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Title: Recommendations for Abidjan on paratransit professionalisation

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### 1. Introduction

The recommendations presented in this document were developed within the scope of a light technical assistance financed by GIZ (within the context of MobiliseYourCity Partnership) and developed by Transitec, in partnership with EcoAccess and Transport for Cairo (TfC). Recommendations are aimed primarily at providing Abidjan's transport authorities with technical tools and insights necessary for their current paratransit sector reform efforts. The current reform process is still in its early stages, focusing on operators' identification and on defining a medium-term pathway towards professionalisation by way of consolidation of existing services.

This set of recommendations results from consultations with local stakeholders in Abidjan and discussions during training sessions. This document includes both generic and Abidjan-specific recommendations and presents an initial interpretation of how they are related.

#### 2. Présentation du document

This document is constructed around two clearly distinct sets of recommendations. First, general recommendations provide broad-ranging insights that, being as generic as possible, can be easily adapted to different contexts, especially in Sub-Saharan Africa. The document presents three general recommendations that focus on the management of paratransit services in cities engaging in systemic reform.

The second set of recommendations addresses the current reform process taking place in Abidjan and focuses on two specific areas: (1) 'institutional recommendations' that pertain to the setup of AMUGA, Abidjan's recent mobility authority and (2) 'paratransit recommendations' that deal directly with the reform of the paratransit sector. In total, four institutional and five paratransit recommendations are drawn from analyses conducted for Abidjan.

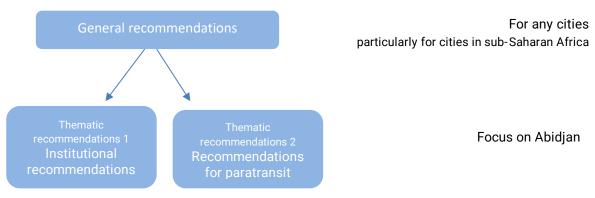


Figure 1: General conceptualisation of recommendations



## 3. Recommandations générales

Broad-scope recommendations included in this section aim to create an enabling environment for paratransit reform and, especially, paratransit sector professionalisation. They rely on introducing new knowledge and strengthening capacities within mobility and transport institutions, as well as developing operational guiding documents. These recommendations will probably require the participation of donors and international experts.

#### General recommendation 1: Develop a mobility governance charter

Developing a governance charter for urban mobility in African cities, indicating their current circumstances (current institutions lack sufficient technical and/or human resources). This is a first step in encouraging cities to begin systemic reform processes. The charter should depict how institutions and the paratransit sector can engage in reform processes, thus depicting possible consolidation efforts and what regulatory frameworks can be developed. The document ought to be simple, readable, and short enough to garner interest from stakeholders who do not see the urgency of reform processes, namely small-scale operators often existing outside regulatory frameworks. As the partnership consolidates and the organising authority or institution that plays this role fully establishes itself, more elaborate documents (agreements pertaining to operators' contracts and specifications of vehicles or quality of service) may be listed, leaving their final definition and production to each city's authorities to guarantee context-consciousness. The charter must not seek to be comprehensive. Instead, it must set out a broad path to reform by indicating likely obstacles, while providing insights on overcoming them.

A worthwhile effort could be to include synthetic case studies to present the experience of cities that have undergone similar processes. This list should not only be limited to successful cases (namely Dakar's CETUD and Lagos' LAMATA), but also cases that have not achieved their objectives and that can show where the process faltered.

### General recommendation 2: Secure financing before engaging in programmes

For any type of paratransit reform programme to be implemented, it is necessary to secure financing (from planning to implementation phases) before engaging in large-scale implementation processes. This could be achieved by (1) optimising public financial resources (such as income generated by licenses provided to paratransit operators) and (2) opting to use external funding. Securing financing will help in achieving buy-in from institutional and paratransit operators.



The institutions responsible for the implementation of the reform measures must accept a minimum degree of flexibility that allows for adaptation of the initial programme as expectations and objectives evolve.

## General recommendation 3: Make use of technical assistance to develop required capacities

Local authorities should make use of technical assistance to ensure that the capacities needed to plan and implement the reform, and especially to engage and negotiate with paratransit operators, are developed. This kind of support should include the following aspects:

- Strategy development for the (re-)organisation and professionalisation of the paratransit sector and its subsequent implementation. Cities such as Yaoundé or Abidjan have already started processes leading to reform implementation roadmaps.
- Reorganisation of operators in terms of consolidation and eventual creation of new forms
  of internal organisation that best align with the objectives of paratransit reform and
  regulatory frameworks (including contractual and operational requirements).
- Drafting of operation agreements between local institutions and (reformed) paratransit operators, according to the specific characteristics of the paratransit services (e.g. ondemand or fixed-route, by vehicle type and internal organisation of operators).
- In addition to support related explicitly to paratransit reform, technical assistance can be leveraged to build the capacities of national and local staff on sustainable urban mobility planning and how to integrate paratransit in such long-term and comprehensive planning approaches. This type of support would ensure that the paratransit sector, and measures to improve it, are aligned with long-term sustainable mobility objectives and measures and well-integrated with other sustainable modes of transportation.

The second type of capacity-building sessions, meant for the paratransit sector, should primarily focus on providing operators with the necessary tools to improve their operations and to align themselves with the professionalisation objectives. Sessions must be sufficiently concrete to explain the proposed tools and new regulatory elements. It is best to utilise city-based expertise in this case, likely using the experience gained by reformed operators, when available, existing bus companies, when they exist, and by local universities and research centres. Cape Town, in its reform program launched by the introduction of the MyCiTi BRT, made use of formal bus companies and academic institutions, namely the University of Cape Town – Centre for Transport Studies, to build the capacities of newly reformed paratransit stakeholders.



Other issues should be identified and considered depending on the local context, scope and status of the reform.

## 4. Recommendations to Abidjan

The following two recommendations directly pertain to Abidjan. They result from two consultation sessions conducted in May and July 2022.

Abidjan has recently set up a transport authority (AMUGA) with the capacity to implement a framework for collaboration with all incumbent paratransit operators. Given its status as an independent administrative authority, the resources allocated to it and the competences set by the State of Cote d'Ivoire with respect to its sectoral policy on urban mobility, Abidjan has an institution capable of planning, initiating and conducting consultations with small-scale operators, to help them (re-) organise themselves, and to sign agreements and specifications for the contracting of public transport services. In this sense, recommendations for Abidjan focus primarily on achieving objectives and on guaranteeing AMUGA's technical capacities.

# Institutional recommendation 1: Staff AMUGA to secure the necessary resources in line with responsibilities

The establishment of AMUGA is still relatively recent. Staff members are being hired, and teams are still being set up. While current developments point to a positive outcome, there is a need to keep up with increasing degrees of responsibility when managing urban mobility, as they are allotted to AMUGA from other institutions. There is still a risk that current staff may become overburdened as the scope of competences increases.

The most urgent recommendation is to adequately staff AMUGA, to ensure that it has sufficient technical and financial resources to perform its (still evolving) mandate effectively. The organisational structure should clearly distinguish between strategic and tactical programmes (which include paratransit reform) and daily operations management. With the current setup, staff may need to define priorities to avoid trade-offs when allocating resources between future initiatives and daily operational tasks. Applied to the paratransit sector, it is paramount to identify which staff members will oversee (1) contracting issues and (2) route mapping and related activities. The identification of capacity building should accompany a more specialised role distribution of staff members' needs for each staff member, according to their area of responsibility.

#### Institutional recommendation 2: Continue paratransit operator consultations

AMUGA is in the process of defining the building blocks for the city's paratransit reform. Several activities are currently in development, including two studies on public transport



restructuring<sup>1</sup> and intermodal hubs<sup>2</sup>. In addition, a citywide assessment to identify incumbent operators is being conducted, a necessary and initial step towards comprehensive reform.

After completing the first identification round of the sector's stakeholders, AMUGA should engage in consultations with 'gbaka' and 'wôrô-wôrô' owners. The immediate objective of these consultations should be to build a database with information on the existing licenses, vehicle type and characteristics of current operations.

Engaging in consultations from the onset of the reform process is essential to establish a basis of trust between AMUGA and paratransit stakeholders throughout the entire reform. This, in turn, will increase the probability of gaining buy-in from the sector and avoiding potential conflict in the future.

In later phases, consultations should be broadened to include other stakeholders, most notably paratransit users, to achieve their buy-in and consider their needs and ideas in designing the envisioned public transport system.

# Institutional recommendation 3: Identify the type of contract best suited to the planned paratransit operations

The third recommendation is to define the type of contract that best suits the paratransit sector situation at different stages in the reform process. The current paratransit reform has been focused on identifying operators and seeking to define a role for paratransit services in a restructured system. It is now necessary to link these choices with adequate regulatory frameworks and with best-suited contracting schemes.

During discussions in training sessions and consultations with AMUGA, it was clear that the type of arrangement between AMUGA and future paratransit operators is yet to be defined. Several options were presented and discussed, pointing to the advantages and disadvantages of each arrangement, but further analysis is required to define what is best suited for Abidjan's future urban mobility system. For it to be as pertinent as possible, AMUGA will need to state the level of consolidation expected from incumbent paratransit operators.

- 1. From the current perspective, while overstretching the objectives of this analysis, it is considered more pertinent to opt out of gross-cost and net-cost contracting alternatives and initially focus on comparatively more flexible options. Nonetheless, more analysis is necessary.
- 2. It is preferable to allow for certain flexibility in terms of what solution is chosen. Contracts with institutional/formal operators (SOTRA (Société des Transports Abidjanais) for Abidjan) will likely differ from those with paratransit operators.

<sup>&</sup>lt;sup>1</sup> Ongoing study conducted by Setec-Transitec-Nodalis.

<sup>&</sup>lt;sup>2</sup> Ongoing study conducted by Bruno Remouré-Transitec.



Regulatory frameworks and arrangements pertaining to licensing must cater for this flexibility and the differences between modes.

# Institutional recommendation 4: Improve communication with civil society and other key stakeholders

The fourth recommendation is to include efforts to improve communication with civil society (i.e. citizens and local associations). AMUGA could, in this case, include (hire) staff in charge of communication with users of paratransit services. Communication activities may include the establishment of a website or the organisation of consultation sessions. Information to be shared can consist of: (1) a description of reform processes taking place and (2) campaigns to garner buy-in from various sectors of society.

Communication campaigns should be a continuous activity and, hence, they should be well-defined from the onset of the reform process. AMUGA needs to make more efforts in this regard, all while seeking to present their vision for paratransit reform.

# Institutional recommendation 5: Ensure complementarity, instead of competition, between institutional and paratransit operators

In parallel, an important issue will be to create a positive environment between SOTRA (the existing formal bus company) and newly reformed operators. Some obstacles will arise as operations of the bus network and paratransit services are in competition, and visions from each side of the table are currently not aligned.

AMUGA should not only seek to consider and integrate the perspectives of both sides in the reform process, ideally through consultations and negotiations, but also strive to integrate these two modes of public transportation. This challenge can be addressed through the ongoing public transport restructuring process and in several stages. It should be based on the (re)definition of the existing network of paratransit and institutional services (ideally in a participatory manner, together with affected operators) to avoid overlaps and competition for passengers, then determining and (re)allocating the newly defined routes and/or areas through the corresponding contractual arrangements, and possibly concluding the process by integrating fares through a digital payment and revenue sharing system.

# Paratransit recommendation 1: Update existing mapping data for paratransit services

Abidjan launched a paratransit mapping initiative in 2019. Results of this initiative have been uploaded to the OpenStreetMap site, and data availability has been helpful to best understand the place and the role of incumbent paratransit operators (see image below).

With several high-impact projects, and most notably (1) the BRT and Metro projects and (2) the public transport network restructuring process that will impact current paratransit routes,



changes to the current network will inevitably occur. New technologies have, nonetheless, the capacity to quickly adapt and update information; hence, a mapping update campaign should be conducted once initial impacts on the current networks are made visible. AMUGA can be in charge of identifying when it is best to perform the data update that will help observe and analyse the effects of the reform process.

On-board surveys and surveys conducted on paratransit ranks/stations will be the more pertinent tools for conducting such an update. If resources and willingness are sufficient, digital technologies can also allow for the inclusion of new data. For instance, information on where each operator is present and how demand is met can help analyse the future supply of services.

A second level of this recommendation is to define one person working within the AMUGA who is the focal point for all activities related to paratransit mapping. This staff member would be responsible for managing databases and producing all necessary data to launch new mapping campaigns.

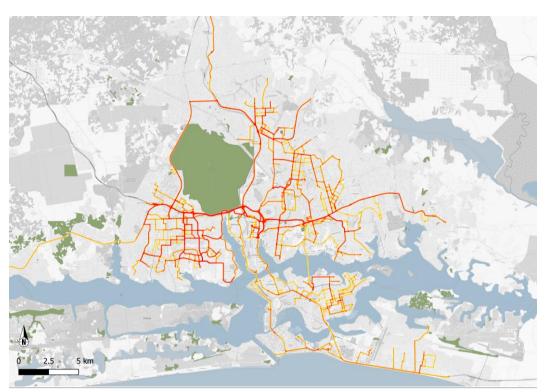


Figure 2: Paratransit routes in Abidjan, from OSM source

Notes: (1) The image was constructed using OSM data and adapting it; (2) Routes in red indicate 'gbaka' routes and those in yellow indicate 'wôrô-wôrô' routes.



### Paratransit recommendation 2: Study the financial model of paratransit

One of the elements missing in the current reform process taking place in Abidjan is a more in-depth knowledge of what the paratransit sector's financial model is, at the individual level (i.e. owners and drivers) and at the vehicle level (i.e. with the vehicle as the subject of analysis). A study conducted by SITRASS in 2000 produced an initial dataset that depicted, with sufficient detail, what direct costs 'gbaka' and 'wôrô-wôrô' operators had, while also estimating what revenue from fareboxes could be calculated. Twenty years later, this data is now out-of-date and requires meaningful updates.

It is thus recommended that a financial model of both 'gbaka' and 'wôrô-wôrô' services be produced to either update the 2000 data or, preferably, conduct a new assessment with current paratransit operators. In both cases, the activity must consider statistical validity for incumbent paratransit modes.

The data to be collected should help with:

- Better understanding of operators' operational costs, particularly direct costs (such as fuel, drivers, personnel payments, and maintenance). This can also include financial flows pertaining to vehicle ownership and vehicle rental practices.
- More accurately estimating what income is needed to operate each paratransit mode, to understand then the number of trips made by each vehicle, what the mean frequencies are, and when peak hours occur.
- Deciphering and predicting obstacles when introducing more formal contracts between owners or groups and employees, and between operators and institutions.

Paratransit recommendation 3: Use vehicle renewal programmes as a tool in reform processes

In parallel to developing a financial model for the paratransit sector, it is also recommended that the Abidjan authorities conduct a vehicle renewal programme. The renewal process should not be perceived as a stand-alone objective. Renewing the vehicle fleet is meant to improve efficiencies in the system (for example, as an accompanying measure to reduce the size of the vehicle fleet) and to reduce externalities directly linked to unroadworthy vehicles.

Indeed, this programme should not be isolated; it should be part of the broader reform process, and it should ideally start with a consensual definition (between authorities and the paratransit sector) of what type of vehicles are most adapted to each paratransit mode's future role in the system.



Defining a vehicle type substantially impacts what financial model can be expected in the future network. Certain types of vehicles may have higher operational costs than those currently being used, which in turn will have an impact on the revenue levels needed to balance the model. However, increased fares might have unforeseen negative consequences that can include excluding some population sectors. Historically, cities tend to avoid this type of dynamics.

In general, when defining the new role, vehicle type, business model and regulatory framework of paratransit services, AMUGA will need to determine the degree of governmental intervention in the system and make a trade-off between three mutually exclusive objectives: affordability to the user, budget sustainability and supply density. Usually, the trade-off consists of prioritising two goals at the expense of a third. For instance, higher operational costs without the provision of subsidies will translate into higher fares and lower affordability (in such a case, budget sustainability and supply density are prioritised over affordability of the system). On the other hand, adopting an affordable fare level will translate into lower revenues and ultimately to a reduced supply level (prioritisation of affordability and budget sustainability at the expense of supply density), unless the government decides to provide subsidies to maintain the supply level (prioritisation of affordability and supply density at the expense of budget sustainability).

## Paratransit recommendation 4: Analyse prospects of stations, ranks and terminal stations

Another complementary element of a paratransit reform in Abidjan pertains to managing stops, stations and terminals. In line with the restructuring programme and the multimodal hub definition (ongoing projects), infrastructures will need adaptation to guarantee a multimodal network.

Creating environments where transfers from mass capacity modes to paratransit modes are possible necessitates infrastructure integration at two levels. First, in stations, paratransit modes must be given areas where to alight or board passengers who seek secondary and/or last-mile connectivity. Second, in ranks or terminal stations, paratransit operators can stock their vehicles when, during any operational moment, they await their turn to operate on a given route.

Initial discussions on this topic are ongoing; they are the responsibility of AMUGA. Further, the multimodal hub project should provide insights on how to manage this question.

### Paratransit recommendation 5: Generate real-time system information

Once the public transport network is stabilised following the introduction of BRT and Metro projects, it is recommended to utilise data collected during mapping efforts to generate real-



time system information that would indicate schedules and better-adapted user trips. This recommendation depends on the advancement of the reform process.

Passenger information systems are particularly useful when trips are complex in nature and require transfers between modes. With the opening of Metro and BRT systems, many passengers will depend on intermodal trips, often combining high-capacity modes with more local or secondary alternatives. Moreover, the network restructuring to come will change the habits of current users, and this will require sufficient information to avoid blockages or feelings of frustration by users.

This recommendation can be implemented in two distinct waves that garner real-time information and how it is presented. First, the initial step relies on data produced and collected by Metro, BRT, and SOTRA systems, and it is completed with theoretical information from the paratransit sector. Between phases, paratransit operators should be encouraged to equip their vehicles with the necessary tools to collect data (e.g. GPS tracking and identification). In the second step, paratransit vehicles would complete Metro, BRT and SOTRA information with more precise details coming from newly equipped vehicles. This later step should likely be introduced in accordance with eventual fleet renewal efforts.

### Other recommendations falling outside the scope of this project

During the process of producing recommendations, discussions included several topics falling outside the direct scope of this technical assistance. It was essential to keep a record of certain elements that are presented below and that could be further analysed.

- Support to existing and future academic programmes focused on urban planning, transport planning and mobility planning. All cities should list existing local programmes to identify new staff and to create more direct links between institutions and universities.
- Developing a community of practice between African cities going through the reform process, most likely under the umbrella of MobiliseYourCity.
- Produce a set of case studies on paratransit reform that includes prosperous and less successful cases, and what insights can be drawn from each.
- Propose study trips for paratransit operators to visit other cities and learn from those cities' operators what the advantages of reform are.





## Conclusions and way forward

The image below proposes an initial interpretation of how the two sets of recommendations interact with each other.

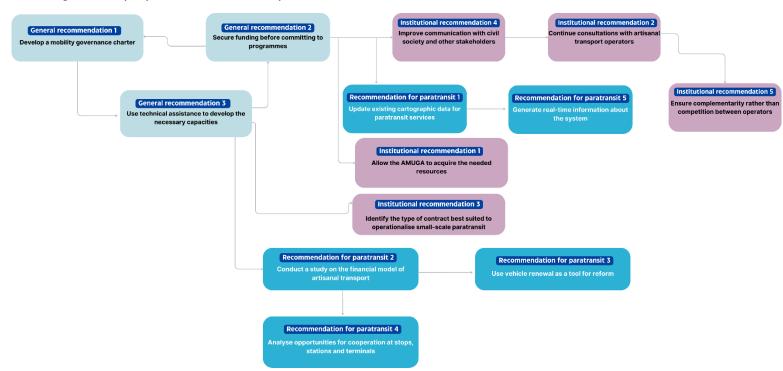


Figure 3: Proposed interpretation of how recommendations align

It's too early to define priorities at this stage; nonetheless, the issue of securing financing for AMUGA and its activities appears to be one of the most likely priorities, along with technical assistance, seeking to identify what contract type is more pertinent.

Implementing recommendations is not easy. It depends heavily on a myriad of elements, yet it most importantly depends on how AMUGA will continue to grow. Ultimately, AMUGA can pinpoint obstacles in the reform process that can be shared with donors, other cities, and local stakeholders. Creating this type of transparency falls outside the scope of this document. Still, it is one activity that holds substantial promise for Abidjan and cities that will undertake reform processes in the coming years.