



AFRICA'S NEW ERA OF URBAN MOBILITY GROWTH

*Potential Opportunities & Partnerships for companies
within Africa's fast growing Bus Rapid Transit landscape*

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RIDING TO A SUSTAINABLE FUTURE: The role of BRTs in advancing efficient urban transport networks

Africa's high urban population growth, increased private vehicle ownership and congestion is putting pressure on public transit system operators and passengers – creating new demand for cost-effective mass mobility.

African cities are characterised by uneven population distribution. The typical urban form is polycentric, with a central business district and high-density low-income areas in the outskirts. Urban form and travel demand patterns for transport differ from one country to another and, as such, rapid transit operations, services and finances must be contextualized to the local situation. BRT solutions need to be tailor-made, safe and affordable.

In this report, Business Sweden explores Africa's BRT landscape and maps out the emerging opportunities for Swedish companies by:

- ▶ Exploring why BRT systems have become a privileged solution in Africa as a means of solving problems associated with urban mobility, while giving an overview of the current public transport solutions and BRT projects on the continent.
- ▶ Assessing the ways in which the Swedish transport ecosystem can contribute to the deployment of BRT systems around the world, as well as providing a highlight of Team Sweden engagements.
- ▶ Highlighting ongoing and upcoming BRT initiatives throughout Africa, with a particular emphasis on areas of potential interests for Swedish companies.

Don't get left behind! Join this rapidly moving bus on its road to sustainable urban mobility!



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URBAN MOBILITY TODAY

How BRTs are saving the world from a global gridlock especially in Africa

Traffic jams. High smog levels. Human clamour for transport options during rush hour mornings and after-work evenings. These are potent hallmarks of urbanisation underscore one simple truth: people must move around.

This understanding coupled with socio-behavioural and economic factors such as stronger appetites for private car ownership fuelled by an increasing middle class, multi-modal transit options that signify escalated road usage, as well as urban planning reforms which prioritise mobility improvements, all propose a need for transport networks to refocus on accommodating the surging demand for urban mobility.



Traffic Congestion in Lagos, Nigeria

The ultimatum is simple: provide sustainable transit alternatives or risk the looming penalties of threatened economic viability and widespread public health concerns if these challenges are not addressed.

This becomes most applicable especially in population booming regions like Africa. Lagos state, Nigeria's commercial capital is forecasted to lose an estimated \$21 billion dollars monthly by 2030 if its congestion problems are left to fester. However, things do not have to be this way. Bold, proactive, and collaborative alignments between public and private stakeholders that combine technology advancements, adequate funding and geographically viable solutions are essential levers to solve the mobility challenge. In Africa, one major transit alternative is the talk of the town: Bus rapid transport systems.



From Dar Es Salam in Tanzania, to Lagos, Nigeria and the bustling cities of Cape Town and Johannesburg in South Africa, BRTs are fast gaining ground across the region for being a proactive response to a new transport paradigm in urban settings: the pressure on transport networks can be reduced by sustainable transit alternatives. Largely characterised by 3 major archetypes – dedicated lanes allowing for separation and priority over main road traffic, high capacity and frequency allowing for more passengers per trip and of course the budget approvers dream; cheaper implementation enabling faster scale to replicate. The initial capital outlay required is less compared to LRT and Metro as an investment of USD 1 billion can achieve approximately 200 km of BRT system while the same investment will realise about 40km of light rail and 10km of metro with the same capacity.



Notable transformations for mobility reforms in Africa date back to 2008, when Lagos, Nigeria launched a 'BRT Lite' corridor which, despite being basic in nature, became a proof of concept that a form of BRT is a possibility in Africa. The hosting of the 2010 FIFA World Cup provided the motivation for Johannesburg, Cape Town, and Port Elizabeth to initiate BRT services.

Johannesburg's launch of the Rea Vaya system in 2009 marked the first 'full BRT' system in Africa. Based on the experiences of Lagos and Johannesburg, similar initiatives have been undertaken in the rest of the continent with the aim of replicating the success achieved across the continent. These efforts include development of BRT systems that are in various phases of implementation in Angola, Burkina Faso, Cameroon, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mozambique, Rwanda, Senegal, South Africa, Tanzania and Uganda.

While operating models and systems differ, one thing cannot be challenged: BRTs have proven to be tested and trusted painkillers for the routine irritations caused by population density which have now translated into never ending commute congestions.

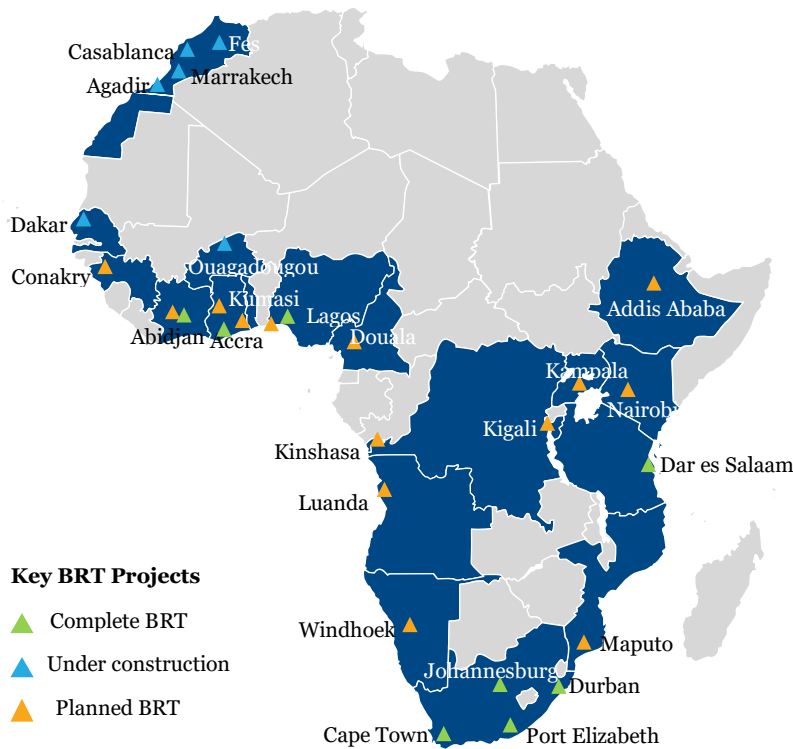
WHITE SPACES AND RISING MEGACITIES

Opportunities in Africa's acceleration for urban mobility development

As momentum builds for BRT systems in the region, African cities are presented with distinct challenges as they gear towards ensuring a more sustainable shift to this transport alternative. Key challenges ranging from huge capital outlay which slow down the pace and interest in which governments would have ideally aspired to ensure increased fleet availability, a deficit of road corridors which inhibit the scale at which buses can operate, and strong government autonomy limiting private vendor participation are amongst a plethora of challenges that can delay an enabling ecosystem for BRT transitions in Africa.

However, these headwinds present simultaneous opportunities across the BRT value chain and make it a viable venture for relevant solution providers. A supply deficit of buses can be bridged by favourable financing options from vehicle manufactures allowing convenient repayment plans from government agencies. Construction of more corridor networks that connect populous districts will decrease commute times, prompting new opportunities for significant road infrastructure projects in Africa. Feeder buses that link remote areas to BRT stations create a use case for complimentary forms of road transport, unlocking market value for suppliers of such transport modes.

An opportunity analysis by Business Sweden highlights the pace of BRT implementation across key African geographies. This mapping is based on our understanding regarding the level of transport investments to establish or scale Bus Rapid Transit (BRT) systems in respective regions. The findings indicate that further analysis by prospecting players would result in opportunities across the supply and demand spectrums of BRT systems for actors across the value chain.



As African governments consider strategies to ensure a more sustainable and climate friendly future for their citizens, BRT serves as a promising instrument. By servicing corridors with low or zero-emission vehicles, the pace of environmental deterioration resulting from the effect of numerous internal combustion engine vehicles (ICE) is significantly reduced. This will accelerate the transition to low-carbon transport and unlock major opportunities for manufacturers or other players in this field. Across board, BRT systems appear to bear one message: they are good for the people and good for the planet especially if these buses are powered by alternative fuels (electric, biofuels).

POTENTIALS FOR ENGAGEMENTS WITH SWEDEN IN THE DIFFERENT VALUE CHAINS OF BRT

Sweden has taken considerable steps in developing a holistic urban mobility solution in most of its cities. The city of Stockholm’s public transportation system runs on 100% biofuel while several other cities public transportation runs on varying degrees of alternative fuel.

Sharing experiences of its development while also learning from the Africa countries in other areas is a great foundation for collaboration.

There are several areas of the BRT value chain where Sweden and potential partner countries in Africa can collaborate:

1. Pre-Feasibility studies, Feasibility and Design studies ¹

Scope:

- Swedish suppliers can support the implementation of BRT projects in the planning phase. They can carry pre-feasibility, feasibility and design studies aimed at:
 - o Assessing the BRT project's economic viability and environmental sustainability
 - o Estimating the project's value
 - o Assessing the integration of the BRT system into the existing city infrastructure



➤ Areas of collaboration:

- Services offered by several leading and specialised consultancy firms
- Grants financing or subsidies can also be offered from Sweden for such feasibility studies to make the project bankable or act as catalyst from institutions such as Swedfund (Swedish Development Finance Institution etc.) dependent on the priorities of the local government, the focus of the project etc.

2. Rolling Stocks: Climate friendly vehicles (Biofuel or Electric buses)

➤ Scope:

- In line with Sweden's climate agendas, the leading bus manufacturers from Sweden i.e., Scania and Volvo, each has complete solutions that ensures that their products do not add to climate issues.
- Product offerings offered by the bus manufacturers that are environmental eco-friendly include the delivery of:
 - o Biofuel compatible buses i.e., Biogas or Biodiesel.
 - o Electric buses
- All support when these solutions are provided ensures that these buses are compatible to other renewable fuel sources.

➤ Areas of collaboration:

- Set-up of assembly points for the electric buses in the host countries
- Partnerships to set up the supporting infrastructure for the electric buses etc.

3. Smart Traffic Management Systems:

➤ Scope:

- Swedish companies can set up technology solutions that seek to integrate the traffic flow and improve safety
- Implementing or upgrading Intelligent Transportation Systems (ITS) can yield substantial efficiency gains and cost savings, significantly improving system reliability and increasing the project's return on investment (ROI)
- These systems employ sensors, cameras, cellular routers, and automation to monitor and autonomously manage traffic, effectively reducing congestion

➤ Areas of collaboration:

- The scope of an Intelligent Transportation Systems (ITS) that can be set up by Swedish suppliers include:

- Operations Management system- Involves the set-up of an operational control centre platform to support the management of the complete system including:
 - Fare Collection System
 - Traffic light management
 - Security and Safety System
 - Maintenance Management
- Communication Network: Focuses on establishing the necessary connectivity infrastructure throughout the entire transport system
- Traffic Lights Control and Priority: Aims to monitor and regulate traffic flow by effectively controlling traffic lights
- Vehicle Traffic Control: Involves integrating the operational systems of the Bus Rapid Transit (BRT) with traffic management systems
- Fare collection: Encompasses various aspects related to fare management, including access control, validation, automated ticketing machines, and point-of-sale (POS) terminals
- Ticketing systems: These encompasses a wide range of functions required for the processing, control, monitoring, and maintenance of all operations related to ticket distribution and validation

4. AAA Financing:

➤ *Scope:*

- The participation of Swedish companies in the BRT system will unlock preferential financing for the BRT system.
- EKN, the Swedish Export Credit Agency, offers guarantees for payment and financing in export transactions, providing attractive financing terms for international buyers while mitigating risks for Swedish exporters and commercial banks.
- SEK, the Swedish Export Credit Corporation, offers long-term funding for export-related operations within Sweden, leveraging its strong credit rating to provide advantageous loans for supporting export transactions.
- Volvo and Scania often include the combined offer from SEK and EKN in their proposals. This streamlines the funding of their activities and has substantial benefits for all interested parties.
- These finance solutions can also be blended with other climate-friendly financing or multilateral banks' funding, further enhancing the concessional support provided.

5. Holistic Long-term Partnership & Engagement

➤ *Government relations*

- Bringing other relevant partners as needed into the picture for a complete solution

➤ *Capacity Building / Localisation*

- Support to create enabling environments as needed for a sustainable development of mobility solutions i.e., institutional capacity building, training of drivers and mechanics etc. Swedish organisations such as Sida and the International Council of the Swedish Industry (NIR) can be of support here. Sometimes international partnerships are made with organisations such as GIZ etc.

VOICES FROM AFRICA: ABIDJAN'S TRANSPORT SYSTEM TURN-AROUND IS A STRONG CASE FOR AFRICA'S URBAN MOBILITY POTENTIAL

Rising urban transport challenges

Côte d'Ivoire is one of the thriving economies in Africa with an ambition to become an emerging economy by 2025. Abidjan, the economic capital of Côte d'Ivoire has a population of 5 million people, which is forecasted to grow to close to 8 million by 2030. Modernising the city's public transport services has become a key necessity to effectively respond to the needs of its rising population.

Since 2015, the Government of Côte d'Ivoire produced an Urban Master Plan in Greater Abidjan (SDUGA) as well as the Urban Transport Master Plan for Greater Abidjan towards the goal of revamping the transport systems. This transport master plan has identified several BRT lines to be implemented, between 2020 and 2025.

A coordinated effort between Côte d'Ivoire, Sweden & other international partners

Abidjan embarked on a new venture to offer the city its first sustainable public transport system, consisting of a BRT system in 2019. Ivorian Ministry of Transport and SOTRA, the city's transport company chose to partner with Team Sweden² to meet its objectives. Scania was contracted to deliver 450 biofuel compatible buses to the city of Abidjan in Côte d'Ivoire in West Africa, as part of SOTRA's fleet upgrade initiative, build a bus depot and train employees. This was further supported with capacity building and financing. The buses will run on biodiesel and some of them are compatible with biogas. This calls for the development of a renewable fuel industry to reduce emissions which will also create new jobs.

The government-to-government partnership between the Ivorian Government and Team Sweden, coordinated by Business Sweden, illustrated the win-win partnerships countries can have towards meeting their SDG 2030 objectives.

Several initiatives are ongoing between Cote d'Ivoire and Sweden to create an enabling environment for the development of the biofuel industry, including institutional capacity building.



² Embassy of Sweden, Business Sweden, Ministry for Foreign Affairs, Swedfund, the Swedish Export Credit Agency (EKN) and the Swedish Export Credit Corporation (SEK), the International Council of Swedish Industry (NIR)

FIVE KEY SUCCESS FACTORS FOR DOING BUSINESS IN AFRICA

	Common Challenges	Recommended Actions
1. DO YOUR HOMEWORK	<ul style="list-style-type: none"> ▶ Market data is not often readily available or reliable ▶ Challenge to assess continuous economic and political changes and regional variations within large markets ▶ Decision-makers are not easily identified 	<ul style="list-style-type: none"> ▶ Target markets based on growth needs, capital requirements, and time horizon ▶ Be aware of regional variations within larger countries, especially in Africa ▶ Conduct due diligence with the support of local expertise
2. DEFINE & DEVELOP STRATEGY		<ul style="list-style-type: none"> ▶ Be asset light in order to maintain responsiveness to fast-paced changes in market conditions ▶ Iterate go-to-market approach as your market position evolves ▶ Plan to scale long term and stay relevant
3. ADAPT BUSINESS MODEL	<ul style="list-style-type: none"> ▶ Economic volatility of buyers in resource-rich markets and high dependence on development funds in resource-poor markets ▶ Sales process is time consuming given lack of access to decision-makers, bureaucratic processes, and the strong interpersonal nature of business relationships 	<ul style="list-style-type: none"> ▶ Turn the rapid pace of change into a competitive advantage by adapting existing products and services to meet specific needs ▶ If possible, connect offering with technology and offer end-to-end solutions ▶ Go beyond 'quality' USP and focus on relationships and knowledge exchange
4. GO LONG AND BE RESILIENT	<ul style="list-style-type: none"> ▶ Procurement processes are more complex than in Europe; decision-making takes longer ▶ Long term contracts in local currency carry higher risk exposure; contract negotiations and extensions are delayed ▶ Difficult to secure financing, resulting in payment delays and postponed due dates for large projects 	<ul style="list-style-type: none"> ▶ Plan and build long term relationships with government and local stakeholders Build resilience and mitigate short-term volatility by: <ul style="list-style-type: none"> ○ Hedging financial risks ○ Keeping the business as lean as possible ○ Diversifying portfolio
5. ENSURE LOCAL INTEGRATION	<ul style="list-style-type: none"> ▶ Business culture characterised by lack of organisation and structure, and buyers are often hard negotiators ▶ Whilst easier to enter indirectly (e.g., via distributors), selling indirectly makes it harder to learn key success factors in local culture 	<ul style="list-style-type: none"> ▶ Show commitment and dedication to the market: <ul style="list-style-type: none"> ○ In Africa, all business is personal ○ Invest in local presence via greenfield, alliance or partnership ○ Hire locally whenever possible, and develop leaders internally

BUSINESS SWEDEN PROVIDES SUPPORT FOR GROWTH IN AFRICA

Business Sweden's continent-wide presence in Africa which is built on a foundation of understanding local business, trade, political and social practices will support a smooth market entry. Business in Africa is personal, and we can support you in building relationships with key stakeholders in government and the business community which is key to long-term success. Finding partners and distributors can present significant challenges which our local teams can help overcome. Using Business Sweden's operational expertise and practical knowledge in identifying and reaching out to local stakeholders and establishing local support is a proven pathway to smoother entry into the African markets.

As part of efforts aligned to exploring BRT opportunities in Africa Business Sweden has the following planned:

- ▶ Webinar highlighting the opportunities within upcoming BRT projects in Africa
- ▶ Mapping of specific opportunities for Swedish companies
- ▶ Regular updates on the status of the various BRT projects in the region

A. *Market potential and selection analysis*

- ▶ Preliminary screening of the several African mining countries based on basic indices of country and relevant macroeconomic key information to reduce to 2-3 high potential markets for further engagements

B. *In-depth market check/analysis*

- ▶ Conduct in-depth market check on shortlisted country/s based on chosen criteria to realise the potential for e.g., to investigate whether the product offering fits the market (such as the market's usage of machinery equipment and level of technology)
- ▶ Examine the legal perspectives in the markets
- ▶ Investigate the distribution and logistics network and setup in the region i.e., if a regional or individual approach is preferable
- ▶ Investigate the best fit for market partner profile that matches with your goals

C. *Partner/Distributor Search*

- ▶ Identify the gross list of potential partners
- ▶ Qualify the partners according to confirmed profile obtainable in the market to create a short-list
- ▶ Investigate the interest among the market players and carry out on ground pre-visits to gather a full picture of the potential partners
- ▶ Create a ranking of the most relevant partners
- ▶ Arrange a visiting programme to meet with ranked list of potential resellers/partners

D. *Stakeholder mapping and engagement*

- ▶ Identify and qualify potential clients according to determined criteria
- ▶ Validate their interest in products and services.
- ▶ Book meetings with companies with high probability of being converted to sales, based on their availability and interest



We help Swedish companies grow global sales and international companies invest and expand in Sweden.

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