnes                                         |
| <b>MWh</b>              | Megawatt hours                                        |
| <b>NPS</b>              | Net promoter score                                    |
| <b>PAYD</b>             | Pay-as-you-drive                                      |
| <b>RWF</b>              | Rwandan francs                                        |
| <b>SACCOs</b>           | Savings and Credit Cooperative Organizations          |
| <b>tCO<sub>2</sub></b>  | Tonnes of carbon dioxide                              |
| <b>tCO<sub>2e</sub></b> | Tonnes of carbon dioxide equivalent                   |
| <b>ToC</b>              | Theory of Change                                      |
| <b>UNFCCC</b>           | United Nations Framework Convention on Climate Change |
| <b>VAT</b>              | Value added tax                                       |
| <b>VC</b>               | Venture capital                                       |

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## Foreword

In East Africa, the transition to cleaner transport is starting to take shape. This includes public transport, where electric buses are a small but fast-evolving part of the e-mobility market.

Kenya's transport sector accounts for 13 per cent of the country's greenhouse gas emissions, contributing significantly to poor air quality. In Nairobi alone, the 20,000 diesel buses on the roads are a major source of pollution. Electric buses can reduce emissions, improve air quality, and create green jobs. But barriers including high upfront costs, perceived risks and limited access to appropriate finance constrain uptake.

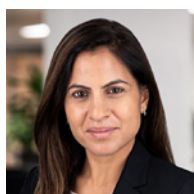
This is where catalytic capital has a key role to play. We use concessional capital to support businesses developing and scaling climate solutions with transformative potential, helping them build the track record and scale needed to attract commercial investment.

One example is BasiGo, an e-mobility company headquartered in Nairobi and operating in Kenya and Rwanda. As a first mover, it is introducing state-of-the-art electric buses along with charging and maintenance services for public service bus operators. BasiGo uses an innovative 'pay-as-you-drive' financing model which makes electric buses more affordable to operators.

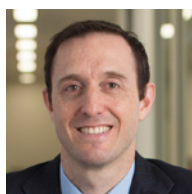
In 2023 we provided flexible debt which enabled BasiGo to pilot and scale its model in Kenya, and subsequently in Rwanda with support from our follow-on investment in 2024. This evaluation, funded by the UK's Foreign, Commonwealth & Development Office (FCDO), independently examines how those investments have performed. It explores how flexible debt has supported BasiGo to pilot and grow its model, and what this has meant for people, the planet, and the wider market.

The findings are encouraging. BII's flexible debt was critical to scaling BasiGo's operations, illustrating how this type of capital can help bridge the gap between innovation and commercial viability in sectors where commercial finance is not yet available. It enabled BasiGo to expand its operations, with 101 buses on the road in Kenya (up from 19) and 34 in Rwanda (up from six) by the end of 2025, and demonstrate the viability of its business model, while advancing access to cleaner public transport. The evaluation also found strong evidence of improved profits for bus operators and customer experience for passengers, alongside significant potential to reduce transport emissions. In addition, it highlights the broader ecosystem required for the market to scale, including charging infrastructure, supportive policy frameworks and access to suitable financing.

Overall, these findings reinforce the role catalytic capital can play in building new markets and accelerating the transition to low-carbon transport.



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## Executive summary

### Investment context and purpose

BII's Kinetic,<sup>1</sup> which together with Catalyst forms BII's Catalytic Capital toolkit, deploys risk-tolerant, catalytic capital to test, seed, and scale cutting-edge technologies or unproven business models and strategies with the potential for transformational climate impact in Africa and Asia. Through its catalytic capital e-mobility programme, BII has invested in BasiGo Ltd, a distributor of electric buses (e-buses) which has been in operation in Kenya since 2021 and in Rwanda since 2023. In addition to introducing a new technology to the Kenyan and Rwandan markets, BasiGo uses an innovative pay-as-you-drive (PAYD) lease model, under which bus operators pay a per kilometre fee – subject to a monthly minimum – covering the leasing of the bus, daily charging and regular servicing. BII has made two investments in BasiGo through Kinetic: \$5 million in its Kenyan operations in 2023 and \$7.5 million in its Rwandan operations in 2024.

This evaluation examined:

1. The extent to which BII's Kinetic investment has supported BasiGo to pilot and scale its e-bus leasing model in Kenya and Rwanda.
2. BasiGo's impact on people, including bus operators and bus passengers.
3. BasiGo's impact on the planet in terms of carbon emissions avoided.
4. Evidence of BasiGo's model being replicated by other businesses across sub-Saharan Africa
5. Whether BasiGo has helped demonstrate the commercial viability of e-bus leasing models in sub-Saharan Africa, leading to more concessional<sup>2</sup> and commercial investment being mobilised for similar models.

### Results

**BII's flexible debt<sup>3</sup> has been crucial for the testing and scaling of BasiGo's model.** BII's investments were made at an early stage of BasiGo's growth, when no other forms of affordable debt finance were available to it. The flexible debt also enabled BasiGo to scale without relying exclusively on equity, which would have made it challenging to achieve returns typically expected by equity investors and, potentially, compromised future fundraising. BII's financing enabled BasiGo to substantially scale up its fleet, with 101 buses on the road in Kenya (up from 19) and 34 in Rwanda (up from six), as of December 2025. The loan was also important in enabling BasiGo to achieve significant cost savings by meeting the minimum order requirement for imports of completely-knocked-down (CKD) kits, to be assembled in-country, which meant the company qualified for import tax exemption, which has resulted in a cost saving of \$2.8 million to date.

**There is good evidence that BII's investments in BasiGo have delivered economic benefits for businesses, with gross profit increase ranging from 25 per cent to 75 per cent.** Comparative analysis of gross profit for conventional diesel buses and BasiGo's electric buses demonstrates that BasiGo's PAYD leasing model presents a commercially attractive proposition to bus operators. In Nairobi, BasiGo buses generate, on average, 75 per cent more gross profit compared to diesel. For operators of city routes in Kigali, the gross profit increase is 35 per cent, and for operators of Rwandan intercity routes it is 25 per cent.

**Positive feedback and high net promoter scores (NPS) of 38–39 also indicate that BasiGo is improving the day-to-day lives of bus passengers.** Surveys conducted in Nairobi and Kigali indicate that passengers in both markets consistently rate BasiGo's e-buses higher than conventional diesel buses across a range of metrics. The passengers surveyed indicated that BasiGo buses consistently outperform diesel buses on comfort and customer service, though the difference was more pronounced in Kenya than in Rwanda. Kenyan passengers particularly valued extra space and more courteous behaviour of bus staff, while Rwandan passengers were particularly appreciative of better comfort, air quality and cleanliness. In both countries, BasiGo has achieved high NPS of 39 (Kenya) and 38 (Rwanda) among the surveyed passengers.

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1 BII, "Kinetic", available at: <https://www.bii.co.uk/en/about/our-company/investment-portfolios/kinetic/>

2 Concessional debt or equity includes first-loss debt or equity, investment-stage grants, and debt or equity that bears risk at below-market financial returns to mobilise private sector investment.

3 This refers to BII's investments via debt instruments with flexibility on terms, including non-recourse/pilot funding, debt for early-stage businesses, subordinated debt, and lending via Financial Institutions.



### **BII's investments in BasiGo have helped to avoid close to 800 metric tonnes (MT) of carbon emissions as of mid-2025.**

An estimated 746 MT of CO<sub>2</sub> emissions have been avoided in Kenya and 36 MT avoided in Rwanda between January 2024 and August 2025, based on e-buses directly financed by BII's investments. This impact is a result of BasiGo helping to displace diesel buses in operators' fleets. As BasiGo continues to scale, its e-buses are expected to avoid more than a further 2,000 MT by the end of 2027. Passenger survey data further suggests that the appeal of BasiGo's e-buses can encourage passengers to use other, more polluting forms of transport less frequently. Of the respondents surveyed, 33 per cent in Kenya and 34 per cent in Rwanda report using diesel buses less as a direct result of using BasiGo e-buses. Respondents also indicated using other polluting modes of transport less, with 29 per cent of respondents in Rwanda stating they used motorbike taxis less because of their use of e-buses.

**There is not yet any concrete evidence of BasiGo's success leading to replication or demonstration effects at scale, although there is some early indication of other businesses being interested in learning from BasiGo's model.** BasiGo's contribution to the Kenyan and Rwandan markets is innovative, both in terms of the electric bus technology and the Pay-As-You-Drive business model. This creates potential for other actors in the space to learn lessons from BasiGo's experience and inform their own operational or investment decisions. The relatively early development stage of both the company itself – and the public transit e-mobility sector in sub-Saharan Africa more broadly – mean it is too early to expect substantial market-level effects. However, one company – IZI Electric – has replicated BasiGo's model in the Rwandan market. There is also evidence that BasiGo's success has attracted interest from other operators that have demonstrated their willingness to learn from BasiGo's model. An enabling policy environment, public investment in charging infrastructure, and BasiGo's progression to breakeven will make it more likely that others can build on these initial expressions of interest, leading to stronger evidence of replication effects in the future.

Similarly, BasiGo's experience has not yet demonstrated a sufficient proof of concept to generate interest in public transit e-mobility among more commercial investors. The interviews conducted in the course of this evaluation indicate investors still view the e-bus sector as high-risk and in its early stages of maturity, particularly when compared to the market for electric two-wheelers. The sector remains a focus for development finance institutions (DFIs) and impact investors, with other major investments made in the sector<sup>4</sup> since BII's flexible debt investment in BasiGo having been made on concessional terms.

## **Method**

The evaluation began with developing a Theory of Change (ToC) based on BII's Impact Framework.<sup>5</sup> This set out how BII's investments in BasiGo in Kenya and Rwanda are expected to contribute to positive outcomes for people and planet, as well as market-level impact through replication and demonstration effects. The ToC informed the selection and design of five key evaluation questions. Data collection followed a mixed-methods approach, drawing on BII internal documents (for example, Investment Committee papers), monitoring data (such as BasiGo's reporting to BII), BasiGo's data on client bus operators, and secondary literature. The evaluation also included key informant interviews with BasiGo management, bus operators, and other companies and investors in e-mobility, alongside passenger surveys in Nairobi (67 respondents) and Kigali (76 respondents). It is worth noting that, due to both the overarching context and resource constraints, the sample of passengers surveyed was non-representative, and the calculations of bus operator revenues and costs relied on a limited number of interviewees and self-reported data. The conclusions presented in this report should be considered with those caveats in mind.

<sup>4</sup> Based on publicly available information.

<sup>5</sup> BII, 'What impact means to us', available at: <https://www.bii.co.uk/en/our-impact/what-impact-means-to-us/>

## Implications and lessons

The analysis carried out during this evaluation demonstrates that BII's flexible debt investment in BasiGo has already generated positive results for people and planet, and has the potential to contribute to broader and longer-term effects. There are several key lessons from this experience. BII and other DFIs and impact investors should consider:

- 1) Expanding catalytic investments in the e-bus market in sub-Saharan Africa, given the high climate and development impact potential and the ongoing need for concessional finance.** Further support to BasiGo – contingent on the company achieving key scale and profitability milestones – could help deepen the company's direct impact on people and planet, support its graduation towards more commercial capital, and strengthen demonstration effects for other investors. Beyond BasiGo, discussions with other investors and e-bus companies highlighted the ongoing need for concessional finance in the e-bus sector given, on the one hand, its long-term positive impact on people and planet and, on the other, high levels of perceived risk among commercial investors. Entry into new markets could be guided by considerations such as (i) the presence of a conducive regulatory environment, including any preferential tax or import tariff policies for electric vehicles, (ii) an established network of bus operators with a strong customer base, and (iii) a clear rationale for those operators to explore alternative technologies and business models due to, for instance, prohibitively high costs of diesel, high costs of credit needed to acquire diesel buses.
- 2) Exploring investments in charging infrastructure and financing mechanisms.** This evaluation has demonstrated that adequate charging stations are a key part of the electric vehicle (EV) value chain and thus a key barrier to bus operators maximising the time e-buses spend on road. In addition, in the long-term, e-bus companies are unlikely to be able to meet demand through leasing buses purely on their balance sheets and will require partnerships with banks, leasing companies and other lenders that can bring dedicated expertise and resources to provide financing to bus operators.
- 3) Continuing to share lessons learned over time on the demand for and scalability of e-buses to amplify demonstration and replication effects.** BII's flexible debt has supported BasiGo to scale its model within Kenya and Rwanda, and in doing so demonstrate demand for e-buses and higher profits for bus operators relative to diesel buses, as evidenced in this report. This study also found a high level of interest from existing transport providers and entrepreneurs across Africa and South Asia, with many contacting BasiGo to learn more about their model. As BasiGo and other e-bus companies continue to scale and demonstrate viability, these companies and investors should look for ways to share lessons and data on, for example, bus performance, operator unit economics, and financing options to support demonstration effects to investors and accelerate investments into the sector. Similarly, evidence of the development and environmental impact of e-buses such as is described in this report, should be shared with other impact investors focused on transport, infrastructure, and climate to help strengthen the impact case for investing in the e-bus sector.





# 1

## Introduction

---

**This report presents the findings of an evaluation of the outcomes and impact generated by British International Investment (BII) through its investments into BasiGo Ltd, an electric bus (e-bus) company.** The investments were made under BII's Kinetic mandate, which deploys catalytic capital in different ways, including offering debt on flexible terms (including tenor, seniority, currency and repayment profile) to help early-stage companies test and scale innovations, and reducing capital risk to mobilise private investment in emerging markets. Within Kinetic, BasiGo was funded through the catalytic capital e-mobility programme. Through catalytic capital programmes focused on climate innovations, Kinetic enables BII to test, seed, and scale cutting-edge technologies or unproven business models and strategies that have the potential for transformational impact on the lives of people and communities in Africa and Asia.

**BII's Kinetic investments have a higher risk tolerance than BII's core investment strategies and can therefore support companies with significant capital requirements that are operating in markets where suitable funding is not available.** E-mobility has emerged as an important sector for the use of Kinetic, given its potential to reduce greenhouse gas (GHG) emissions, improve air quality, and create green jobs across markets in which BII is invested.

**This evaluation has been funded by FCDO as part of a broader project to generate evidence and lessons to be learned from BII's investments made under its Kinetic mandate.** An integral part of the Kinetic mandate is its focus on learning. By conducting detailed monitoring, evaluation, analysis, and documentation, the aim is to generate and share insights that contribute to the understanding of how to effectively use catalytic capital to support climate innovation and scaling. It is expected that these insights will inform future catalytic capital strategies, enable replication of innovative climate business models, and help to crowd in capital from other investors. As an e-bus company operating in Kenya and Rwanda, this evaluation of BasiGo offers important learnings about the impact of Kinetic's catalytic capital in the e-mobility space to date.



## 2

### Objectives and scope

#### 2.1 Evaluation objectives

The evaluation was conducted between May and October 2025 and sought to examine:

- How catalytic capital supported the testing and scaling of BasiGo's model.
- The outcomes of BasiGo's operations for people, namely bus operators and passengers, and planet, in terms of CO<sub>2</sub> emissions avoided.
- The extent to which BII's investment in BasiGo has helped to impact the market for e-buses across sub-Saharan Africa through demonstration effects.

The intended audience for this report includes development finance institutions (DFIs), impact investors, and companies operating in the climate and transport space, as well as any other stakeholders that would benefit from our findings about the successes and challenges of business models in the sector, as well as financing approaches that can be used to drive climate and inclusion impact.

#### 2.2 BII investment

In 2023, BII's Kinetic made its first \$5 million loan to BasiGo to support the scale-up of its e-bus business in Kenya. The loan was structured to be disbursed in stages, in line with BasiGo raising matching equity. This structure ensured debt levels remained manageable for BasiGo, while also encouraging continued efforts to attract more investors for upcoming rounds of funding. BII then supported BasiGo's expansion in the Rwanda market in 2024, providing a \$7.5 million follow-on loan supporting the scale-up of BasiGo's Rwanda fleet and charging infrastructure. Together, these investments enabled BasiGo to both test and scale its e-bus leasing model.

#### 2.3. BasiGo business model and market context

BasiGo is a manager and distributor of e-buses which are leased to private bus operators in Nairobi, Kenya and bus companies operating city routes in Kigali and intercity routes across Rwanda. The company has been in operation in Kenya since 2021 and in Rwanda since 2023.

The unique features of the company’s business model are:

- E-bus technology: The electric vehicle (EV) space remains a nascent sector in sub-Saharan Africa, with mass transit such as e-buses in particular still in the early stages of market development. In East Africa, BasiGo has been a first mover, introducing a new and unfamiliar technology to the market.
- A pay-as-you-drive (PAYD) lease model: bus operators pay a per km fee, subject to a monthly minimum, covering the leasing of the bus, daily charging and regular servicing. This helps to address the prohibitive upfront costs of purchasing e-buses outright. At the time of BII’s first loan agreement in November 2023, BasiGo was the only company deploying electric public service vehicles with this model in Africa.
- Local assembly of e-buses: In the Kenya market, BasiGo imports completely-knocked-down (CKD) units for assembly locally, enabling them to avoid duties applicable to imports of completely-built-up (CBU) e-buses. By developing its local capacity to assemble buses, BasiGo is also contributing towards job creation and skills development in bus manufacturing. In Rwanda, where there is zero import duty on EVs, BasiGo imports CBU e-buses.

Aside from the maturity of BasiGo’s operations, there are significant contextual differences between the two markets which influenced our analysis:

|                          | Kenya                                                                                                                                                                                | Rwanda                                                                                                                                                                                                                                                                                             |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BasiGo clients           | Savings and Credit Cooperative Organizations (SACCOs) run bus routes as private entities, with government licenses for specific routes. Most clients are well-established operators. | Private companies; however, the sector has been undergoing changes, including substantial numbers of operators entering and exiting the market in response to government policy. EcoFleet, a parastatal, was close to taking over all public bus operations in Kigali at the time of our research. |
| Routes                   | Routes primarily within Nairobi; intercity routes launched in late 2025. <sup>6</sup>                                                                                                | Routes within Kigali as well as intercity, meaning a greater variation in terms of distances covered, terrain, and fuel requirements.                                                                                                                                                              |
| Diesel buses             | Diesel buses vary between standard matatus and highly decorated ‘manyangas’, characterised by extensive graffiti, loud music, and often blacked-out windows.                         | Diesel buses are generally clean and orderly, with the government having brought in 160 new diesel buses in March 2024 in response to a public bus shortage.                                                                                                                                       |
| Fares                    | Set by operators, with fares varying depending on distance travelled, time of day, electric vs. diesel – or a combination of factors. Payments accepted in cash and e-money.         | Set by the government and reviewed every two years; varies by distance travelled; same for all buses and bus operators. All payments are made via e-money.                                                                                                                                         |
| BasiGo payment structure | Most operators lease entire buses, with a PAYD lease model, with standard fees per km; a minority buy the buses and only lease the battery.                                          | Exact payment terms vary across operators but generally involve a fixed monthly cost + percentage of revenue.                                                                                                                                                                                      |

Table 1: Comparing BasiGo’s market contexts

6 Intercity routes in Kenya were launched after the primary research for this study had been completed. As such, they were not included in the subsequent analysis.



# 3

## Evaluation methodology

### 3.1. Theory of change

The Theory of Change (ToC) in Figure 1 on the next page sets out how BII's investments in BasiGo in Kenya and Rwanda are expected to contribute to positive outcomes for people and planet, as well as creating market-level impact through replication and demonstration effects. The ToC was developed by Wellspring with input from BII, and based on BII's Impact Framework,<sup>7</sup> as a first step to inform the evaluation design. It provides the framework around which the evaluation questions were developed, to assess the description of observed outcomes, and the contribution BII made to those outcomes.

### 3.2. Evaluation questions

The evaluation was designed to answer the following evaluation questions (EQs):

|            |                                                                                                                                                                                                                         |             |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>EQ1</b> | To what extent has BII investment supported BasiGo to pilot and scale its e-bus leasing model in Kenya and Rwanda and move towards commercial sustainability? How critical was the use of the flexible debt instrument? | Section 4.1 |
| <b>EQ2</b> | How has BasiGo's model made a difference to the lives of bus operators, customers, and other stakeholders?                                                                                                              | Section 4.2 |
| <b>EQ3</b> | How has BasiGo's model had an impact on the climate (e.g., through CO2 emissions avoided)?                                                                                                                              | Section 4.3 |
| <b>EQ4</b> | Is there any evidence to date of other companies replicating BasiGo's model elsewhere in sub-Saharan Africa? <sup>8</sup>                                                                                               | Section 4.4 |
| <b>EQ5</b> | To what extent has the project resulted in more investment being mobilised, either for BasiGo or similar models?                                                                                                        |             |

Table 2: Evaluation questions

7 BII, 'What impact means to us', available at: <https://www.bii.co.uk/en/our-impact/what-impact-means-to-us/>

8 Since the markets in Kenya and Rwanda are still at early stages of development, the geographical scope for this EQ was expanded to cover sub-Saharan Africa to allow for the possibility that replication effects could be seen in other countries.



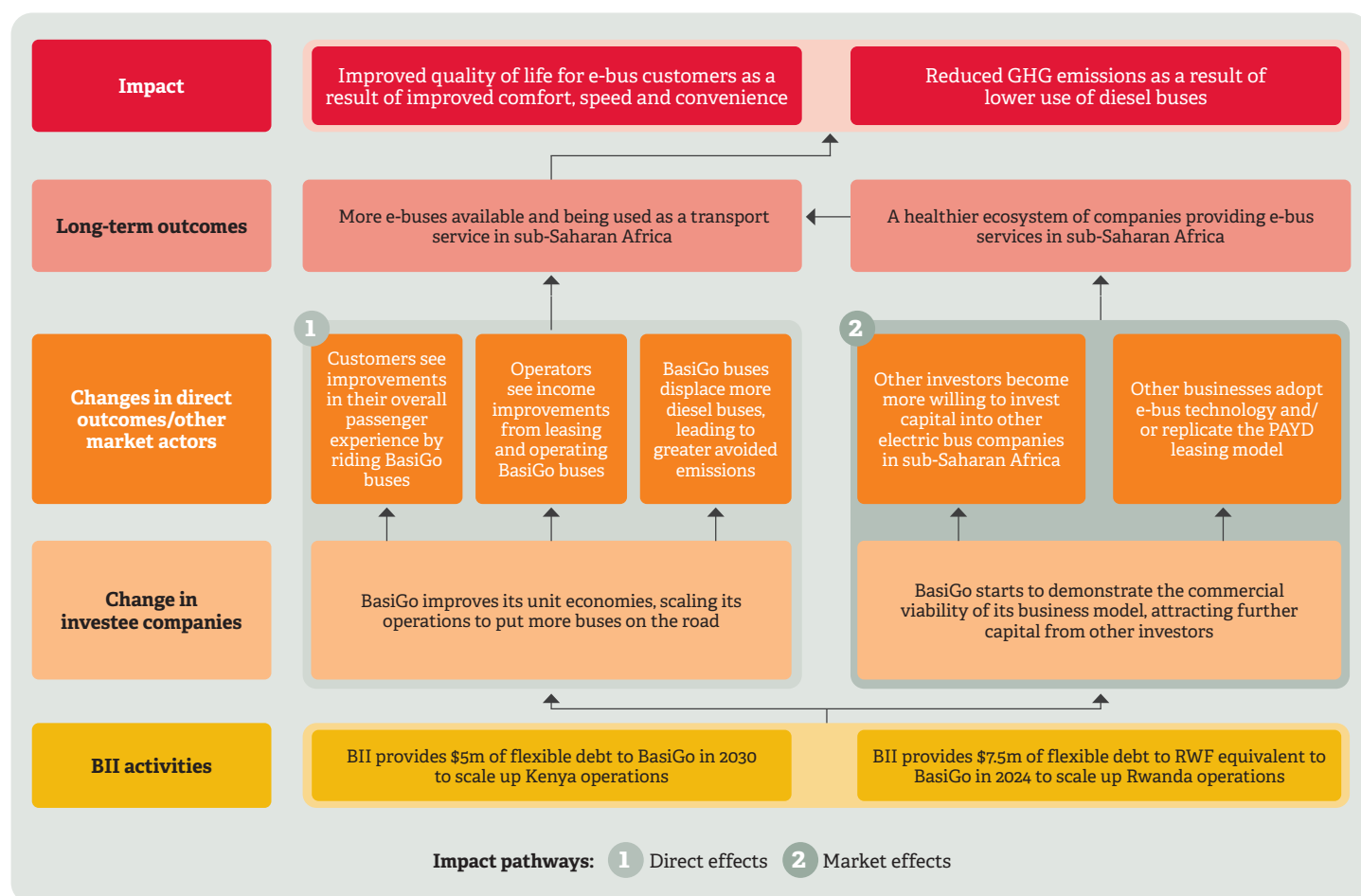


Figure 1: BasiGo theory of change

### 3.3.Data collection

The evaluation relied on a mixed-methods approach to data collection, drawing on the following information sources:

- **BII internal documents and monitoring data:** Including BII Investment Committee papers for BasiGo investments in Kenya and Rwanda, as well as annual monitoring data collected for both investments. These sources have been drawn on to address EQ1 (BasiGo's scale-up), EQ3 (BasiGo's impact on climate), and EQ5 (mobilised investment for BasiGo or similar models).
- **Market data and academic studies:** Although studies on the e-bus sector in Africa and other developing countries are fairly limited, several relevant examples were used to identify other e-bus companies for interviews and to inform and triangulate analysis on emissions reductions. These include Africa E-Mobility Alliance's 'Building visibility on electric bus initiatives in Africa',<sup>9</sup> the World Bank's study 'The Economics of Electric Vehicles for Passenger Transportation',<sup>10</sup> and several academic papers. These sources have been used to address EQ3 (BasiGo's impact on climate) and EQ4 (evidence of replication effect).

<sup>9</sup> Africa E-Mobility Alliance (2024), 'Building visibility on electric bus initiatives in Africa', available at: <https://transformative-mobility.org/wp-content/uploads/2024/09/Building-Visibility-on-Electric-Bus-Initiatives-in-Africa-V3.pdf>

<sup>10</sup> World Bank Group (2023), 'The Economics of Electric Vehicles for Passenger Transportation' available at: <https://openknowledge.worldbank.org/server/api/core/bitstreams/4c73ad87-2972-44e3-942e-cd2e3bb32350/content>

- **Key informant interviews:** We conducted 25 key informant interviews (KIIs) in total over the course of the evaluation. These interviews included:
  - BasiGo's management (chief executive officer and chief financial officer)
  - BII investment teams
  - Bus operators in Kenya (eight) and Rwanda (seven) leasing BasiGo buses<sup>11</sup>
  - Five current and potential investors in the e-bus sector in Africa
  - Two other companies in the e-mobility space
  - Two ecosystem stakeholders supporting the enabling environment through providing charging infrastructure and as a parastatal managing and regulating bus operations, respectively) for e-mobility in sub-Saharan Africa

The findings from these interviews fed into our analysis for all five EQs.

- **Customer surveys:** BasiGo passenger data was collected in person in both Kenya (67 responses) and Rwanda (76 responses). We aimed to collect at least 30 complete responses per survey,<sup>12</sup> gathering as many additional responses as possible, subject to time constraints and interviewee willingness to participate. In conducting in-person surveys, we stationed enumerators for up to two days each at main bus stations in Nairobi and Kigali where BasiGo buses operate to conduct short surveys with customers. The surveys primarily focused on close-ended questions around the customers' experience of riding BasiGo buses. The survey findings helped us to address EQ2 – specifically, the sub-question relating to BasiGo's impact on end customers.
- **BasiGo data on client bus operators:** This includes operator-level data that BasiGo collects and records on distances travelled, revenue obtained, maintenance costs, fees paid to BasiGo, etc. Analysis of this data was used to address EQ2 – specifically, the sub-question relating to BasiGo's impact on bus operators.

### 3.4. Limitations

The methodology for this evaluation had several limitations resulting from both the overarching context and from resource constraints:

- **Non-representative sample of customers leading to self-selection bias:** It was not possible to construct a representative sample of customers within the constraints of this evaluation, as customer lists with demographic and socio-economic data are not available and the costs of constructing these lists and randomly sampling customers were prohibitive. The customer surveys were therefore prone to self-selection bias, which may have resulted in skewed responses, for example, if respondents who were very happy with e-buses were more likely to agree to complete a survey. Any conclusions drawn from the customer survey have to be considered carefully within this context.
- **Inconsistent data on revenues and costs:** Payments on buses in Nairobi are split between e-money and cash, whereas payments in Rwanda are carried out with e-money only and are recorded and processed by a third party – the AC Group – that charges BasiGo a commission for managing the payment service. In absence of an automated process, BasiGo's data on Kenya thus relies on the operators themselves submitting information on their revenues. This means the data on revenues can be inconsistent and subject to accounting and recall errors. In addition, the collection of comparable data on revenues and costs associated with diesel buses relied on estimates obtained during operator interviews, as operators were not consistently and uniformly willing, able or comfortable sharing this information.
- **Small population of bus operators:** given the relatively early stage of BasiGo's operations in Kenya and Rwanda, the number of operators consulted was limited, despite the attained objective of speaking to at least 50 per cent of BasiGo operators in both countries. This means the findings obtained were likely substantially affected by variations in routes, size of operator fleet, and data availability. The calculations of relative revenues and costs should therefore be interpreted with that caveat in mind.

<sup>11</sup> Our intention was to interview 50 per cent of all operators working with BasiGo in Kenya and in Rwanda, with the selection of operators based on their availability and willingness to be interviewed. At the time of primary data collection, BasiGo Kenya had signed lease agreements with 15 operators and BasiGo Rwanda with 11. However, in the case of Rwanda, four out of 11 operators had signed contracts with BasiGo only a week before field work had commenced, and a further four less than a month earlier. This limited both the selection of operators available for interviews and the depth and reliability of insights they could provide.

<sup>12</sup> In line with the Central Limit Theorem.





# 4

## Evaluation findings

### 4.1 How catalytic capital supported the testing and scaling of BasiGo's model

BII investments were made at an early stage of BasiGo's growth when no other forms of affordable debt finance were available to the company. In addition to the typical fundraising challenges experienced by start-ups, BasiGo's management reported that the company's model was perceived by commercial lenders to carry additional risks:

- **Innovative model:** BasiGo was a first mover, introducing a new and unfamiliar technology to a new market. The PAYD model, relying on leasing rather than asset ownership, was also a novel approach. Given the novel product, no data on secondary market value could be made available to prospective lenders for credit assessments.
- **Capital intensive:** BasiGo's model required a substantial upfront investment, with an e-bus costing almost four times the price of a diesel bus in the Kenya market. The resulting cash flow profile was seen as too risky by commercial lenders.
- **Ecosystem risks:** Additional uncertainties that further influenced commercial risk perceptions included grid reliability, the feasibility of setting up charging stations, government policy, including concerning import taxes and energy tariffs.

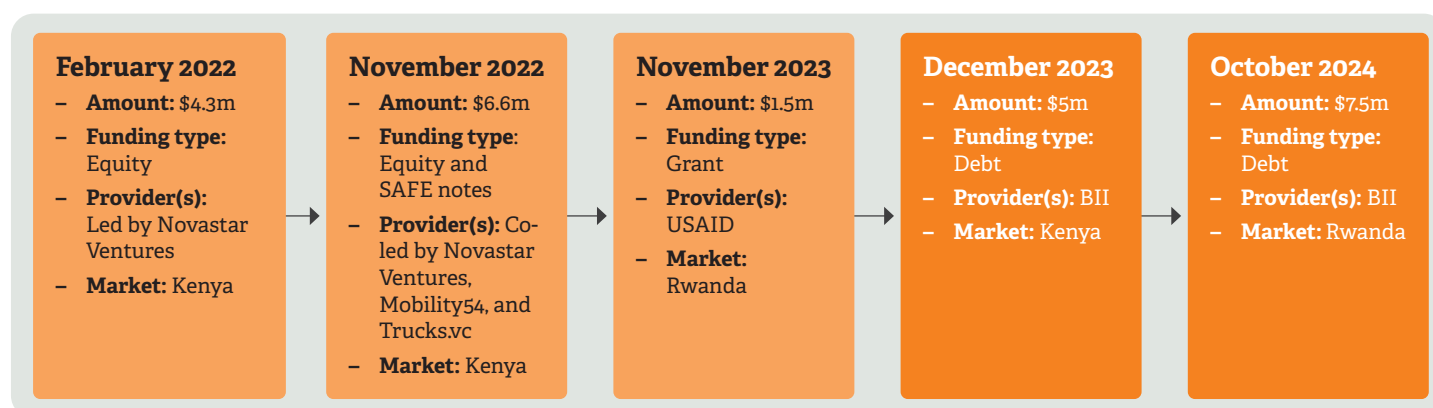


Figure 2: BasiGo fundraising<sup>13</sup>

Source: background BII investment documentation and interviews with BasiGo management.

<sup>13</sup> It should be noted that BII's follow-on loan in October 2024 was unlocked by BasiGo's successful raising of \$42 million in Series A equity and was agreed at the same time as a \$10 million debt facility from DFC.

**Even in cases where investors were willing to provide debt financing, this risk would have been priced in,** resulting in financing terms that would have been challenging for the company at this early stage in its growth trajectory. By comparison, BII's loan agreements:

- Were more risk-tolerant, despite the above-mentioned features such as high initial capital outlay.
- Offered larger ticket sizes at a longer tenor and with lower interest rates.
- Included a more flexible repayment schedule to align with available cashflow.

Excluding the option of debt on less favourable terms, BasiGo's alternative would have been to raise larger amounts of equity. This would have resulted in much slower scaling and greater difficulty in achieving strong unit economics. In addition, relying on equity financing would have presented challenges in terms of achieving returns typically expected by equity investors, thus making it harder to fundraise in future rounds.

**BII's financing has enabled the company to substantially scale up its fleet, with 101 buses on the road in Kenya (up from 19) and 34 in Rwanda (up from six),** as of December 2025. It should be noted that the pace of scaling had been slower than initially expected. This was a proactive response from BasiGo, due to timing delays in equity financing rounds – which are not unusual in East African markets, to regulatory uncertainty in the Kigali bus sector, and to overall uncertainty in the development finance space. Nonetheless, BasiGo is expected to continue to grow at pace, subject to ongoing strong service offering and progress with securing financing. Demand is likely to keep growing due to the strong commercial proposition for operators (see Section 3.2), with a strong existing pipeline of close to 1,000 pre-orders of buses. Key obstacles to overcome to ensure that the company continues to scale include the planned upgrading of manufacturing capacity in Kenya and the resolution of regulatory uncertainty in Rwanda, where the parastatal EcoFleet is in the process of taking over all bus operations in Kigali.

**During evaluation interviews, BasiGo's management also emphasised that the timing of BII's loan was important in enabling BasiGo to achieve significant cost savings, thus improving its unit economics.** The financing tranche has enabled BasiGo to meet the minimum purchase order size of 20–30 units for imports of CKD kits for in-country assembly in Kenya, as compared to importing fully assembled buses. This enabled BasiGo to qualify for import tax exemption, and has resulted in cost savings of \$90k per bus, amounting to a total cost reduction of ~\$2.8 million since BII's investment in November 2023.



***It would have taken a lot more equity and/or time to get to proof of concept without the catalytic capital that BII provided.***

***BasiGo management***

## **4.2. Direct impact of BasiGo on people**

### **a) Impact on bus operators**

**BasiGo's ability to grow its business hinges on the ability to deliver a commercially attractive proposition to the bus operators leasing the e-buses under the PAYD model,** in comparison to the established practice of buying and operating diesel buses. The gross profit advantage of e-buses to the operators was expected to be realised due to:

- High cost of diesel fuel.
- High loan service costs following the acquisition of a diesel bus.
- Maintenance costs being included in the BasiGo PAYD charge.

As part of this evaluation, we conducted interviews with companies operating bus routes in Nairobi, Kigali, and between Rwandan cities to assess the typical costs and revenues for diesel buses compared to BasiGo's e-buses and determine whether this thesis holds. So far, most bus operators signing up with BasiGo are piloting e-buses as part of a much larger fleet composed of diesel buses. They were therefore able to draw direct comparisons between the operational practices for diesel and EVs, as well as the resulting differences in revenues and costs.

## Kenya

**In Kenya, BasiGo e-buses generate Kenyan shillings (KES) 49,000 (~\$375)<sup>14</sup> or 75 per cent more gross profit on average for operators compared to diesel buses, primarily due to lower costs.** While the exact cost comparisons between diesel and BasiGo buses depend on several key factors that may vary across operators, overall conclusions are consistent in terms of operator benefits.

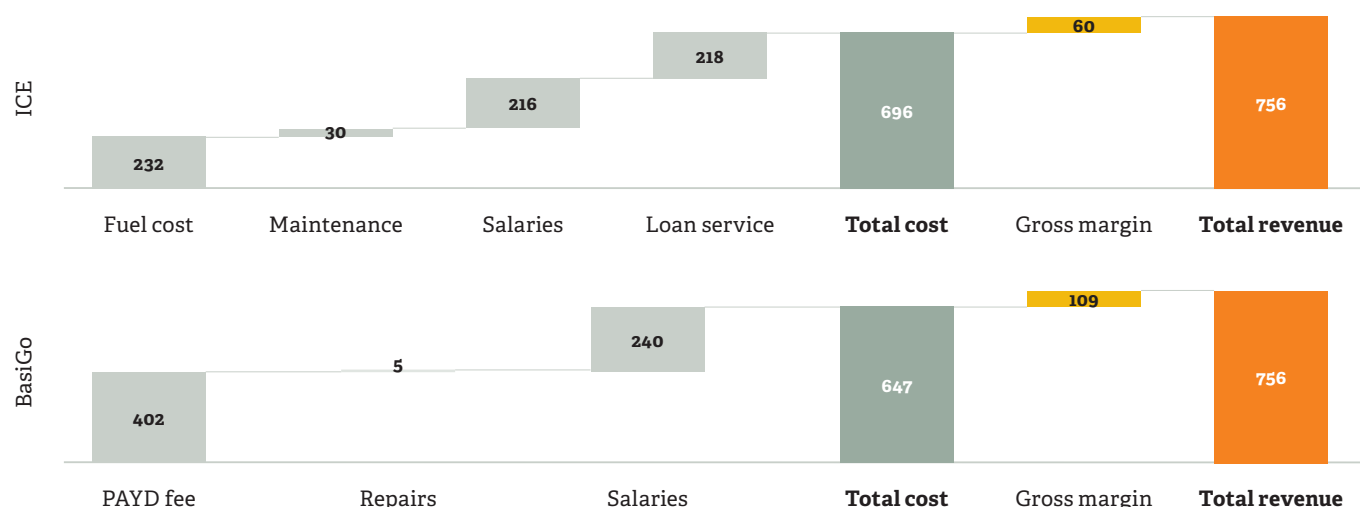


Figure 3: Kenya Internal Combustion Engine (ICE) vs BasiGo bus monthly costs and revenues in KES'000  
Source: Wellspring analysis based on BasiGo data and interviews with bus operators.

The main cost items for operating diesel vehicles are:

- **Upfront cost** (not included in the waterfall charts above): This is approximately equivalent to the 20 per cent downpayment on a loan to purchase a diesel bus costing KES 7 million (that is, KES 1.4 million). It should be noted that diesel buses with more customised features (manyangas) can cost up to KES 14 million, resulting in a higher initial capital outlay for diesel.<sup>15</sup>
- **Fuel cost** was consistently cited as KES 170–173 per litre, translating into an average monthly cost of KES 232k. The most important factor is daily distance travelled, ranging from 200km to 300km by operator, with some interviewees citing monthly costs of up to KES 270k.
- **Maintenance costs** range between KES 20k per month and KES 50k per month for diesel, with costs increasing with the age of the bus fleet. The calculations presented above take the median response of KES 30k per month.
- **Loan service costs** vary based on interest rates, with some operators being able to obtain better terms from their SACCOs, but have averaged at 17 per cent. Over a four-year loan term (the average reported) those costs amount to KES 218k.

The main cost items for operating BasiGo buses are:

- **Upfront cost** (not included in the waterfall charts above) has varied: operators that obtained BasiGo buses in the early months had to pay a deposit of KES 750k, later rising to KES 1.5 million. This meant the upfront cost was roughly equivalent for diesel and BasiGo buses.
- **PAYD fee**, covering the cost of electric charging and maintenance. The BasiGo PAYD charge of KES 402k is based on the assumption of 6,000 km monthly minimum (200km daily equivalent), charged at KES 67/km. However, half of interviewees noted that the 6,000 km minimum is hard to meet due to charging needs, resulting in a higher effective PAYD charge per km.
- **Repair costs** are distinct from the regular maintenance and servicing included in BasiGo's monthly PAYD charge. Operators report that spare parts for BasiGo buses that are not covered by the monthly charge are considerably (<10x) more expensive than spare parts for diesel buses. The incidence of those higher costs remains low, and averaging those additional costs across an average operator's e-bus fleet results in only KES 5k per month.

**Salary costs** are similar for all types of buses, on a per-day basis.

<sup>14</sup> Exchange rate as of Q3 2025, when primary research was carried out.

<sup>15</sup> Since operators take out loans to purchase internal combustion engine (ICE) buses outright, they can expect to retain control of the asset after the four-year period – unlike BasiGo's leasing model. However, bus operators have noted that the quality of the asset is likely to deteriorate during that period, meaning that the buses would require more maintenance, and would be more likely to stay off the road for longer. Longer-term comparisons of financial performance were out of scope for this evaluation.



*The leasing model makes a big difference to costs by removing the need for monthly loan repayment.*

*BasiGo represents a cost saving of 20–30 per cent for us.*

*BasiGo is more cost effective because maintenance cost is already included.*

*Loan service costs really eat into the diesel bus margin. By the time the loan is repaid, the bus is older and requires a lot more maintenance.*

### **Operator interviews**

**Most Kenyan operators reported similar earnings for BasiGo buses and diesel buses, and therefore we have assumed the same average monthly revenues in the gross margin calculations set out in Figure 3.** However, several interviewees claimed they were able to earn more on their BasiGo buses, while others noted that in some cases their diesel buses generate more revenue.<sup>16</sup>

**One of the most important considerations affecting both revenues and costs has been the difference in uptime between diesel and BasiGo.** Most operators interviewed reported that diesel buses are off-road for several days a month (uptime ranging from 20 to 28 days, compared to BasiGo's 29–30 days) due to:

- Maintenance needs (which increase with age).
- Higher likelihood of accidents due to reckless driving (with drivers reported to take greater care with “fancier” BasiGo buses).
- Police harassment, which also results in additional charges and costs to the business.

**In addition to being able to generate more fare revenue due to being able to run the bus service on more days per month, some operators cited BasiGo's capacity advantage to be an important factor as well.** Diesel bus capacity varies from 25 to 50 seats, compared to BasiGo's 36. However, BasiGo design allows for an additional 18 standing passengers (which are not permitted on diesel matatus).

**Moreover, while fares are generally determined by distance travelled as well as the time of day, three operators out of eight directly stated they charge higher fares (+20 to 50 per cent) for BasiGo buses compared to diesel.** Lastly, some operators have stated they give BasiGo buses priority during peak hours, guaranteeing more passengers – and more fare revenue – compared to diesel buses.

**However, there was also some feedback indicating that revenue from BasiGo buses can be lower than from the diesel fleet.** Of the operators interviewed, 50 per cent said diesel buses cover more ground than BasiGo due to lack of a need to pause for charging. One operator said the 60km lost (due to the distance to the charging station) and the resulting loss of earnings erodes gross profit to only KES 5k per bus per day.



*Income is the same, but it's much less hassle with electric.*

*The police don't touch BasiGo, they've got nothing on them!<sup>17</sup>*

*Our daily target revenue is KES 27k for diesel buses and KES 31k for BasiGo.*

*Five out of eight operators interviewed reported that revenues are the same; two said BasiGo buses generate more earnings, and one said BasiGo buses bring in less money.*

### **Operator interviews**

<sup>16</sup> Due to the fact that, on average, 30 per cent of fare payments are still done in cash, this was difficult for the evaluation team to verify independently.

<sup>17</sup> The comment on better protection from police harassment relates to the fact that BasiGo buses appear cleaner and are not covered in graffiti that may violate established (though selectively applied) regulation on permissible colour schemes for public buses. There is, therefore, less cause for police to challenge the appearance of BasiGo buses.

## Rwanda

On average, operators of bus routes within Kigali generated 35 per cent (~\$400) more gross profit by switching from diesel to BasiGo's e-buses, while operators of intercity routes gained 25 per cent (~\$380) in gross profit.<sup>18</sup> In both cases, the difference is driven primarily by cost reductions, and it is important to note that calculations were based on a small number of responses, with considerable variability in reported costs, and can be highly sensitive to fuel efficiency assumptions.

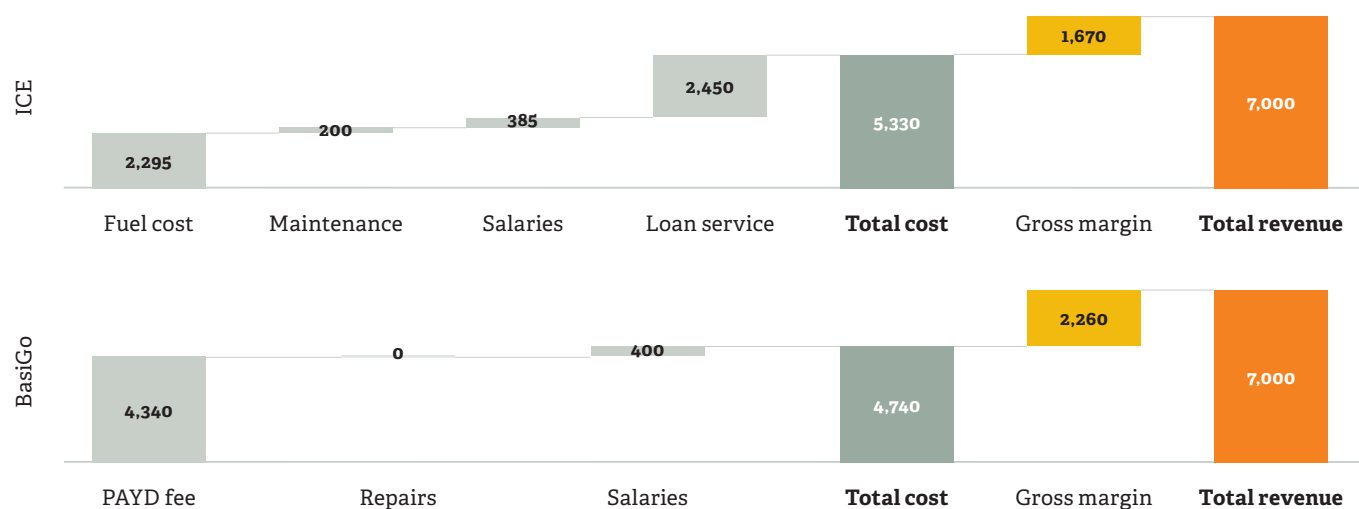


Figure 4: Rwanda ICE vs. BasiGo bus (city) costs and revenues in RWF '000  
Source: Wellspring analysis based on BasiGo data and interviews with bus operators.

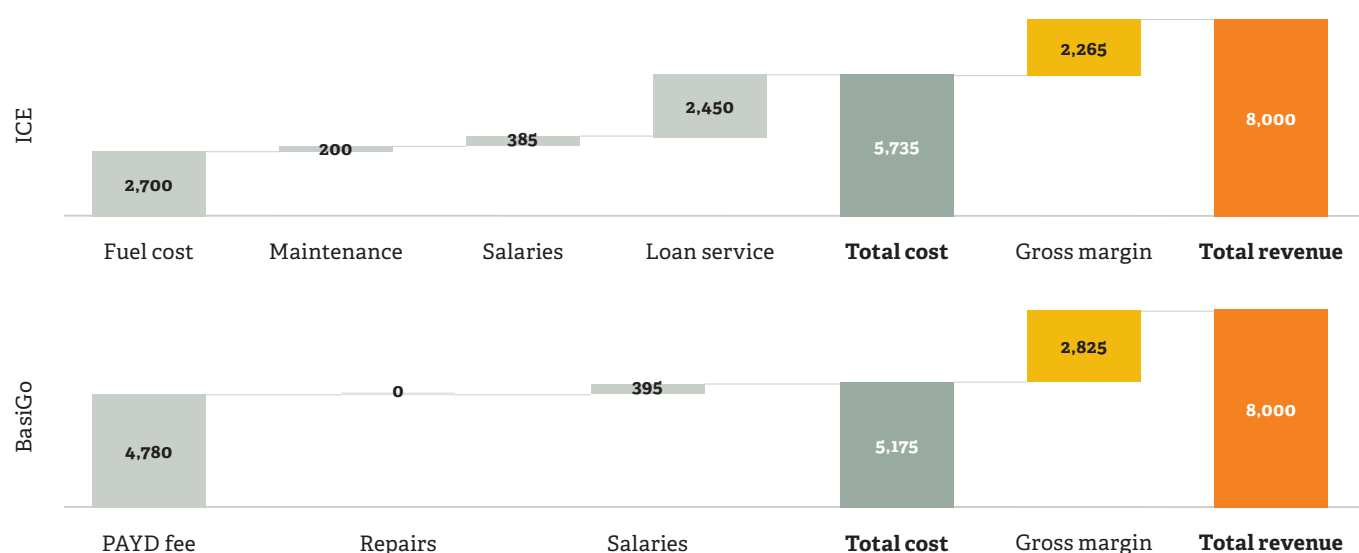


Figure 5: Rwanda ICE vs. BasiGo bus (intercity) costs and revenues in RWF '000  
Source: Wellspring analysis based on BasiGo data and interviews with bus operators.

The main cost items for diesel bus operators are:

- **Upfront cost** (not included in the waterfall charts above): There is substantial variation in the reported cost of diesel buses, from Rwandan francs (RWF) 70 million to RWF 120 million, partially depending on bus capacity.
- **Fuel cost** depends on the route taken by the bus and the hilliness of the terrain, with intercity routes considerably more challenging and typically requiring more fuel. Reported daily costs have ranged from RWF 60k to RWF 300k per day. For city routes, based on interviewee responses, we have carried out a bottom-up calculation, based on daily distance travelled (200km), fuel efficiency (4km per litre), average cost (RWF 1,700/litre) and number of operational days per month (27). For intercity operators, we have taken the interviewee average of RWF 100,000 per day, and multiplied that by the number of operational days per month (27).

<sup>18</sup> Exchange rates as of Q3 2025 when primary research was carried out.



- Only two operators were able to provide an estimate of **maintenance costs** for diesel vehicles, and those varied substantially (RWF 120k/month vs. RWF 96k/day). We have assumed a median value of RWF 200k/month for both city and intercity routes.
- **Loan service cost:** Financing assumptions are based on loan terms of five years with a 30 per cent upfront payment and interest rates of 16 per cent.<sup>19</sup> However, due to inconsistent government policy and regulations restricting price setting for bus fares, many of the 18 operators that emerged in 2024 struggled to make a profit and ended up defaulting on their loans. Some operators reported owning their buses whereas, in fact, they had simply defaulted on the loan but were still allowed to operate. The illustrative loan schedule therefore depends on the assumption that loan repayment proceeds in line with expectations.
- **Salary costs** were identical for diesel buses and BasiGo buses on a per-day basis, as in Kenya.

The main cost items for BasiGo buses were similar to the Kenyan context. However, the PAYD terms for BasiGo buses in Rwanda have also differed between city and intercity bus operators. The former typically pay fixed monthly sums of RWF 3.5 million with a 12 per cent revenue share, whereas the latter pay the same RWF 3.5 million with a 16 per cent revenue share.

Lastly, **revenues are higher for intercity routes compared to city routes** – RWF 7 million vs. RWF 8 million, respectively. However, due to government regulation which fixes ticket rates for all operators, there is no difference in revenue between diesel and electric buses.



*BasiGo are more profitable because we can carry more passengers: 44 with BasiGo, compared to 29 with diesel.*

*The financial model is appealing.*

*Profit is 30 per cent higher due to lower costs.*

*Fixed distance requirement is not profitable to the business. Gross margin for a diesel bus is about 40 per cent.*

*Profits are higher because electricity prices are lower and more stable than diesel.*

*In Rwanda, our estimates indicate that city operators in Kigali make ~35 per cent more gross profit with BasiGo buses compared to diesel buses.*

## Operator interviews

### b) Impact on bus customers

BasiGo's value proposition to bus operators also hinges on the experience provided to customers riding its e-buses. Compared to diesel buses, passenger satisfaction was expected to be higher for electric based on key factors that include safety, noise, and overall comfort. For this evaluation, we conducted short, in-person surveys with 67 customers using BasiGo buses in Kenya and 76 in Rwanda to assess the level of impact they have had on passenger experience relative to diesel buses. Figure 6 presents the findings from the surveys across both the Kenyan and Rwandan markets.

<sup>19</sup> As in the case of Kenya, diesel operators in Rwanda take out a loan to buy the diesel bus outright and retain the asset after the repayment period. This is different to BasiGo's leasing model. The analysis presented here therefore focuses on an indicative comparison of gross profits, rather than a comprehensive assessment of bus operators' financial position over the long term.

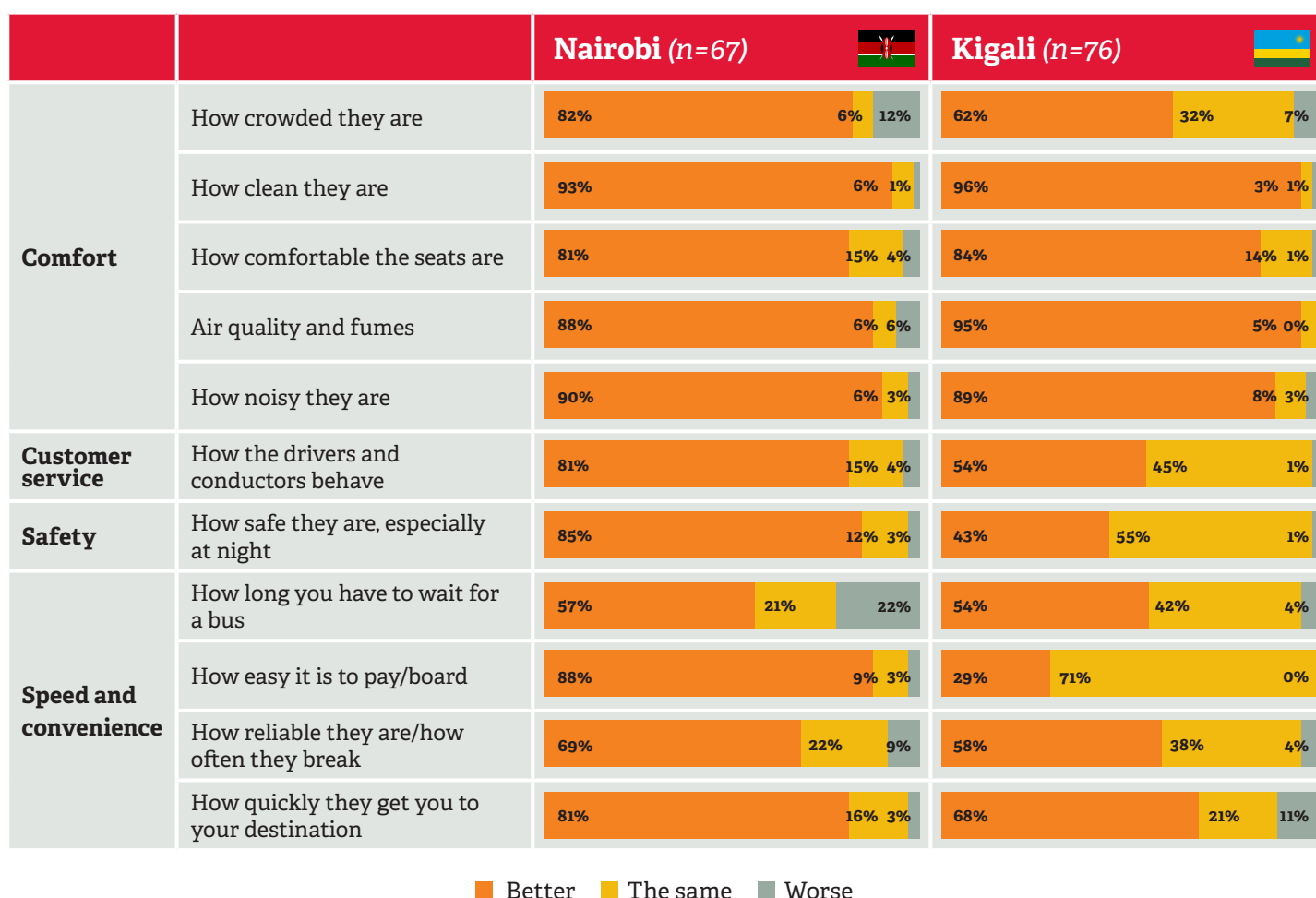


Figure 6: Passenger survey results in Kenya and Rwanda

**Among the surveyed passengers, BasiGo buses consistently outperformed diesel buses on comfort.** Passengers consistently reported BasiGo buses as more comfortable than diesel buses in both countries, with BasiGo buses receiving particularly strong positive feedback on cleanliness compared to diesel buses. Passengers in Kenya were more positive about reduced crowding, with extra space cited by Kenyan traders as a key reason for preferring e-buses (94 per cent of traders preferred e-buses for less crowding) for carrying goods to markets.

**Surveyed passengers also reported that BasiGo offers a better customer service, though the difference was more pronounced in Kenya than in Rwanda.** Passengers in Kenya viewed behaviour of bus staff on e-buses much more favourably compared to diesel buses. In comparison, passengers in Rwanda did not believe there to be much difference in staff behaviour, likely due to there being more regulation and professionalisation of the bus industry in the country.

**In Kenya, surveyed passengers also preferred e-buses because they viewed them as safer than diesel buses (matatus).** A significantly higher share of Kenyan passengers (85 per cent) considered BasiGo buses were safer than diesel buses, compared to passengers in Rwanda (43 per cent) where the bus industry is more regulated. Cameras and highly-positioned windows on e-buses were highlighted by respondents in Kenya as helping to reduce the risk of valuables being stolen.

**Surveyed passengers in both countries were broadly positive about the speed and convenience of e-buses as compared to diesel alternatives, but the difference was much more pronounced in Kenya.** In Nairobi, passenger boarding and fare payments were seen favourably compared to diesel buses (88 per cent), followed by positive responses on how quickly e-buses got passengers to their destination (81 per cent). The supply of e-buses on specific routes shaped responses on passenger waiting times. Respondents that used e-buses managed by the operator Oma gave particular praise for the service, on the basis of having a reliable supply of e-buses. For routes where operators have a limited supply of e-buses, respondents provided less positive feedback on waiting times, with there being a clear demand from passengers for increased availability of e-buses. In contrast, in Rwanda, the ease of passenger boarding and fare payments, in particular, were largely seen to be the same for both types of buses (according to 71 per cent of respondents), most likely due to the Rwandan government setting a standard process for all buses.

Overall, surveyed customers were very satisfied with BasiGo buses, as demonstrated by high NPS of 39 and 38 in Kenya and Rwanda, respectively. Given that NPS scores above 20 are considered ‘favourable’ across industries,<sup>20</sup> the results of this survey indicate that BasiGo has strong potential to succeed in building customer loyalty.

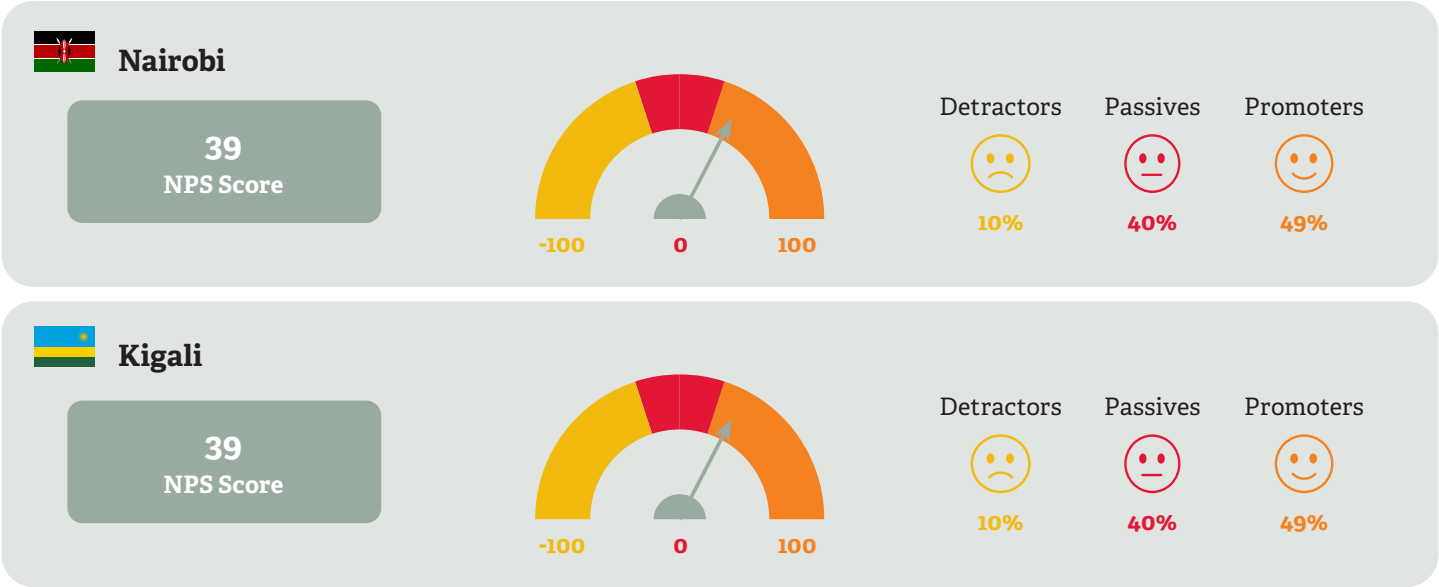


Figure 7: BasiGo NPS in Kenya and Rwanda  
Source: Surveys with 67 passengers in Kenya and 76 in Rwanda.

### 4.3. Direct impact of BasiGo on planet

#### Kenya

In Kenya, BII’s finance has helped BasiGo to avoid an estimated 746 MT of CO2 emissions between January 2024 and August 2025, as shown in Figure 9. Calculations were based on the buses which were acquired as a direct consequence of BII’s funding commitment, meaning that BasiGo’s overall emissions avoided will be higher.

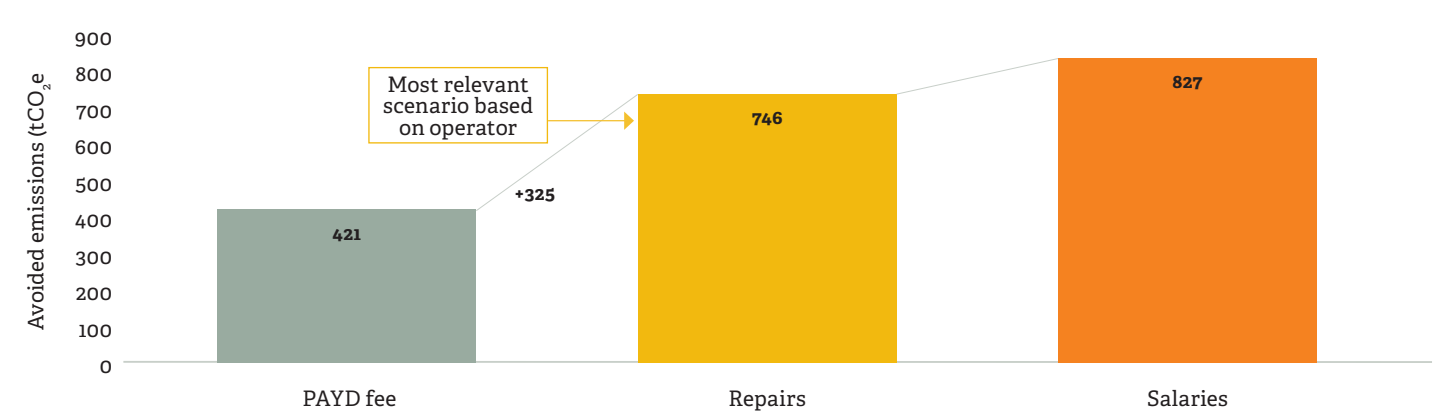


Figure 8: Kenya emissions avoided from Jan 2024–Aug 2025  
Source: Wellspring analysis based on data from BasiGo and UNFCCC.

<sup>20</sup> Qualtrics (2021), ‘What is a Good Net Promoter Score?’ available at: <https://www.qualtrics.com/en-gb/experience-management/customer/good-net-promoter-score/>

## Assumptions for BasiGo's avoided emissions in Kenya

- **Diesel bus emissions per km:** Emissions from diesel buses were calculated based on the fuel consumption (0.193l/km)<sup>21</sup> and emissions per litre of a 36-seater bus, the same capacity as BasiGo e-buses used by operators.
- **E-bus indirect emissions per km:** BasiGo 26-seater buses consume 0.54 kilowatt hours (kWh) per kilometer, while 36-seater buses consume 0.8 kWh/km; virtually all operators use 36-seater buses, so emissions generated were at the higher end based on bus size.
- **Distance covered:** Calculations for avoided emissions were based on the total distance covered by all e-buses over the period (1,599,302 km), with diesel bus emissions based on the same distance travelled.
- **Charging period/emissions factor:** The United Nations Framework Convention on Climate Change (UNFCCC) grid emissions factor estimates a 0.3174 tCO<sub>2</sub>/megawatt hours (MWh)<sup>22</sup> average across peak and off-peak hours. Using this figure would underestimate emissions avoided, as operators indicated that they typically (but not exclusively) charge during off-peak hours (namely, at night) where the grid is 100 per cent renewable. In the 80 per cent scenario, we apply the UNFCCC grid emissions factor to 20 per cent of the charging time and assume emission-free charging for the other 80 per cent of the time.

## Rwanda

In Rwanda, BII's finance has helped BasiGo avoid an estimated 36 MT of CO<sub>2</sub> emissions to date in 2025, as shown in Figure 9. Calculations were based on data available for 22 out of 34 buses in BasiGo Rwanda's fleet, with some operators only just having acquired e-buses at the time of the evaluation.

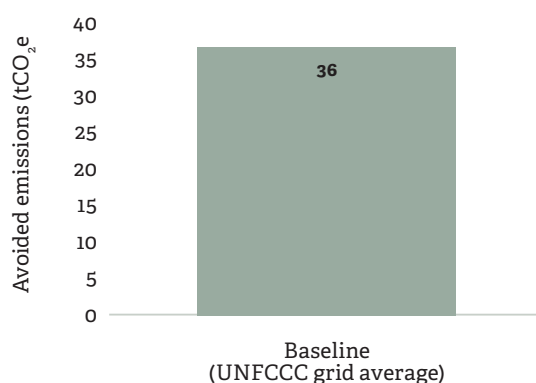


Figure 9: Rwanda emissions avoided in 2025 YTD

Source: Wellspring analysis based on data from BasiGo and UNFCCC.

## Assumptions for BasiGo's avoided emissions in Rwanda

- **Diesel bus emissions per km:** Emissions from diesel buses were calculated based on available data on the fuel consumption (0.193l/km) and emissions per litre of a 36-seater bus in Kenya, in the absence of data in the Rwanda context.
- **E-bus indirect emissions per km:** Energy consumption for 36-seater buses (0.8 kWh/km) was applied to all Rwanda e-buses, though intercity buses run larger at a 44-seater capacity. BasiGo are still developing their carbon methodology for Rwanda and were therefore unable to provide energy consumption figures for intercity buses.
- **Distance covered:** Calculations for avoided emissions were based on the total distance covered by all e-buses (242,282 km), with diesel bus emissions based on the same distance covered.
- **Charging period/emissions factor:** The UNFCCC grid emissions factor estimates a 0.4608 tCO<sub>2</sub><sup>23</sup>/MWh average across peak and off-peak hours. Unlike Kenya, no additional scenarios were modelled in terms of additional potential avoided emissions as the Rwandan grid is currently only 53 per cent renewable,<sup>24</sup> regardless of time of day.

<sup>21</sup> GIZ. (2019). Updated transport data in Kenya. Changing Transport

<sup>22</sup> UNFCCC. (2019). Harmonized Grid Emission factor data set

<sup>23</sup> Tonnes of carbon dioxide.

<sup>24</sup> Rwandan Ministry of Infrastructure, (2019), 'Rwanda targets 60% renewable resources by 2030, Permanent Secretary Uwase Patrice' available at: <https://www.mininfra.gov.rw/updates/news-details/rwanda-targets-60-of-renewable-resources-by-2030-permanent-secretary-uwase-patrice>

## Findings from the passenger survey

**The theory behind BasiGo's impact on climate – in particular, the displacement of polluting diesel buses by e-buses – is also supported by the findings of the passenger survey conducted in the course of this evaluation.** Survey data indicates that 33 per cent of respondents in Kenya and 34 per cent of respondents in Rwanda use diesel buses less as a direct result of using BasiGo e-buses. Respondents also indicated using other polluting modes of transport less, with 29 per cent of respondents in Rwanda stating they used motorbike taxis less because of their use of e-buses. Reduced use of cars and taxis by passengers in both markets provides further evidence that BasiGo is contributing towards reduced carbon emissions, in line with its impact thesis.

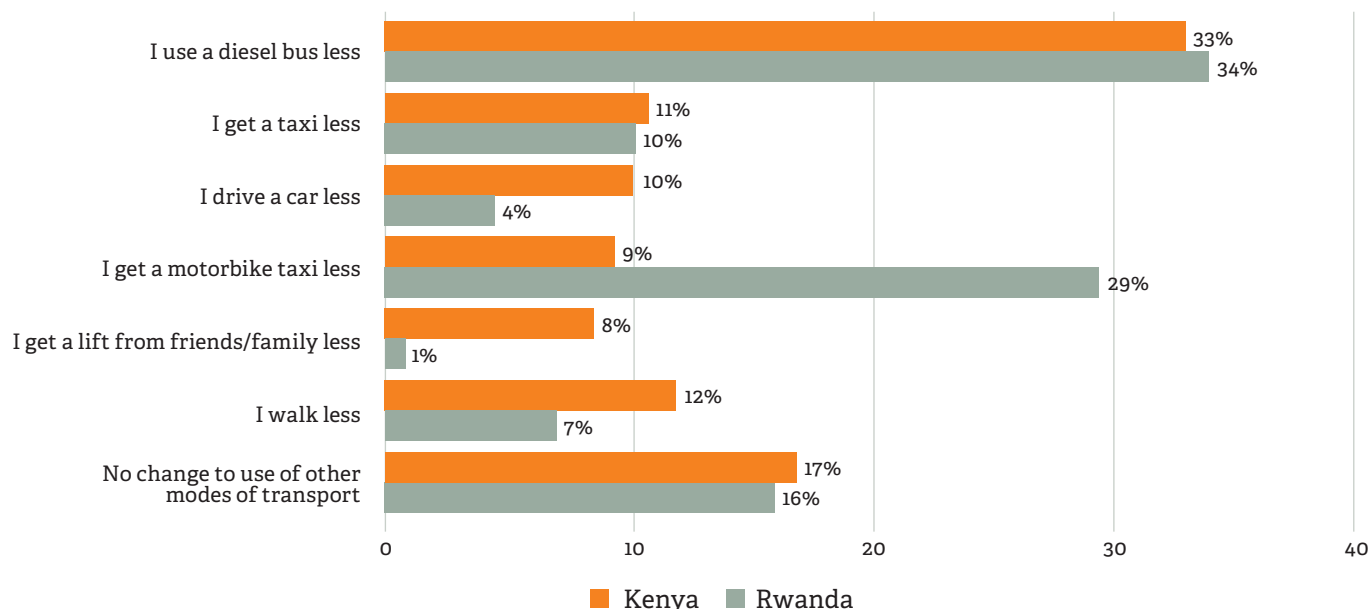


Figure 10: Passengers' affected usage of other modes of transport  
Source: Surveys with 67 passengers in Kenya and 76 in Rwanda.

## Future avoided emissions

**As BasiGo scales its fleet of e-buses in both markets, annual emissions avoided will continue to increase.** In Kenya, once BasiGo scales its fleet, projections indicate that up to 2,984 MT of CO<sub>2</sub> emissions will be avoided as the company moves towards its breakeven point, representing an additional 2,238 MT compared with current estimations.<sup>25</sup> In Rwanda, BasiGo will avoid an additional 108 MT of CO<sub>2</sub> as the company reaches its scale-up targets, amounting to a total of 144 MT of CO<sub>2</sub>.<sup>26</sup> These projections demonstrate BasiGo's positive impact on the planet will continue to increase as the business grows.

<sup>25</sup> Based on the upper bound of the breakeven multiplier estimated by BasiGo management, reflecting the number of buses required to reach operational breakeven in Kenya.

<sup>26</sup> Based on the upper bound of the breakeven multiplier estimated by BasiGo management, reflecting the number of buses required to reach operational breakeven in Rwanda.



## 4.4. Market-level impact of BasiGo

### a) Replication

BII's Kinetic aims to test, seed and scale cutting-edge climate technologies or unproven business models and strategies that have the potential for market-level impact. This objective depends in part on the ability to demonstrate the operational and financial viability of business models, such as BasiGo's, to the broader sector. Doing so can stimulate the replication of those business models by other companies, in whole or in part, enabling the sector to grow and deliver positive impact for people and planet on a greater scale.

Understanding the potential for BasiGo's model to be replicated in other contexts requires, first and foremost, a consideration of market maturity and policy environment. The African e-mobility sector – and the public transport segment in particular – is still in the early stages of its development, with a total of only 25 companies (at varying stages of maturity) across ten countries.

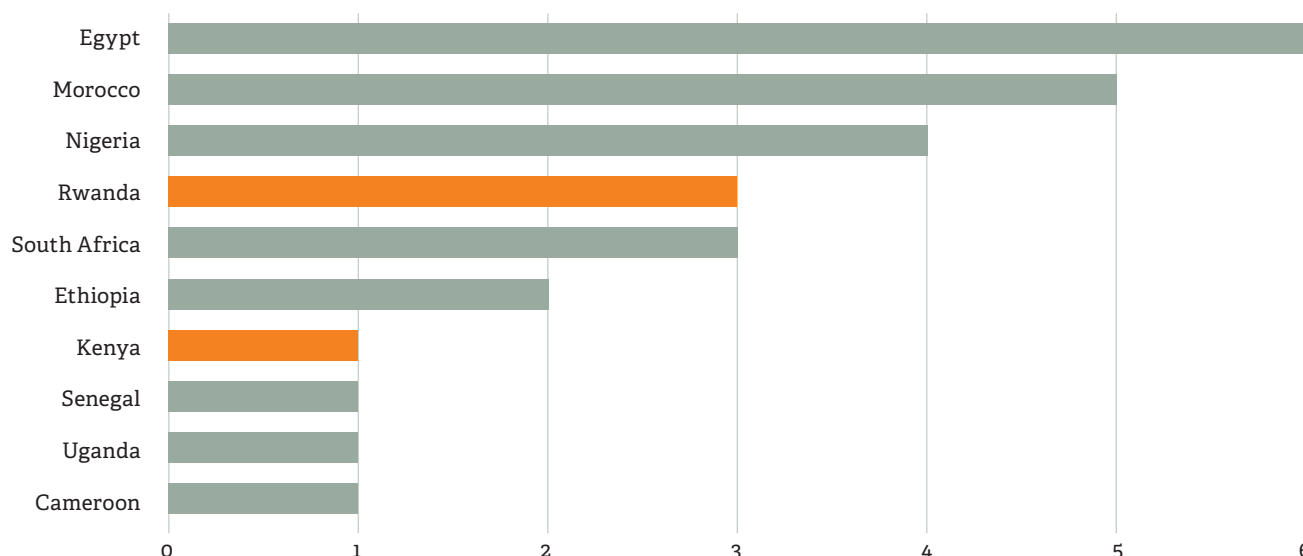


Figure 11: Number of other electric bus operators by country

Source: Building Visibility on Electric Bus Initiatives in Africa, Transformative Urban Mobility Initiative, 2024.

**Compared to other more mature markets in North Africa, the e-mobility public transport sector in Kenya and Rwanda in particular remains very small, with BasiGo as a clear market leader.** In Kenya, ROAM was BasiGo's only competitor until its recent shift in focus to two-wheeled vehicles. IZI Electric remains the only other serious contender for a partnership with the newly created Rwandan parastatal company EcoFleet, which is expected to take over bus service operations in Kigali shortly.

At policy level, interviews with other companies in the e-mobility space indicate that key enabling factors for sector growth – which may also influence the emergence of companies that may choose to replicate BasiGo's model in the future – include:

- Value added tax (VAT) and import tariff exemptions and the associated ease and cost of importing fully assembled buses, for example in Egypt, Morocco, Rwanda, and Ethiopia.
- Bans on diesel vehicle imports (Ethiopia).
- Proactive public authority initiatives to acquire more e-buses (for example, more than 100 buses being purchased for the Bus Rapid Transit project in Greater Cairo).

Our interviews with other companies in this space, as well as ecosystem stakeholders, also helped identify contextual market factors that may further determine the replication potential of BasiGo's model:

- The attitudes of the public or private bus service operators to asset ownership as compared to leasing, including both the relative cost considerations and perceptions of risk;
- Brand loyalty and acceptance of Chinese manufacturers. For example, the South African market is characterised by a strong preference for Toyota, based on negative prior experiences with other original equipment manufacturers, and thus the willingness to accept the e-buses produced by BasiGo's Chinese suppliers.

- The potential gains from professionalising bus operations through greater revenue transparency, such as if better financial management is linked to greater ease of obtaining bank loans, which are likely to be more attractive in cases where the bus service is run by a private entity.
- A policy environment and market structure that enables a company to work with existing public transport operators, as opposed to working with government schemes that seek to circumvent or compete with them.
- Availability of supporting infrastructure, such as charging stations. It should be noted that BasiGo's approach of investing in charging infrastructure alongside e-bus manufacturing is unusual and has been necessitated by the company's role as a first mover in the Kenyan market. Without government investment in this form of infrastructure (as is the case in Rwanda), companies seeking to replicate BasiGo's model as first movers in other markets would similarly have to consider the necessary investment in charging stations.
- A policy and regulatory environment that actively promotes EVs. Examples include the ban on diesel vehicle imports in Ethiopia, import duty exemptions for EV imports in Rwanda, and Kenya's recently announced National Electric Mobility Policy. This includes a commitment to establish supportive measures for EV charging infrastructure, such as standards for interoperability and space allocation for public charging infrastructure.

To date, one company, IZI Electric in Rwanda, could be identified to have replicated BasiGo's business model of leasing e-buses to operators.

**Beyond this individual case, there is evidence that BasiGo's success has attracted interest from other operators that have demonstrated a willingness to learn from BasiGo's model.** This includes:

- 20 operators from India that have visited BasiGo in Kenya to learn about its model.
- Enquiries from entrepreneurs and existing companies from 11 other countries in sub-Saharan Africa (Democratic Republic of Congo, Zambia, Nigeria, Burundi, Tanzania, Zimbabwe, Mauritius, South Africa, Uganda, Zambia, and Botswana) interested in understanding more about various aspects of the BasiGo model as they consider investment decisions.
- BasiGo being invited to South Africa to speak to taxi operators and having been directly approached by a South African start-up keen to learn about its model.

## b) Investor demonstration effects

Last, this evaluation aimed to assess the extent to which BasiGo has provided a sufficient proof of concept to generate greater interest in their model and the e-bus sector among other DFIs or more commercial investors. The evaluation considered how the broader e-mobility market is changing, and the different factors that may be driving these changes beyond BasiGo's growth.

**The interviews conducted indicate that investors still view the e-bus sector as high-risk and in its early stages of maturity,<sup>27</sup> particularly when compared to the market for electric two-wheelers.** The sector remains a focus for DFIs and impact investors, with other major investments made in the sector<sup>28</sup> since BII's flexible debt investment in BasiGo having been made on concessional terms.

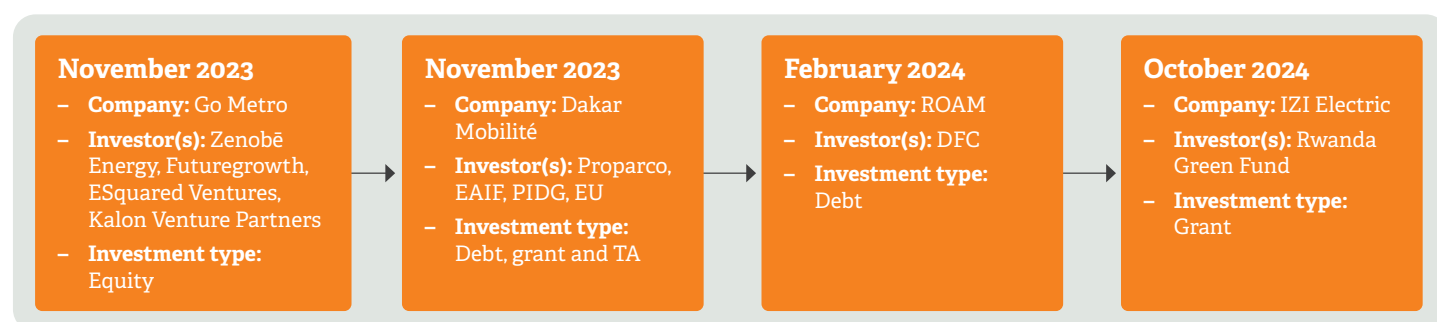


Figure 12: Other investments in the e-bus sector in sub-Saharan Africa

<sup>27</sup> This assessment is in line with the Industry Lifecycle Model (for example, as cited in Klepper, S. & Simons, K. (2005). 'Industry shakeouts and technological change', *International Journal of Industrial Organization* 23: 23–43.), whereby the 'introduction' stage of market growth is characterised by a single producer or very few firms, with the product having been recently commercially introduced.

<sup>28</sup> Based on publicly available information.

There is, however, early evidence of the e-bus sector moving slowly towards less concessional investors in more developed markets in sub-Saharan Africa:

- **E-mobility is becoming more familiar to investors, having achieved proof-of-concept:** In countries such as Ethiopia, Kenya, and Rwanda, there is a perception from BasiGo management that investors now understand the market potential and are focused on assessing individual companies. Furthermore, there is some indication that Kenyan banks have been more willing to issue loans for smaller electric 14-seater vans, following BasiGo's proof of concept.
- **However, the public transit segment still requires concessional financing:** For example, the Private Infrastructure Development Group's investment into Dakar Mobilité required both debt and viability gap finance to make the project commercially viable. This was due to the gap between capital expenditure (capex) and operating costs and the concession offered by the government for operating within the Dakar Bus Rapid Transit system. By contrast, the two-wheeler segment in East Africa is reported to be able to secure terms closer to commercial due to (i) lower upfront capex requirement, and (ii) greater market maturity.
- **Scale will be crucial for enabling BasiGo to progress to commercial capital:** While BasiGo is demonstrating positive results in terms of unit economics, the pace of scaling will determine the company's ability to attract more commercial capital. BasiGo still requires a considerable financing boost to reach the target number of buses on the road to break even, and will require more debt following on from Series B. While BasiGo is unlikely to be able to secure fully commercial debt until it reaches breakeven point, the company's successes to date will likely enable it to move along the continuum of financing towards less concessional DFI loans after Series B.



*Nobody is doubting e-mobility here anymore. We have moved decidedly through the market concept phase. Now it's all about evaluating specific companies.*

*BasiGo management*



## 5

### Implications and lessons

**BII's flexible debt has been crucial for the testing and scaling of BasiGo's model.** The investments were made at an early stage of BasiGo's growth, when no other forms of affordable debt finance were available. The flexible debt also enabled BasiGo to scale without relying exclusively on equity, which would have made it challenging to achieve returns typically expected by equity investors and, potentially, compromised future fundraising. The financing enabled BasiGo to substantially scale up its fleet, and to make significant cost savings by meeting the minimum order requirement for imports of CKD kits, thereby avoiding import tariffs due to in-country assembly, resulting in a cost saving of \$2.8 million to date.

**There is good evidence that BII's investments in BasiGo have delivered economic benefits for businesses and improve the day-to-day lives of passengers.** BasiGo offers a compelling model for bus operators that can expect a gross profit increase of 75 per cent (in Nairobi), 35 per cent (in Kigali) and 25 per cent (for intercity routes in Rwanda). Passengers report BasiGo buses consistently outperform diesel on comfort and customer service, with BasiGo given NPS of 39 in Kenya and 38 in Rwanda. This evidence gives comfort that future investments in the e-bus sector can have a positive impact on people and the economy as a core impact pathway (alongside impact on the planet).

**BII's investment in BasiGo has helped avoid close to 800 MT of carbon emissions to date across both Kenya and Rwanda.** This impact comes from the direct result of BasiGo helping to displace diesel buses in operators' fleets. Findings from the passenger survey also demonstrate BasiGo is actively influencing customer choice in terms of using other forms of public and private transport. With upwards of one-third of respondents using other polluting modes of transport less, BasiGo is helping reduce emissions beyond directly replacing diesel buses on the road. As BasiGo continues to grow, greater emissions avoided are expected from the scale-up of its buses.

**There is not yet any concrete evidence of BasiGo's success leading to replication or demonstration effects at scale, although there is some early indication of other businesses interested in learning from BasiGo's model.** The e-bus sector in sub-Saharan Africa remains nascent overall, with investments in other markets being made on concessional terms. Replication effects take time to materialise, so the current lack of concrete evidence is in line with expectations. An enabling policy environment, alongside BasiGo's progression to breakeven will make it more likely others seek to replicate the model. Other investors interviewed suggested investment from DFIs in the 'supporting ecosystem', such as charging infrastructure and financing innovations, around e-buses could help to move the sector forward.

## Lessons for BII and other DFIs and impact investors

BII and other DFIs and impact investors should consider:

- 1. Expanding catalytic investments in the e-bus market in sub-Saharan Africa, given the high climate and development impact potential and the ongoing need for concessional finance.** Further support to BasiGo – contingent on the company achieving key scale and profitability milestones – could help deepen the company's direct impact on people and planet, support its graduation towards more commercial capital, and strengthen demonstration effects for other investors. Beyond BasiGo, investors and e-bus companies highlighted the ongoing need for concessional finance in the sector given, on the one hand, its long-term positive impact on people and planet and, on the other, high levels of perceived risk among commercial investors. Entry into new markets could be guided by considerations such as (i) the presence of a conducive regulatory environment, including any preferential tax or import tariff policies for electric vehicles, (ii) an established network of bus operators with a strong customer base, (iii) a clear rationale for those operators to explore alternative technologies and business models due to, for instance, prohibitively high costs of diesel and the high costs of credit needed to acquire diesel buses.
- 2. Exploring investments in charging infrastructure and financing mechanisms.** This evaluation has demonstrated that adequate charging stations are a key part of the EV value chain and also a key barrier to bus operators maximising the time e-buses spend on road. In addition, in the long term, e-bus companies are unlikely to be able to meet demand through leasing buses purely on their balance sheets and will require financing partnerships.
- 3. Continuing to share lessons learned over time on the demand for and scalability of e-buses to amplify demonstration and replication effects.** BII's flexible debt has supported BasiGo to scale its model within Kenya and to Rwanda, and in doing so to demonstrate the demand for e-buses and increased profit for bus operators relative to diesel buses, as evidenced in this report. This study also found a high level of interest from existing transport providers and entrepreneurs across Africa and South Asia, with many contacting BasiGo to learn more about its model. As BasiGo and other e-bus companies continue to scale and demonstrate viability, these companies and investors should look for ways to share lessons and data, for example on bus performance, operator unit economics, and financing options, to support demonstration effects to investors and accelerate investments into the sector. Similarly, evidence of the development and environmental impact of e-buses, such as described in this report, should be shared with other impact investors focused on transport, infrastructure, and climate, to help strengthen the impact case for investing in the e-bus sector.



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