Barriers and Opportunities for the Electrification of Popular Transport

Baseline Study

SOUTH AFRICA

2026



GlobalNetwork for PopularTransportation
SHARED-USE MOBILITY CENTER
AFRICA E-MOBILITY ALLIANCE

Set 2026
Global Network for Popular Transportation

Authors
Winnie Miranyi

Tom Courtright

Editors
Andrea SanGil León

Natalia Pérez Bobadilla

Sarah Platanitis

Design
Juan Hernández Céspedes

Cover Image Credit
Andrea SanGil León



GlobalNetwork for PopularTransportation



AFRICA E-MOBILITY ALLIANCE



SHARED-USE MOBILITY CENTER

Foreword

Integrating popular transport in policy and planning can avoid further increases in per capita GHG emissions by disincentivizing the shift to private car ownership and use and by improving shared mobility and public transport networks. Accelerating the shift to electric vehicles in the sector strengthens popular transportation and local economies by reducing costs for operators, commuters, and governments, creating new business opportunities and generating jobs in the Electric Vehicle (EV) and clean energy sectors. Most importantly, this transition will significantly reduce local air pollution, leading to healthier communities and improved quality of life for residents.

The Global Network for Popular Transportation aims to equip change leaders and strengthen their capacity to work together to make local and national electrification policies and plans inclusive of popular transportation.

These baseline studies were developed by the Global Network for Popular Transportation, a project of the Shared-Use Mobility Center, with support from the Drive Electric Campaign.

Through the work of local consultants, we developed nine country-level baseline studies to better understand the current situation of popular transportation (including 2Ws, 3Ws, minibuses or other vehicles used for this purpose) and electrification, to identify champions, key stakeholders, emerging policies, and opportunities to incorporate popular transport into electrification policy and planning in the following countries:

Kenya, South Africa, Indonesia, Vietnam, Thailand, Chile, Colombia, Mexico, and Brazil.

These baseline studies will help change leaders in the climate and transport fields better understand the benefits of electrifying the popular transport sector, the sector's electrification needs, and policy opportunities to bridge those gaps. The objective of this work is to identify levers that will equip the relevant change leaders (and their local and national networks) with areas for engagement, mobilization and action.

Table of Contents

Foreword **3**

Executive Summary **5**

Key Insights 6

3.1 National and provincial framework 7

3.2 Enforcement and informality 8

3.3 Reform and formalisation processes 8

4 Popular Transport Landscape **12**

4.1 Modal share and scale 12

4.2 Workforce, representation and organisation 14

5 Electrification Landscape **15**

5.1 Current state of electrification 15

5.2 Financing: lowering the cost of capital 16

5.3 Industrial policy and local manufacturing 17

5.4 Barriers analysis and the Stellenbosch Framework 19

6.1 Key findings 20



Figure 1: Minibus Taxi Terminal.
Photo by: Andrea San Gil.

Executive Summary

In South Africa, popular transport by and large means the minibus taxi, which carries the vast majority of popular transport passengers and most shared transport trips. The sector grew out of apartheid-era restrictions on Black-owned enterprise and the state's withdrawal from regulating it in the late 1980s, and carries political weight as a result (Fobosi, 2013).

An estimated 200,000–300,000 minibus taxis make more than 15 million commuter trips a day (Booysen et al., 2026; Kgwedi and Krygsman, 2017). They carry 80% of public-transport worker-trips, up from 68% in 2013, as public bus and rail ridership has declined (Stats SA, NHTS 2020). Annual turnover is estimated at R38–50 billion (Wasserman, 2019). Owners are organised into route associations under SANTACO and the NTA. Drivers work long hours against daily targets, and labour protections are largely unenforced (Barrett, 2003; Fobosi, 2013).

South Africa has some advantages and obstacles other markets lack. It has a domestic minibus assembly base at Toyota Durban and Nissan Rosslyn, an EV-specific Automotive Investment Scheme notice, and a 150% tax allowance for EV production under section 12V of the Income Tax Act (GreenCape, 2024; TechCentral, 2025). However, no electric minibus taxi is yet in commercial service. The first, flxEV's eKamva, has soft-launched on routes near Century City, Cape Town as of October 2026. Electric bus procurement by Golden Arrow and Johannesburg's Metrobus is further along (City of Johannesburg, interview, 2025). The grid is more than 80% coal, so the climate gain from grid-dependent electrification is limited for now, although it removes exhaust particulates (Booysen et al., 2026).

Available charging technology can cover most uses; rather, the main constraint is the cost of capital. Once the 25% import duty and up to 30% ad valorem tax are applied, an imported electric minibus costs 1.4–2 times as much as a local diesel one, and taxi finance is priced at 20–27% (Sello et al., 2026; GreenCape, 2024). Cape Town tracking data show 61–89% of vehicle-days are viable with depot charging alone, and more than 90% with home charging (Booysen et al., 2026). However, home charging is often unsafe in informal housing (Knipe, interview, 2025). Reform pilots, including incentive schemes, service contracts and collectivised finance, have improved compliance where they were funded, but none has exceeded about 900 vehicles, and most have been discontinued. Public operating support exists only in provincial and municipal schemes (ODA, 2022a–e). This report argues that progress depends on two things: lowering operators' cost of capital through risk pooling and pay-as-you-drive models, and supply-side support for local assembly.

Key Insights

Insight 01
Licensing and planning sit with different governments

Provinces license routes. Cities plan networks but have limited capacity to see or shape who operates on them. Licensing backlogs and inaccurate databases leave fleet estimates 100,000 vehicles apart.

Insight 02
Electrification is still pre-commercial but may scale without reform

EV The first electric minibus taxis are being piloted now, and have potential to scale. However, pay-as-you-drive models allow individual owners to switch without accompanying reform, leaving existing labour conditions in place..

Insight 03
Cost of capital is the binding constraint

Finance at 20–27% and import duties put electric minibuses out of reach of most owners. Pay-as-you-drive and pooled lending are the main options being tested.

1 Introduction

South Africa's cities and towns depend overwhelmingly on the minibus-taxi (MBT) industry for daily mobility. Two-thirds of South African households have no access to a private vehicle. The MBT sector is privately owned, decentralised, and largely self-regulated: it has become, in effect, the backbone of the country's public transport system (Fobosi, 2013; Barrett, 2003).

The industry expanded significantly in the late 1970s to provide for a growing urban African workforce that the apartheid state's transport system did not account for, and it became one of the few channels through which Black-owned enterprise operated at scale during that period (Fobosi, 2013). Since 1994 it has sat somewhat awkwardly between two opposing pressures: state-led formalisation through licensing, recapitalisation and sectoral labour determinations, and an operating culture built around self-regulation and target-based earnings that erodes those instruments in practice. Drivers, in particular, work inside an arrangement in which formal labour rights nominally apply but are rarely enforceable.

This baseline study examines the potential for electrifying South Africa's popular transport sector. It focuses on minibus taxis, given their dominance in the sector, and on an industry structured around high capital costs, route-based associations, and thin operating margins (GreenCape, 2024; Genesis Analytics/GIZ, Electric Vehicles Market Intelligence Report 2024).

Electrification of South Africa's minibus-taxis offers multiple benefits. The sector is a major source of urban air pollution and the single largest transport cost for low-income households. It is also a significant employer and a possible anchor for local vehicle manufacturing given South Africa's century-old automotive industrial base (GreenCape, 2024).

South Africa's popular transport sector has some of the ingredients for an industry-anchored electric leapfrog, but not yet the means to finance it.

Alternatives to commercial vehicle finance are only beginning to be tested. The most recent, a World Bank and DBSA project with one route of the Pretoria Randburg Soshanguve (PRS) Taxi Association, received what the World Bank describes as the DBSA's first fleet loan made directly to a paratransit organisation in late 2023; its outcomes are not yet documented (World Bank, 2023). Dakar offers longer evidence: minibus owners grouped into jointly liable economic interest groups borrowed at 8–9% across three renewal phases between 2005 and 2016, with repayment rates of 91–99% (SSATP, 2023). This

report's central argument is that electrification depends on lowering operators' cost of capital, through risk-sharing arrangements and pay-as-you-drive models, alongside supply-side support for local manufacturing.

The sections that follow set out the regulatory environment governing popular transport, the structure and workforce of the sector, the current state of electrification pilots and barriers (assessed against the Stellenbosch Framework), and the resulting findings and recommendations.

2 Methodology

This baseline study employs a mixed-methods approach combining desktop research and key informant interviews. A comprehensive literature review was conducted, drawing on academic publications, government reports, industry briefs, and market intelligence reports. Semi-structured interviews were conducted with 10 key stakeholders across South Africa's transport ecosystem between January and August 2026, including representatives from non-governmental organisations, transport consulting firms, government authorities, and local experts.

Interviews were conducted virtually via Google Meet, transcribed verbatim, and analysed thematically. The interview findings have been integrated throughout this report, with direct quotations used where they provide unique insights.

3 Regulatory Conditions

The MBT industry occupies an unusual regulatory position: it is formally licensed but was built on, and still partly operates through, informal practice. Regulation operates at three levels: national, provincial, and municipal.

3.1 National and provincial framework

Route access and vehicle operation are governed by the National Land Transport Act (NLTA) and administered through Provincial Regulatory Entities (PREs). Operating licences are tied to specific routes rather than to operators or fleets: an owner joins a local taxi association, the association endorses the application, and the PRE issues a licence for the approved route (GreenCape, 2024). Two national umbrella bodies sit above the associations. The South African National Taxi Council (SANTACO), functions as a business and employer body across the nine provinces; the smaller National Taxi Alliance (NTA) was constituted in 2003 (Barrett, 2003; GreenCape, 2024).

Figure 2: Minibus Taxi
Photo by: Andrea San Gil.



Regulatory responsibility is split across the three spheres of government, and the split shapes what each actor can actually do. The national government sets policy and maintains the licensing system; provincial departments issue operating licences through the PREs; municipalities, through their Integrated Transport Plans, advise on whether to grant a proposed route. The practical consequence is a mismatch between planning and licensing functions. Cities have the power to plan for public transport through their Comprehensive Integrated Transport Plans (CIPTs) and ITPs but the city where a taxi operates has no direct authority over who is licensed to operate on their streets; instead, its role is limited to directing applications. Licensing is for the provincial regulatory entities, which creates a disconnect between what is planned and what is actually licensed to operate. (interview, City of Johannesburg, 2025).

The NLTA anticipates a further step in which municipalities take over the licensing function themselves through a Municipal Regulatory Entity, but no city has yet been assigned this power. Johannesburg officials describe the resulting gap plainly: they are not fully privy to the provincial licensing database, which leaves them unable to see or shape what is running on their own streets (interview, City of Johannesburg, 2025). This began early on: the apartheid government deregulated the taxi industry in 1988–89, and the state's withdrawal left the sector to organise itself. This vacuum was filled, in one interviewee's phrase, by "the law of the gun," with route control often settled through violence and group alignment rather than administrative process (Fobosi, 2013; interview, McLachlan, 2025). The state did not withdraw entirely, Provinces retained the licensing function but their grip on the sector became weak. Nearly four decades on, that legacy still constrains what regulators can do.

3.2 Enforcement and informality

Despite formal licensing requirements, enforcement is uneven. A substantial share of operators run without full compliance with the operating-licence regime — some vehicles are unlicensed altogether and evade tax — and labour law is widely ignored on the ground, including the Basic Conditions of Employment Act and Sectoral Determination 11 for the taxi sector, which nominally sets minimum wages, hours, and leave (Department of Labour, 2005; Fobosi, 2013). Drivers are paid on a daily target: the owner sets an amount to be delivered, and the driver decides how to reach it. Non-compliance is not confined to unlicensed operators. The target system itself pushes drivers toward long hours, speeding and overloading regardless of licence status (Schalekamp and Saddier, 2020; Plano, 2022), and formalising finance does not by itself change it: in Dakar, after fifteen years of fleet renewal, only about 20% of drivers had formal contracts and the target system remained (SSATP, 2023). Johannesburg officials attribute much of the slippage to the licensing system itself, describing it as an ageing platform that the national Department of Transport has been trying to overhaul, with new applications backing up in the meantime (interview, City of Johannesburg, 2025) . This backlog makes it harder to track who is operating, but it does not by itself explain why labour provisions are ignored on the ground.

The Sectoral Determination 11: Taxi Sector (2003) regulates minimum wages, working conditions, hours of work, leave, and other provisions in the taxi industry, but is largely not followed. The financial thresholds to formal entry help explain why informality persists. Joining an association typically requires an initial membership fee, a permit fee, and ongoing weekly dues; route access is bought and sold, at reported prices ranging from R10,000 to R200,000 depending on the route (Barrett, 2003; GreenCape, 2024). As a result, the boundary between the formal and informal industry is porous rather than crisp. The same vehicle can be licensed on paper, associated with a rank, and still run outside labour law, a Fobosi (2013) argues that the formal/informal distinction is analytically unstable in the sector for exactly this reason.

The enforcement gap is legible in day-to-day working conditions. Drivers work roughly 18-hour shifts against fixed daily targets and rest in the off-peak middle of the day at informal holding areas that have no security, where cell-phone theft is common. Weapons on board are not unusual (Knipe, interview, 2025). Independent studies of driver health corroborate the underlying pattern: long hours, irregular meals, and high-stress driving are associated with higher rates of hypertension, poor diet, and other occupational health burdens among South African taxi drivers (Sinclair & Sinclair, 2015; Peltzer & Phaswana-Mafuya, 2013). Formal regulation covers this workforce on paper; in practice, most of the risk falls on the driver.

3.3 Reform and formalisation processes

The government's principal formalisation vehicle has been the Taxi Recapitalisation Programme (TRP). Its initial aims were to combine fleet

renewal and formalization. It was to formalise labour practices, consolidate businesses into larger entities, replace radius-based permits with route-based operating licences, reduce fleet size through scrapping, and set minimum vehicle safety standards (Walters, 2008, cited in Schalekamp and Klopp, 2018). Access to the scrapping allowance was tied to formalisation, since an operator's permit had to be converted to an operating licence before a vehicle could be scrapped (SANTACO, 2006). In practice, progress has been largely confined to fleet replacement and permit conversion (Schalekamp and Klopp, 2018; Plano, 2022), and its implementation has been contested by owners over the terms of compensation and recapitalisation (Fobosi, 2013).

The TRP is nominally still live but has slowed considerably. The original target of 100,000 old vehicles was raised to 135,894 in 2007; despite this, only 83,713 had been scrapped by mid-2024, with about R5.9 billion paid in scrapping allowances (Cape Argus, 2024). No official evaluation of the programme is publicly available (Schalekamp and Klopp, 2018). Eligibility requires a vehicle to be older than 2007 and to have an operational history that can be reconstructed from its operating licence, this threshold excludes the many old minibuses that never held a licence in the first place. Those vehicles sit outside the programme but remain on the roads, which caps how much of the fleet the TRP can actually turn over (interview, City of Johannesburg, 2025). The programme's economics have also worked against it. Operators refinancing into a new vehicle have faced interest rates of 25–27%, on top of already high vehicle prices, and the government is now reviewing whether to close the programme and design a successor. One option under discussion is a first-loss guarantee or interest-rate subsidy paid to banks rather than a scrapping payment to the owner (Gaibe, interview, 2025). Loopholes have compounded the problem: very old, non-operating vehicles were bought up and submitted for the scrapping allowance, diverting funds into fraud rather than fleet renewal. The scrapping allowance was initially R50,000 and has since risen to R151,000 (SAnews, 2023). Even at that level it covers well under half the cost of a new minibus, so most of the vehicle finance still has to be raised commercially, at the interest rates noted above (interview, City of Johannesburg, 2025).

Outside the TRP, provinces and cities have tested three other approaches: performance incentives, service contracts with industry-owned companies, and collectivised operations or finance (Table X). Each improved compliance or service where it operated, but each depended on public money that has been provincial, municipal or time-limited, and none has reached more than about 900 vehicles against a national fleet of 200,000–300,000. Most report outputs rather than independently evaluated outcomes.

Figure 3: Licenses and permits for Minibus taxis in South Africa. Photo by: Andrea San Gil.

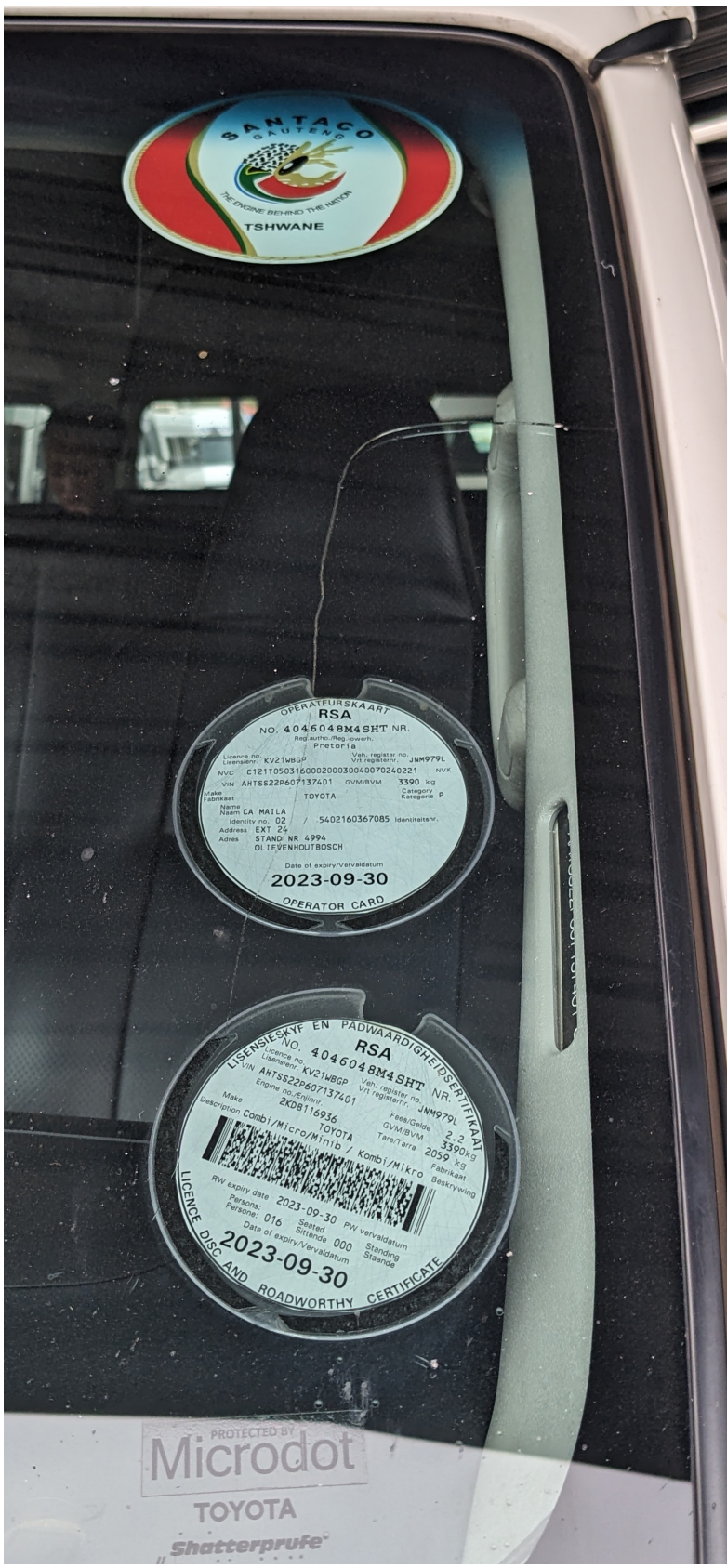

Table 1: Minibus-taxi reform approaches in South Africa.

Model	Where and When	Lead and Funding	Industry Partner	Scale	Reported Resul	Limits
Capital subsidy						
Taxi Recapitalisation Programme (TRP; revised as RTRP from 2019)	National; 2006 to present	National Department of Transport; national budget	Individual licensed owners; scrapping administered by contracted agents	83,713 old taxis scrapped against a target of 135,894 by mid-2024; about R5.9 billion paid	Removed older vehicles and introduced minimum safety standards	Formalisation aims (labour, consolidation, fleet reduction) largely unrealised; no public evaluation
Performance incentives						
Moja Cruise	eThekwini; pilot May 2018 to Feb 2022	eThekwini Transport Authority; municipal funds (R202 million approved).	Five regional taxi offices and 76 associations.	410 vehicles, 337 owners, 467 drivers (target up to 5,000 vehicles).	Operators paid R1,000 per vehicle per month for tracking, roadworthiness and written driver contracts; driver training.	Slow agreement with industry cost the programme its Phase 2 funding; limited municipal staff capacity; many drivers had outstanding warrants.
Blue Dot	Western Cape; live May 2021, ongoing at Oct 2022	Western Cape DTPW; provincial funds (budget not reported).	Eight new regional taxi companies plus UTS.	880 vehicles, 500+ operators, 900 drivers, 150 routes.	Speeding events down 50% after one year; 27,000 passenger ratings, averaging 'good'.	Incentives paid to operators, so reaching drivers is hard; 2021 taxi violence disrupted roll-out; one interviewee reports gains reversed after funding ended.
Service contracts with industry-owned companies						
Red Dot	Western Cape; May 2020 to May 2022	Western Cape DTPW with Department of Health; provincial funds	Umanyano Travel Services (UTS), wholly owned by SANTACO Western Cape	About 250 dedicated vehicles at peak	More than 340,000 trips for health workers and patients; tracked, dispatched and monitored by government	Emergency service that ended with the pandemic
Gautrain Midibus Feeder Distribution Service	Gauteng; since Nov 2011 (concession ends 2026)	Gautrain Management Agency; about R21 million a year	Alexandra Transport Solutions, formed by two taxi associations	22 midibuses, 52 staff	Scheduled feeder service with steady patronage growth; expanded to further stations	Cash handling (automated fare collection too costly); owners expected salaries; vehicles bought in owners' names
Libhongolethu minibus feeder	Nelson Mandela Bay; since May 2018	Nelson Mandela Bay Metro; Public Transport Network Grant	Spectrum Alert, a formed by two associations (187 shareholders)	100 minibuses leased at R5,300/ month; around 400 drivers and conductors employed	Scheduled feeder routes to a bus trunk; owners of 200 withdrawn taxis compensated	Fares cover 29% of operating costs; ageing leased fleet; patronage declined; services later suspended

Model	Where and When	Lead and Funding	Industry Partner	Scale	Reported Results	Limits
Collectivised operations and finance						
Collective fleet and fare management scheme	Cape Town; about 18 months, before 2017	Association-initiated	One route association	Not reported; only half the fleet was needed to run the service	Central fleet management, daily cash collection, fixed driver wages	Collapsed over owners' disputes about payouts and drivers' wage demands
7th Avenue Transport Operating Company pilot	Mitchells Plain, Cape Town; 2019, two months	City of Cape Town	7th Avenue taxi association	Fleet rationalised from 78 to 40 vehicles	Scheduled services; 8-hour driver shifts; improved passenger satisfaction	Short pilot; fares stayed in cash
PRS/DBSA fleet finance (TTSA)	Tshwane-Johannesburg (Marabastad-Randburg route); 2022 to present	World Bank (advisory); DBSA (loan)	Pretoria Randburg Soshanguve Taxi Association: 15 owners, 29 vehicles	One 54 km route	DBSA fleet loan approved Sept 2023, first disbursed Nov 2023; projected 21% emissions cut from operational changes	Outcomes not yet published; EV option exceeded the service's revenue and needed a dedicated MV grid feeder

More recently, subsidy reform has been raised as a precondition for deeper formalisation. Unlike bus and rail, the MBT sector receives no operating subsidy. The Department of Transport's draft public transport subsidy policy proposes moving from mode-specific subsidies to subsidised networks served by a combination of modes, which could include minibus taxis where integrated transport plans provide for them (PMG, 2025), but there is not yet consensus within government on operating support for the sector. In May 2025 the National Department of Transport circulated a document to the metros signalling a change to the public-transport grant regime, on the argument that roughly R80 billion had been spent on BRT infrastructure over about 15 years to move around 1% of demand, while the minibus taxi sector moves close to 80% of demand on roughly 1% of government funding (McLachlan, interview, 2025). Gaibe frames the same shift from the National Treasury side: at the end of 2024 government signalled it would stop funding new BRT rollouts on value-for-money grounds and opened a three-year review of how road-based public transport should be funded, with rail positioned as the backbone and bus and minibus taxi services complementing it (Gaibe, interview, 2025).

On the electrification side, dedicated MBT-specific regulation is largely absent; existing levers are industrial-policy instruments such as the Department of Trade, Industry and Competition's (DTIC) Automotive Investment Scheme (AIS), updated in February 2024 with an EV-specific notice reimbursing up to 35% of qualifying EV manufacturing investment, and import duties/ad valorem tax that currently disadvantage imported EVs (a 25% import duty plus an ad valorem tax of up to 30%, since imported EVs are classified as luxury goods) (GreenCape, 2024; Genesis Analytics/GIZ, 2024). Section 12V of the Income Tax Act, introduced by the Taxation Laws Amendment Act of 2024, allows vehicle manufacturers to deduct 150% of qualifying investment in buildings and equipment used mainly to produce battery-electric or hydrogen vehicles, for assets brought into use between 1 March 2026 and 1 March 2036 (Income Tax Act, s.12V; TechCentral, 2025). The Electric Vehicles White Paper (December 2023) is the main recent policy signal. It sets out a manufacturing-side transition framework paired with a tax allowance for producers of battery-electric and fuel-cell vehicles, and the Department of Transport is separately updating its Green Transport Strategy (Moshikaro-Amani, interview, 2025). However, she noted that the EV White Paper is focused on the supply side, how to support manufacturers. The demand side element is missing.

4 Popular Transport Landscape

South Africa's popular transport landscape is dominated by a single mode — the minibus taxi — rather than the more diverse mix (motorcycle taxis, three-wheelers) seen in some other African markets.

4.1 Modal share and scale

The NHTS 2020 recorded that 61.8% of households used minibus taxis as their main mode of transport, and that taxis' share of public-transport worker-trips rose to 80.2% from 67.6% in 2013. Bus (16.6%) and especially rail (3.2%) usage declined sharply (Stats SA, NHTS 2020; SABOA Summary, 2021). Metrorail's paying passengers fell from 646 million in 2008/09 to 147 million in 2019/20 (Business Report, 2022), a collapse the State Capture Commission linked to mismanagement and corruption at PRASA, compounded by theft and vandalism of infrastructure (Daily Maverick, 2022). Regionally, taxi usage is highest in Limpopo, North West, Mpumalanga and Gauteng, where they make up 70-80% of trips. Rural households rely more heavily on buses (21.2%) than urban households (8.3%) (NHTS 2020). This regional variation underscores the need for locally tailored electrification strategies.

The minibus taxi industry is estimated to have an annual turnover of R38 billion to R50 billion (Wasserman, 2019). Kgwedi and Krygsman (2017) note that minibus taxis make over 15 million commuter trips daily. The government has acknowledged the industry's contribution to the economy. Provincial licensing happens through the PREs, but the resulting databases are often inaccurate. Gauteng set up a Public Transport Crisis Committee in January 2025 to clear its operating-licence backlog and is purging duplicate and fraudulent entries from its database (SAnews, 2025; Business Explainer, 2026). This partly explains why fleet estimates vary so widely, from about 200,000 to more than 300,000 vehicles nationally (Booysen et al., 2026; see below).

Fleet-size estimates vary. The Department of Trade, Industry and Competition puts annual replacement demand at over 10,000 vehicles a year (Naamsa data, cited in GreenCape, 2024). Owen Mwaura (interview, 2025) gives roughly 200,000 minibus taxis in operation at the end of 2024; City of Johannesburg officials estimate over 100,000 in Johannesburg alone and over

Figure 4: Minibus Taxi
Photo by: Andrea San Gil.



250,000 nationally (City of Johannesburg, interview, 2025). Toyota South Africa alone produced an estimated 16,500 minibus taxis in 2023 at its Durban plant, with Nissan producing a smaller volume in Rosslyn, Pretoria (Genesis Analytics/GIZ EV MIR, 2024). Average monthly sales of new minibus taxis in 2023 sat around 180 to 200 vehicles a month, or 2,160 to 2,400 a year (Business Day, 2023).

4.1.1 Popular transport typology

4.1.1.1 Minibus taxis

The dominant vehicle type is the 10–16 seater minibus taxi (locally "kombi"), typically a Toyota Quantum/HiAce (branded "Ses'fikile") or similar. The NHTS 2020 also identifies smaller sub-categories used by households: local minibus/commuter taxis (86.4% of all taxi trips), bakkie taxis (5.8%), long-distance minibus taxis (2.9%), sedan/"four-plus-one" taxis (2.9%), metered taxis (1.1%), and app-based/e-hailing taxis (0.8%) (NHTS 2020). Unlike some other African contexts, motorised two- and three-wheeler taxi modes are not a significant part of South Africa's popular transport mix; the closest analogues are electric micro-mobility vehicles used for last-mile delivery rather than passenger transport, an emerging but still small market segment (Genesis Analytics/GIZ EV MIR, 2024). Studies on electrifying minibus-taxis have found that the median Cape Town minibus-taxi drives 111 km/day (Sello et al, 2026).

4.1.1.2 Other modes

Beyond minibus taxis, two smaller informal/semi-formal modes exist but remain marginal relative to the MBT sector. **Tuk-tuks** operate mainly as a niche last-mile service in specific Johannesburg nodes (e.g. near UJ/Wits, Sandton, Rosebank) and in regional towns. They also work for corporate delivery/advertising use; they are not addressed specifically in road traffic legislation, and only require an operating licence if used for public transport.[1]

Motorcycle-taxi e-hailing has just begun with Uber Moto, piloted in Johannesburg's western suburbs from January 2025 at fares from R18/trip; Uber has since announced plans to expand nationally and create up to 300,000 riding opportunities over the next decade, though motorcycle-safety experts have raised concerns about helmet fit and rider training standards ("Expect 300,000 New Uber Motorbike Riders," Amcham, 2026; "Uber introduces motorbike rides," Times Live, 2025). The National Department of Transport, however, has since instructed Uber to halt the pilot on regulatory grounds, as the licensing regime has no category for motorcycle passenger transport. The department's position is that it cannot open a new mode before the existing minibus taxi regulatory backlog is under control (Gaibe, interview, 2025). Johannesburg officials confirm the underlying legal position: motorcycles have never been licensed for public transport in South Africa because of the associated safety risks, so anything on the road under an e-hailing brand is operating outside the regulated system (interview, City of Johannesburg, 2025).

4.1.2 Social implications

Minibus taxis are the default mode for the urban and peri-urban poor, and for scholar transport in many areas; households cite the unavailability of buses, together with cost, as key reasons for taxi dependence (NHTS 2020). At the same time, households report significant dissatisfaction: 56.1% of taxi users cited poor rank facilities, and around 7.6% flagged taxi fares as too expensive, while 5.6% cited reckless driving as a leading concern (NHTS 2020). The sector's informal governance model has also been linked historically to inconsistent safety and vehicle-standards enforcement (Fobosi, 2013).

The industry also carries social weight beyond its transport function. Apartheid-era spatial planning pushed Black communities far from centres of employment. When formal public transport collapsed - specifically Rail commuter services, which suffered infrastructure failure and service withdrawal, and subsidised bus services, which also declined; minibus taxis were what connected townships and peri-urban areas to the economy. Owning a taxi came to signal both prosperity and a form of local civic contribution, providing the community with what Mwaura calls "a means to an opportunity" (Mwaura, interview, 2025). Fobosi (2013) makes the same point from a labour-market angle: the industry serves the urban poor as passengers and as workers, generating jobs for drivers, rank cooks, car washers and mechanics, and turning ranks into anchor points for adjacent informal markets. Molobela (2024:2) adds that although academics and the government routinely criticize the sector for its unregulated character, it remains the most consistently available means of public transport in much of the country and a load-bearing part of local economies.

1 jtscm.co.za/index.php/jtscm/article/view/214/414; businesstech.co.za/news/motoring/175263

4.2 Workforce, representation and organisation

4.2.1 Ownership and Employment

Ownership in the MBT sector ranges from owner-drivers to multi-vehicle fleet owners who employ drivers on a target/commission basis. A driver typically remits a fixed daily amount to the owner and keeps the remainder after fuel costs, a structure widely described in the literature as creating intense pressure on drivers, as they can increase their own earnings by driving faster or picking up more passengers (Barrett, 2003; Fobosi, 2013; Molobela, 2024).

Both owner and driver operate as free agents inside the shift, each making daily decisions about how to maximise their own take (Fobosi, 2013). Average hours have been documented at around 14 hours/day (05:00–19:00), with drivers bearing vehicle breakdown risk directly through reduced pay (Barrett, 2003).

Molobela's (2024) study of Mankweng taxi ranks found that 36% of respondents had been in the taxi business for over 11 years, while 89% held a National Senior Certificate, challenging the assumption that taxi entrepreneurs are illiterate. The study also found that over 80% of respondents had no business plan, highlighting a significant gap in business management capacity.

The average operator age is in their early 50s, and generational differences shape openness to change. Younger operators may be more likely to treat electrification, telematics and business-model reform as opportunities rather than threats (Moswane, interview, 2025).

4.2.2 Business model

Representation runs through two parallel channels: employer/owner bodies and worker bodies. Employer/owner bodies are principally SANTACO, formed in 2001 and representing an estimated 90% of owners across all nine provinces, and the smaller NTA. SANTACO's provincial structures have shown they can create companies that government can contract: SANTACO Western Cape established Umanyano Travel Services in 2020, which ran the province's Red Dot service and later joined the Blue Dot pilot alongside eight regional taxi companies (ODA, 2022a; 2022b). These are contracting vehicles for services, however, not entities that own or finance fleets. The largest worker body is the South African Transport and Allied Workers' Union (SATAWU), which has organised a minority of drivers (Barrett, 2003).

4.2.3 Gender Dimensions

Women remain a small share of the workforce: historical estimates put women at roughly 2% of the total MBT workforce, concentrated in administrative roles, with very few women drivers or queue marshals (Barrett, 2003). Molobela (2024:5) records 99% male ownership in his Mankweng sample, and describes the industry as one where women face both entry barriers and a working environment that makes sustained participation in. Interview evidence points to a cultural dimension: even as passengers, women can face a hostile reception in some ranks, and the assumption that the industry is not "for" women is voiced from within the workforce itself (Knipe, interview, 2025). Electrification could open a narrow window here: new skills requirements (charging operations, telematics, fleet management) create roles not tied to the incumbent driver culture and may be easier for women to enter.

Figure 5: Minibus Taxi Terminal.
Photo by: Andrea San Gil.



5 Electrification Landscape

EV penetration in South Africa's popular transport sector remains early and largely pre-commercial. No electric minibus taxi fleet is yet operating at scale; activity to date is concentrated in feasibility studies, industrial-policy planning, and adjacent electric-bus pilots rather than deployed MBT fleets.

5.1 Current state of electrification

Interviews conducted for this study suggest South Africa's popular-transport electrification has more potential than the published figures alone imply. Minibus-taxi associations have formally requested electric minibuses for testing (Moswane, interview, 2025). Cape Town, Johannesburg, and Golden Arrow Bus Services have live procurement or tender activity in the electric bus space. At the same time, underlying market data confirms this remains a pre-commercial stage: a Genesis Analytics/GIZ (2024) report found that EV sales in South Africa grew from 502 in 2022 to 931 in 2023, still predominantly private passenger vehicles.

Public transport bus operators at the Golden Arrow Bus Service (GABS) piloted electric buses in 2023, pairing several with rooftop solar PV and solar carports to manage loadshedding risk — a response strategy set out in the Department of Transport's Green Transport Strategy (DoT, 2018). Industry analysts and studies note that this energy sourcing strategy matches South Africa's solar profile, since peak solar irradiation coincides with mid-day off-peak public-transport operating hours (Genesis Analytics/GIZ EV MIR, 2024; Sello et al, 2026).

A 2026 study found that for electric minibus-taxi operators to breakeven, charging costs must stay under 4.5 ZAR ($0.28)/kWh to compete with diesel (Sello et al, 2026); current electricity costs hover around this, without accounting for the cost of fast chargers. Additionally, a completely built unit (CBU) EV minibus with import duty currently costs 1.4 to 2 times that of a local diesel minibus, a major barrier to overcome (Sello et al, 2026).

Early bus pilots have shown local fit as a constraint. Cape Town's initial procurement from BYD ran into trouble on the city's steeper gradients, with some buses unable to complete their routes; the city has since shifted its attention to fleet acquired by Golden Arrow, which is buying and scaling electric buses of its own (Moshikaro-Amani, interview, 2025). GreenCape (2023) reports that the Golden Arrow Bus Services (GABS) pilot has confirmed the underlying economics: electric buses cost two to three times as much as diesel equivalents to purchase, but fuel-cost savings deliver a positive return over the vehicle's 15–20 year lifespan. Order books are starting to reflect this: Cape Town is due to receive roughly 36 electric buses, Golden Arrow has ordered 120, the University of Johannesburg has six electric buses operating on its shuttle service , and Metrobus has gone to tender for an initial 10 (interview, City of Johannesburg, 2025).

The Global Environment Facility (GEF) has funded an electric bus pilot managed by the Development Bank of Southern Africa (DBSA), involving the procurement of 39 electric buses with total funding of USD 4.7 million (Venter, 2024). The beneficiaries are the City of Tshwane (20 buses) and eThekwini Municipality (19 buses). As of May 2026, the project has, however, not yet moved to the pilot phase; it remains in the early stages of technology assessment, policy development and value chain evaluation.[2]

Several electric minibus pilot projects are underway or planned. The most advanced is flx EV's eKamva, a 15-seater developed by a GoMetro-led consortium, which is due to begin commercial operation on routes serving Century City, Cape Town, from around October 2026 (EWN, 2026). Stellenbosch University has developed a retrofitted electric minibus prototype, and a demonstration trial was held in Thembisa in 2025. Local authorities report strong operator interest but persistent concerns about brand credibility. Operators are reported to repeatedly ask, "Why can't you bring this in a Toyota?" (Moswane, interview, 2025).

Pilot activity is concentrated in the Western Cape and Gauteng. Flx EV is preparing a Century City deployment together with the City of Cape Town and a local taxi association, packaging one or two electric minibuses with solar and dedicated charging infrastructure, and is separately in discussion with a Johannesburg fuel-station operator to make charging available to taxis along a route (Gaibe, interview, 2025). Johannesburg officials remain cautious about the pace: no electric minibus is yet in commercial service in

2 https://www.energize.co.za/article/sanedi-electric-bus-pilot-delayed-beyond-planned-rollout

South Africa, and the primary constraint is that no such vehicle is available off the shelf from a dealer (City of Johannesburg, interview, 2025).

Charging arrangements at the driver end add another complication. A pilot of at-home charging failed fire-hazard testing more than once, in part because many drivers rent rooms in informal dwellings with unregulated electricity connections; the incremental fire risk of a high-current EV load on those connections is not trivial (Knipe, interview, 2025). Simulation studies suggest that access to charging, rather than vehicle range or charger speed, is the main determinant of viability under current operating patterns. Using tracking data from 17 Stellenbosch taxis, Pretorius et al. (2025) found that 55% of vehicle-days were viable with 22 kW depot charging alone, rising to 79% with home charging and 86% with 50 kW depot plus home charging. A city-scale study using one month of tracking data from 671 Cape Town taxis found viability of 61–89% with depot charging only and 92–97% with home charging added, while faster chargers added only 1–5 percentage points (Booysen et al., 2026). Operators from historically Black neighbourhoods had the lowest viability without home charging, and the authors recommend secure, shared charging hubs in townships rather than reliance on private home connections, which also add to the evening residential peak (Booysen et al., 2026). In interviews, vehicle cost was described as the more binding barrier, however: even a lower-priced import such as the Joylong lands at around R800,000 CBU before duties, and charging time and infrastructure follow as secondary concerns (Knipe, interview, 2025).

5.2 Financing: lowering the cost of capital

The first lever is demand-side: lowering operators' cost of capital. A leapfrog pathway must therefore include a financing pilot. From the 1980s, Toyota's Durban assembly plant supplied both the vehicle and the credit, and a specialist lender, SA Taxi Finance, later scaled that model into a JSE-listed conglomerate, Transaction Capital, before its recent delisting. The underlying arrangement was credit-risk financing at rates around 27% over 72 months, whereby an owner would repay close to double the vehicle price over the term. This lending was already secured on the vehicle: SA Taxi described itself as a provider of asset-backed developmental credit, repossessing, refurbishing and reselling vehicles on default, with recovery rates of around 72% (Transaction Capital, 2016). The high rate reflected the credit risk of individual owners in a market with one dominant specialist lender, rather than an absence of collateral. Other sources put typical terms at a 10% deposit and 20% interest over 72 months (Booysen and Sello, 2026). One industry adviser described the result as a 'straitjacket' locking it to a single 15-seater vehicle type and to a cost of capital that leaves little margin for reinvestment (McLachlan, interview, 2025).

Collectivisation is one proposed response (McLachlan, interview, 2025). The most recent South African test is a World Bank and DBSA project with the Pretoria Randburg Soshanguve (PRS) Taxi Association, limited to one 54 km route run by 15 owners with 29 vehicles. After data collection and a business plan in 2022–23, the DBSA approved a fleet loan in September 2023, with first disbursement in November 2023 (World Bank, 2023). The project projects a 21% emissions reduction from operational changes alone. Its electrification analysis concluded that the cost of an electric solution exceeds what a typical informal service can carry from its own revenue, and that the local grid could not supply the charging power without a dedicated medium-voltage feeder (World Bank, 2023). An adviser to the project reports a concessional rate of 12% (McLachlan, interview, 2025), but outcomes on fares, loan performance and driver conditions have not been published.

South African attempts to collectivise operations have had mixed results. The 1996 White Paper on National Transport Policy already directed that operators be supported to form cooperatives, associations or companies (Schalekamp and Klopp, 2018). In Cape Town, an association that centralised fleet management and paid drivers fixed wages ran the scheme for about 18 months before it collapsed over owners' disputes about payouts and drivers' wage demands (Schalekamp and Klopp, 2018). Gautrain's midibus feeder company found that vehicles bought in individual owners' names blurred the line between the new company and existing family businesses (ODA, 2022e). In Maputo, bus cooperatives formed from minibus owners could not maintain their buses without operating support, and drivers stayed on the target system (Schalekamp and Saddier, 2020). Pooling financial risk can lower the cost of capital; corporatising operations has proven slow, costly and fragile.

Incentive schemes offer a partial alternative. In the Western Cape's Blue Dot pilot, speeding events fell by 50% in the first year across 880 participating vehicles (ODA, 2022a). Because payments go

to operators, ensuring that drivers benefit has been a recurring challenge (ODA, 2022a), and one interviewee reports that behavioural gains reversed after funding ended and tracking equipment was removed (Gaibe, interview, 2025). Blue Dot's planned second stage includes vehicle renewal to reduce operating costs and emissions (ODA, 2022a). The 7th Avenue Transport Operating Company (TOC) pilot in Mitchells Plain, Cape Town, ran scheduled services for two months (Plano, 2022). As documented by Saddier et al. (2019), the pilot achieved a 45% reduction in fuel consumption, rationalised the fleet from 78 to 40 vehicles, and significantly improved passenger satisfaction. Driver conditions also shifted from ~12-hour days over a 7-day week to a 7.5-hour day with scheduled breaks and one rest day per week (Saddier et al., 2019).

A third route shifts the capital burden from operators to specialist providers. In Kenya, BasiGo leases electric buses to matatu operators on a pay-as-you-drive basis: operators pay a deposit and a per-kilometre fee covering the battery, depot charging and maintenance (CleanTechnica, 2025). The model has relied on development finance, including US$17.5 million in debt from British International Investment and the US DFC in 2024 (Techleap, 2024). In South Africa, flx EV offers a similar bundle of vehicle, charging and finance with the eKamva (Section 5.3). These models reduce operators' upfront costs but move the cost-of-capital problem to the provider, which is where concessional finance may be most effective.



Figure 6: Reproduction of a Minibus Taxi. Photo by: Andrea San Gil.

5.3 Industrial policy and local manufacturing

The second lever is supply-side: converting the existing minibus assembly base at Toyota Durban and Nissan Rosslyn into a domestic e-minibus manufacturer. GreenCape's 2024 industry brief frames MBT electrification primarily as a manufacturing and investment opportunity, centred on the Atlantis Special Economic Zone for Green Technologies (ASEZ) in the Western Cape, and points to existing DTIC incentives (the Automotive Investment Scheme and its EV-specific notice, plus the People-carrier Automotive Investment Scheme) as levers to de-risk local EV/component manufacturing (GreenCape, 2024). The Genesis Analytics/GIZ 2024 EV Market Intelligence Report separately sizes electrification of public transport (buses and minibuses) as a medium-term (3–5 year) investment opportunity worth an estimated R3.6 billion/year for electric minibuses and R6.3 billion/year for electric buses, alongside a smaller but faster-moving R2–7.5 billion electric micro-mobility opportunity in last-mile delivery. Financing innovation — leasing per kilometre, battery-as-a-service/"pay-as-you-save" models — is repeatedly flagged as necessary given that EVs cost two to three times more upfront than comparable diesel/petrol vehicles (GreenCape, 2024; Genesis Analytics/GIZ EV MIR, 2024).

Toyota and Nissan's existing minibus assembly lines (Durban and Rosslyn respectively) are identified as a base on which local electric MBT assembly could be built. The local component supply chain already provides battery management systems, battery-pack assembly, composite materials, steel components, automotive glass, wiring harnesses, seating and tyres. Still lithium-ion cell manufacturing and electric motor production are not (Genesis Analytics/GIZ EV MIR, 2024). Dakar's experience offers a caution. Its first renewal phase required buses to be assembled locally, but the condition was dropped in the second phase in favour of a direct agreement with a foreign manufacturer, and operators later reported slow and costly access to imported spare parts (SSATP, 2023).

Box 2: The AIS-EV notice

In February 2024 the Department of Trade, Industry and Competition issued a notice updating the Automotive Investment Scheme (AIS) with an EV-specific support programme, replacing the EV portions of the July 2021 AIS guidelines. The notice covers battery-electric, fuel-cell, and other alternative-energy vehicles. Support has three components: (1) a 20% reimbursable cash grant on qualifying productive-asset investment by OEMs running Complete Knock Down operations; (2) a 150% accelerated depreciation allowance for OEM investment; and (3) a 35% reimbursable cash grant for component, tooling, and battery-assembly manufacturers.

Implementation has moved unevenly. The 150% allowance was enacted as Section 12V of the Income Tax Act, taking effect on 1 March 2026 with a R500m allocation for the 2026/27 tax year, running to 2036. The cash-grant components sit under the AIS notice itself; detailed eligibility guidelines promised "in due course" do not yet appear to have been separately published, and no public list of approved AIS-EV projects has been released. Imported EVs continue to attract 25% import duty plus up to 30% ad valorem tax as luxury goods, which raises the effective cost of any EV minibus not assembled locally under the AIS-EV envelope.

Flx EV has designed the 'eKamva' minibus with Chinese OEM Higer, a 15-seater boasting a 200+ km range (around two-thirds from on-ground studies) and 40–70% operational savings. Deployment has been slower than planned: GreenCape reported 40 vehicles and 5 DC fast chargers, but first commercial routes are now expected around October 2026 (GreenCape, 2024).

The GreenCape (2024) report also outlines the economics of electrification: operational costs of a diesel MBT are estimated at R6.07/km (R2.49 for diesel, R3.58 for maintenance), whilst an electric alternative is rated at 0.35kWh/km, translating to about R1.20/km (depending on local tariff structures). This represents a significant operational cost saving of approximately 80%. A fleet of 1,000 electric buses would require an estimated 80–100 MW of renewable charging capacity, highlighting the scale of infrastructure investment required (GreenCape, 2024).

The Stellenbosch framework is a system-of-systems modeling approach designed to analyze and simulate the electrification of informal, demand-responsive paratransit systems. We use its prioritization matrix to identify barriers under different conditions, such as weak grids, limited capital, or scarce data. Originally applied to South Africa's minibus taxis, the framework is parameterized and transferable to other informal, demand-responsive systems across Africa, Asia, and Latin America.

5.4 Barriers analysis and the Stellenbosch Framework

The table below summarises the principal barriers identified in the source material, mapped against the Stellenbosch Framework's five context conditions. The barriers below map onto the two levers set out above: capital constraints and data availability bear on the financing lever, while economic/industry factors bear on the manufacturing lever. Grid stability and rapid urbanisation issues exist across both.



Figure 7: QR code to a trip planner platform that includes price and routes for Minibus Taxis in South Africa. Photo by: Andrea San Gil.

Context Condition	Primary Challenge Identified
Grid stability	South Africa's grid is coal-dominated (>80% of generation) and subject to loadshedding; a fleet of 1,000 electric buses alone would require an estimated 80–100 MW of renewable charging capacity, and off-grid/rooftop solar solutions are limited to daylight hours (GreenCape, 2024; Genesis Analytics/GIZ EV MIR, 2024). An electric minibus-taxi on South Africa's current grid may emit 14% more CO2 than a diesel minibus as a result, although electrification eliminates exhaust particulate matter (Booysen et al., 2026; Sello et al, 2026).
Capital constraints	EVs cost 2–3x more upfront than ICE equivalents; financing mechanisms for electric buses and minibus taxis are limited, and a 25% import duty plus up to 30% ad valorem luxury tax on imported EVs compounds the capital barrier for operators (GreenCape, 2024).
Data availability	The sector's informal, association-based structure means fleet, route and demand data are fragmented; national statistics (NHTS) capture modal share but not granular fleet age, vehicle condition, or route-level demand needed to plan charging infrastructure (Stats SA NHTS 2020; GreenCape, 2024).
Rapid urbanization	Continuing urban population growth sustains high demand for taxi-based mobility even as bus and rail services decline, concentrating pressure on already-congested ranks and interchanges that would need to host charging infrastructure (GreenCape, 2024; NHTS 2020).
Economic/ industry factors	An established, century-old ICE-based automotive manufacturing base (Toyota, Nissan) and supply chain represents both an asset (assembly capacity, skills base) and a barrier, since local lithium-ion cell manufacturing and electric motor production do not yet exist domestically (Genesis Analytics/GIZ EV MIR, 2024).

6 Findings, Opportunities and Recommendations

6.1 Key findings

South Africa can leapfrog to electric popular transport, but only if two levers move together. On the demand side, operators' cost of capital has to fall from the current 20–27%. Dakar shows that pooling risk through jointly liable operator groups, guarantee funds and concessions can bring lending to 8–9% with high repayment (SSATP, 2023); South Africa's first comparable test, the PRS/DBSA loan, is too recent to judge (World Bank, 2023). Pay-as-you-drive providers offer a second route. On the supply side, the country's existing minibus assembly base at Toyota (Durban) and Nissan (Rosslyn) needs to be converted into a domestic e-minibus manufacturer, which requires supply-side regulation: local-content thresholds, procurement channels, and offtake commitments. The AIS-EV notice offers the manufacturing subsidy, but demand support is still required. Without both levers, the transition remains unfinanceable at operator level and uncommercial at plant level.

The minibus taxi is the focus. At roughly 80% of public-transport worker-trips and 61.8% of household main-mode usage, any electrification strategy for popular transport in South Africa is, in practice, an MBT electrification strategy (NHTS 2020).

There is limited deployment of electric minibus-taxis as of mid-2026. Available sources describe pilots, feasibility assessments, and industrial-policy design (ASEZ, AIS-EV) rather than any operating electric MBT fleet, earlier stage than several peer markets (GreenCape, 2024).

The association-based governance model is both an obstacle and a potential channel. SANTACO is useful as a macro umbrella for taxi operators, and its near-universal owner coverage gives it reach, and its provincial structures have formed companies that government can contract for services (ODA, 2022a; 2022b); evidence that it can aggregate finance or fleet ownership is lacking. However, its structure was not built for the capital-intensive, longer-payback economics of EVs (GreenCape, 2024; 2003 Barrett report).

Grid constraints (loadshedding, coal-dominated generation) are a first-order barrier distinct from the financing and regulatory barriers common elsewhere, and solutions being piloted for electric buses (off-peak solar charging at depots) are a plausible near-term model for MBT ranks as well (Genesis Analytics/GIZ EV MIR, 2024).

Import tax policy currently works against EV uptake in this sector. The 25% duty plus up to 30% ad valorem tax on imported EVs raises upfront cost precisely where operators are already capital-constrained (GreenCape, 2024).

Public operating support exists only in pockets. Provinces and cities have funded incentive schemes and service contracts (ODA, 2022a–e), but there is no national operating subsidy for the sector and no consensus on one.

Labour and gender conditions in the existing ICE-based industry must be addressed. Long hours, thin/no social protection, and very low female representation are a baseline the electrification transition should not simply carry forward unaddressed (2003 Barrett report).

6.2 Opportunities

The four opportunities below are possible within existing programmes and institutions. Two build on the AIS-EV notice and the Atlantis SEZ to move forward on the manufacturing side. The remaining two draw on the solar-charging model tested at electric-bus depots and on SANTACO's owner coverage to reach operators.

Link early-stage e-MBT production to the existing assembly lines. Under the DTIC's AIS-EV notice (reimbursing up to 35% of qualifying investment), pair them with a local-content threshold in any future public procurement of electric minibuses. Without visible offtake, the manufacturing subsidy alone will not draw the investment it was designed for (GreenCape, 2024; Genesis Analytics/GIZ EV MIR, 2024).

Pilot shared charging hubs in townships and at interchanges. Municipalities could provide land and grid upgrades, with associations or private firms operating hubs as a charging service, and solar-aligned or time-of-use charging to limit peak impacts (Booysen et al., 2026).

Test alternative-ownership financing models. These could include battery leasing, "pay-as-you-save", or per-km leasing with SANTACO-affiliated associations as an aggregation and feedback channel, given owners' existing familiarity with association-mediated route and permit financing (GreenCape, 2024).

Support pay-as-you-drive providers, starting with a market assessment. Assess operator demand, deposit capacity, route suitability and access to overnight charging, drawing on

data from the eKamva roll-out, and explore concessional finance for providers rather than individual operators (CleanTechnica, 2025; EWN, 2026).

Use the Atlantis Special Economic Zone as a demonstrator site. This would enable linking component manufacturing, assembly and possibly a pilot E-MBT fleet, to test the full value chain domestically before wider rollout (GreenCape, 2024).

6.3 Policy entry points

The four entry points below adjust instruments government is already reviewing. Two align with policy windows opening in 2025–26: the EV import duty regime and the review of road-based public transport funding and the draft subsidy policy. The other two address rank-based charging infrastructure and route-level data, which the first two will need to function.

Tax and industrial policy can reconcile support for industry (supply) and operators (demand). Reclassifying imported EVs out of the luxury-goods category lowers upfront cost to operators but undercuts local assembly. Structuring the reclassification around CKD/SKD imports (partially or completely knocked-down for local assembly) rather than fully-built vehicles preserves the incentive for domestic assembly while reducing effective vehicle cost to operators (GreenCape, 2024).

Procurement and subsidy design are critical. If government extends operating support to the MBT sector, whether through the draft subsidy policy or through provincial and municipal schemes such as Blue Dot and Moja Cruise, condition or incentivise any new subsidy mechanism toward electric or low-emission vehicles rather than replicating ICE-based recapitalisation (Fobosi, 2013; GreenCape, 2024).

Charging infrastructure can be located on public land. Since taxi ranks and bus depots often sit on municipal land but municipalities frequently lack capital, prioritise public-private partnership and energy-service-contract models to unlock private investment in rank-based charging (Genesis Analytics/GIZ EV MIR, 2024).

Data infrastructure can accelerate rollout. Invest in better route-level and fleet-condition data collection in partnership with SANTACO and the PREs, to fill the data gap identified under the Stellenbosch Framework and enable evidence-based charging-network planning (GreenCape, 2024).

6.4 Priority areas for further research

The items below are questions that should be explored further. Two are empirical: operator unit economics for eMBTs, and SANTACO's institutional capacity to manage EV finance and infrastructure at scale. The other two look forward: how electrification changes labour conditions and gender access in the sector, and whether last-mile electric micro-mobility could serve as a lower-CAPEX entry point.

The sources reviewed for this baseline do not include detailed unit economics of electric vs. ICE minibus taxi operation under South African fare, fuel, and financing conditions.

SANTACO and provincial-association governance readiness for managing EV financing, charging infrastructure, and maintenance/skills programmes at scale.

Labour and gender implications of electrification specifically (as opposed to the ICE-era baseline), including whether new skills requirements create new entry barriers or new opportunities for underrepresented groups in the sector.

A dedicated look at electric micro-mobility (last-mile delivery) as a nearer-term, lower-CAPEX complement to MBT electrification, given its identified R2–7.5 billion market size and different barrier profile.

Sources Referenced

Amcham, 2026. *Expect 300,000 new Uber motorbike riders in South Africa*. amcham.co.za/news/expect-300000-new-uber-motorbike-riders-south-africa

Baloyi, M. (2012). The impact of the Taxi Recapitalisation Programme on the South African Taxi Industry: a case study of Greater Mankweng Taxi Association in Capricorn District, Limpopo Province.

Barrett, J. / ILO. *Organizing in the Information Economy: A Case Study of the Minibus Taxi Industry in South Africa*, ILO Seed Working Paper No. 39, 2003.

Basson, A. (2023). SU & partners retrofit first minibus taxi in SA to run on electricity. Stellenbosch University. https://www.su.ac.za/en/node/433

Bradlow, B (2020). *Operational subsidies are key to reforming South Africa's minibus taxi sector.* Accessible at: https://theconversation.com/operational-subsidies-are-key-to-reforming-south-africas-minibus-taxi-sector-146932

Booysen, M.J., Abraham, C.J. & Pretorius, B.G. (2025). A system-of-systems framework for planning the electrification of paratransit. Energy Strategy Reviews 62, 101892. https://doi.org/10.1016/j.esr.2025.101892

Booysen, M.J., Pretorius, B.G. & Sello, J.T. (2026). A sustainable transition to electric minibus taxis in Cape Town's paratransit. Nature Sustainability 9, 933–941. https://doi.org/10.1038/s41893-026-01808-9

Booysen, M.J. & Sello, J.T. (2026). Electric minibus taxis: the challenges and gains facing Cape Town's transition. The Conversation. https://theconversation.com/electric-minibus-taxis-the-challenges-and-gains-facing-cape-towns-transition-278808

Business Day, (2023). *SA Taxi needs debt solution to keep going.* Accessible at: https://www.businessday.co.za/bd/companies/financial-services/2023-12-05-sa-taxi-needs-debt-solution-to-keep-going/

Business Explainer (2026). Gauteng cracks down on taxi licence fraud. https://businessexplainer.co.za/economy/2026/07/22/gauteng-cracks-down-on-taxi-licence-fraud/

Business Report (2022). Prasa says it needs cash injection to thwart crime and rebuild networks. https://businessreport.co.za/companies/2022-06-23-prasa-says-it-needs-cash-injection-to-thwart-crime-and-rebuild-networks

Cape Argus (2024). Department of Transport announces the scrapping of over 83,000 'old' taxis. https://iol.co.za/capeargus/news/2024-06-20-department-of-transport-announces-the-scrapping-of-over-83000-old-taxis/

CleanTechnica (2025). BasiGo expands beyond Nairobi with launch of Kenya's first inter-city electric minibus pilot. https://cleantechnica.com/2025/07/23/basigo-expands-beyond-nairobi-with-launch-of-kenyas-first-inter-city-electric-minibus-pilot/

Daily Maverick (2022). Chief Justice calls for special commission to investigate Prasa's implosion. https://www.dailymaverick.co.za/article/2022-06-23-chief-justice-calls-for-special-commission-to-investigate-prasas-implosion.md

Department of Transport, Republic of South Africa (2018. *Green Transport Strategy for South Africa (2018-2050).* Accessible at: https://climate-laws.org/document/green-transport-strategy-2018-2050_0f58

Department of Transport (2019). Minister Blade Nzimande: Revised Taxi Recapitalisation Programme. https://www.gov.za/speeches/minister-blade-nzimande-revised-taxi-recapitalisation-programme-26-apr-2019-0000

EWN (2026). Electric minibus taxis to service thousands of people near Century City. https://www.ewn.co.za/2026/03/23/electric-minibus-taxis-to-service-century-city

Fobosi, S. *Minibus taxi industry in South Africa: A servant for the urban poor?*, Consultancy Africa Intelligence, 2013.

Genesis Analytics / GIZ. Electric Vehicles Market Intelligence Report 2024 (ElectricVehiclesdigital.pdf).

GreenCape. *Enabling the Electrification of the Minibus Taxi Industry in South Africa to Unlock the Potential for Local Manufacturing,* 2024 Electrificationofminibustaxiindustryindustrybrief.pdf). Available at www.greencape.co.za.

Helen Suzman Foundation. Minibus Taxi Brief, 2023.

Income Tax Act 58 of 1962, s.12V. https://www.acts.co.za/income-tax/12v__deduction_in_respect_of_p

Molobela, T. (2024). *Exploring the role of the minibus-taxi industry on promoting taxi entrepreneurship in South Africa.*

ODA (2022a–e). Documentation of minibus taxi industry innovative models: fact sheets on (a) Western Cape Blue Dot, (b) Western Cape Red Dot, (c) eThekwini Moja Cruise, (d) Nelson Mandela Bay IPTS, (e) Gautrain Midibus Feeder Distribution Service. Prepared for National Treasury Cities Support Programme and DBSA, 28 October 2022.

Peltzer, K and Phaswana-Mafuya, N. (2013). *Depression and associated factors in older adults in South Africa.* Global Health Action.

Plano, C. (2022). Policy reflection on 'big-bang' public transport formalisation and reform, and the need for alternative approaches. Centre for Transport Studies, University of Cape Town.

Pretorius, B.G., Strauss, J.M. & Booysen, M.J. (2025). Viability and impact of existing urban minibus taxi mobility with electric vehicles. African Transport Studies 3, 100042. https://www.sciencedirect.com/science/article/pii/S2950196225000201

SANTACO (2006). Taxi recapitalisation: SANTACO concerns and recommendations. https://static.pmg.org.za/docs/2006/060920santaco.htm

SAnews (2023). Taxi Recapitalisation Programme makes significant strides. https://www.sanews.gov.za/south-africa/taxi-recapitalisation-programme-makes-significant-strides

SAnews (2025). New digital licensing system set to transform Gauteng's public transport sector. https://www.sanews.gov.za/south-africa/new-digital-licensing-system-set-transform-gautengs-public-transport-sector

Schalekamp, H. (2017). Lessons from building paratransit operators' capacity to be partners in Cape Town's public transport reform process. Transportation Research Part A 104, 58–66. https://doi.org/10.1016/j.tra.2017.08.002

Schalekamp, H. & Klopp, J. (2018). Beyond BRT: Innovation in minibus-taxi reform in South African cities. Proceedings of the 37th Southern African Transport Conference.

Schalekamp, H. & Saddier, S. (2020). Emerging business models and service options in the shared transport sector in African cities. Volvo Research and Educational Foundations.

Sello et al, (2026). *Electric Minibus Taxis in Cape Town: Energy Demand, Emissions, and Costs.* Accessed at https://www.mdpi.com/2071-1050/18/4/2122

SSATP (2023). Dakar: The minibus renewal and professionalization process. Studies of Informal Passenger Transport Reforms in Sub-Saharan Africa. World Bank/AFD/Transitec.

Sinclair, M. (2015). *Aggressive driving behaviour: the case of minibus taxi drivers in Cape Town, South Africa.*

Southern African Bus Operators Association (SABOA) (2021). *Summary of the NHTS 2020 — Public Transport — Key Excerpts, 8 March 2021.*

Statistics South Africa, (2020). *National Household Travel Survey (NHTS), 2020* (P0320).

TechCentral (2025). What manufacturers should know about the EV tax incentive. https://techcentral.co.za/?p=259361

Techleap (2024). BasiGo secures $42M for expansion. https://finder.techleap.nl/news/feed/basigo-secures-42m-for-expansion

Transaction Capital (2016). SENS pre-close update. https://sharedata.co.za/v2/scripts/SENS.aspx?id=277842

World Bank (2023). Transforming Transit in South Africa: How formalizing informal transit operations can support sector decarbonization. Presentation, 30 October 2023. https://unfccc.int/sites/default/files/resource/IFE_EN~2.PDF

Times Live, 2025. "Uber introduces motorbike rides to curb traffic congestion in Joburg CBD," timeslive.co.za/news/south-africa/2025-02-05-uber-introduces-motorbike-rides-to-curb-traffic-congestion-in-joburg-cbd

Venter, C (2024). *Electric buses to be rolled out in DBSA-funded project in Tshwane, eThekwini.* Accessible at: https://www.engineeringnews.co.za/article/electric-buses-to-be-rolled-in-dbsa-funded-project-in-tshwane-ethekwini-2024-01-19.