

Mastering Mobility: Reforming paratransit with MobiliseYourCity's catalogue of measures

November 29th | 15:00-17:00 CET



Welcome to this year's Mastering Mobility Series!

- ✓ Learn
- ✓ Exchange
- ✓ Connect

02.11.2021 Data types and data collection methods for an urban mobility diagnosis

10.11.2021 Tramways as sustainable mass-transit systems: Ex-post evaluation of Moroccan tramways

16.11.2021 Understanding air quality and its role in urban transportation

23.11.2021 Integrating air quality into sustainable mobility planning

29.11.2021 Reforming paratransit with MobiliseYourCity's catalogue of measures

30.11.2021 Getting to know your potential: Conduct a financial assessment of your city

07.12.2021 Reflecting about barriers and co-creating solutions for active and walkable cities

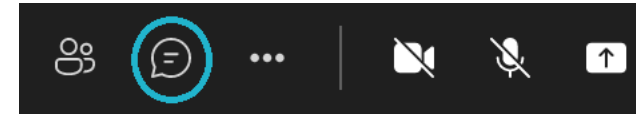


Some general notes on this session



Make sure you are muted and your camera is turned off

CHAT



This session will be recorded. You will not appear in the recording if your camera is kept off



Include your questions in the chat, we will pose them in the Q&A at the end of the session



Don't hesitate to share your ideas, comments and questions in the chat!

Traduction instantanée disponible en français!



Instructions avant de commencer la session :

- Rendez-vous sur l'**App Store** de votre téléphone (iOS ou Android) et **téléchargez l'application Ablio Audience**.
 - Google Play Store : cliquez ici
 - App Store (iOS) : cliquez ici
- Ouvrez l'application et **entrez le code de l'événement : FDmivp** (Veuillez noter qu'il est sensible à la casse).
- Sélectionnez un canal pour écouter la session dans la langue de votre choix.

Instructions pour l'utilisation pendant la session :

- Utilisez les **haut-parleurs** de l'ordinateur pour entendre la partie audio de la vidéoconférence.
- Utilisez votre smartphone avec l'application **Ablio Audience** et des écouteurs pour entendre la traduction instantanée.
- **Activez le microphone** de votre ordinateur lorsque vous parlez dans votre langue.
- Si le délai augmente pendant la session, tapez (**fermez et rouvrez**) le canal de traduction pour le relancer.

Agenda

15:00 Introduction to today's session
Mateo Gomez

15:05 Understanding paratransit: Definition
Anne Chaussavoine

15:10 Understanding paratransit: Diagnosis
Solène Baffi

15:20 Case study: paratransit in Asia
Clément Musil

15:25 Q&A
All participants

15:30 Reforming paratransit: A catalogue of practical actions
for policy-makers and practitioners
Solène Baffi

15:40 Case study: Dakar
Ababacar Fall

15:50 Case study: Cape Town
Reginald Springleer

16:05 Cross analysis
Anne Chaussavoine

16:15 Q&A
All participants

16:25 Breakout groups: put together a project on paratransit for
city x using the catalogue of measures
All participants

16:50 Wrap-up and participant feedback
Mateo Gomez

Objectives of the session

- Identify the steps and requirements to do a diagnosis of paratransit
- Learn how to integrate paratransit service into sustainable urban mobility planning and about the variety of measures to improve the sector
- Reflect on how to potentially implement them in your city

Meet the speakers and facilitators of today's session

Speaker

Ababacar Fall

Conseil Executif des Transports
Urbains de Dakar



Speaker

Clément Musil

Project manager
MobiliseYourCity Asia



Speaker

Reginald Springleer

City of Cape Town

Speaker

Anne Chaussavoine

Transport team leader
Agence Française de
Développement



Moderator

Mateo Gomez

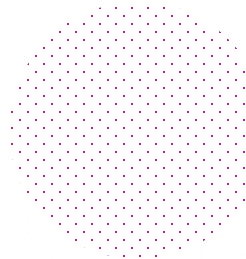
Capacity building and
methodologies
MobiliseYourCity Secretariat



Speaker

Solène Baffi

Project manager
Codatu



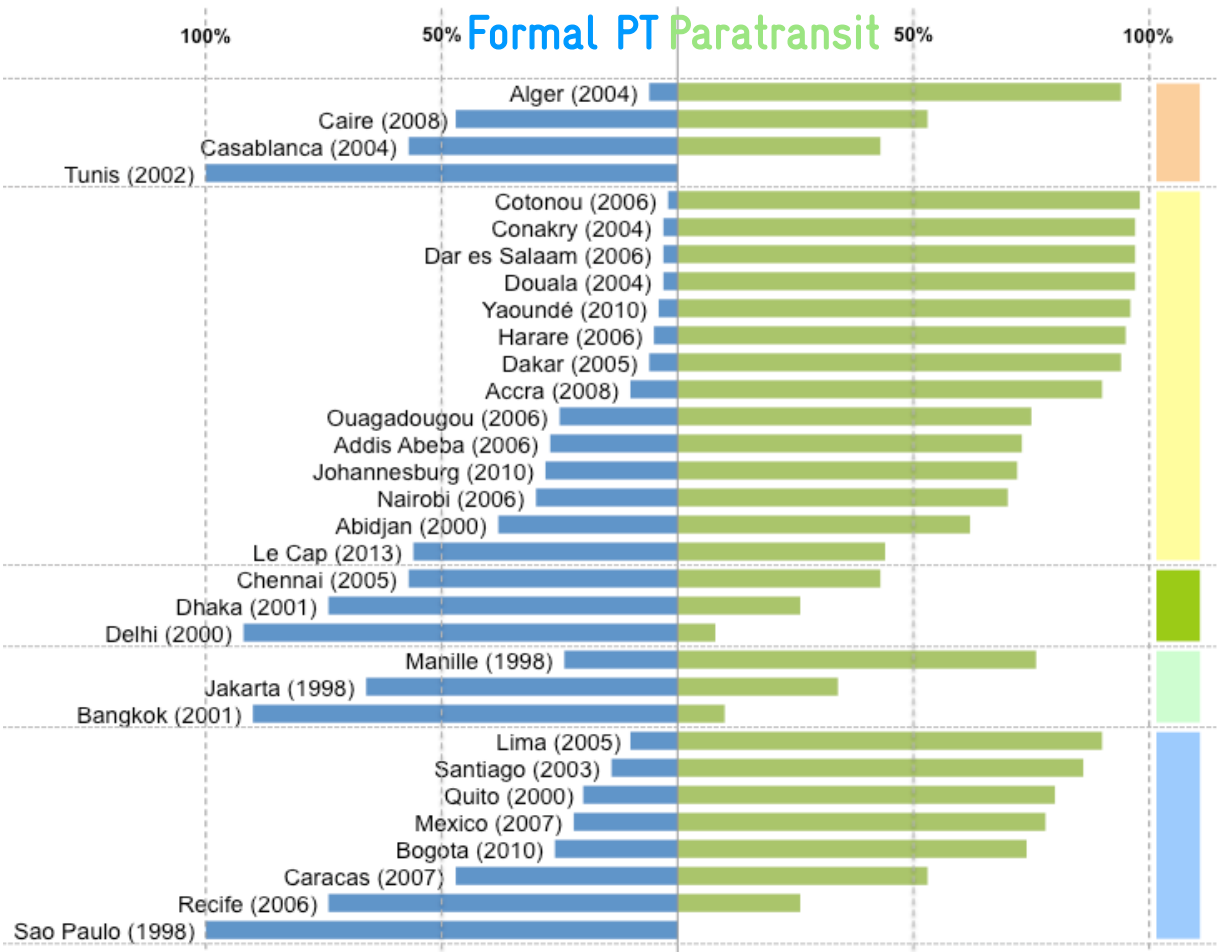
Understanding paratransit

Introductory key features

2

Paratransit: introductive key features

- An important **modal share**... but depending of urban context



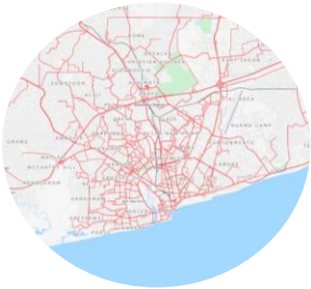
8 - Presentation title

- **Diversity of modes**



- **Flexible services**

- on demand/fixed routes
- shared or collective
- adaptive routes & schedule



Paratransit: introductive key features

- A service driven by **individual short term profitability needs**
 - low public oversight, no subsidies
 - multiple actors with distincts interests
 - no offer in unprofitable time/place
 - unpredictable services, « fill and go » logic, limited information
 - limited quality on vehicles, stops/terminals



- A service hampered by **overcosts:**
 - due to technical inefficiencies (competition in the market, aged vehicles,...)
 - due to corruption, associations racketeering
 - due to high financing cost

Paratransit: introductive key features

- Poor working conditions



- no contracts, target system
- long hours
- no social protection ...

- Negative externalities

- congestion
- air quality and GHG emission
- road safety



Reforming paratransit with MobiliseYourCity's newest catalogue of measures

Understanding paratransit: how to conduct a
diagnosis

29 November 2021



Solène Baffi (CODATU)



AFD
AGENCE FRANÇAISE
DE DÉVELOPPEMENT

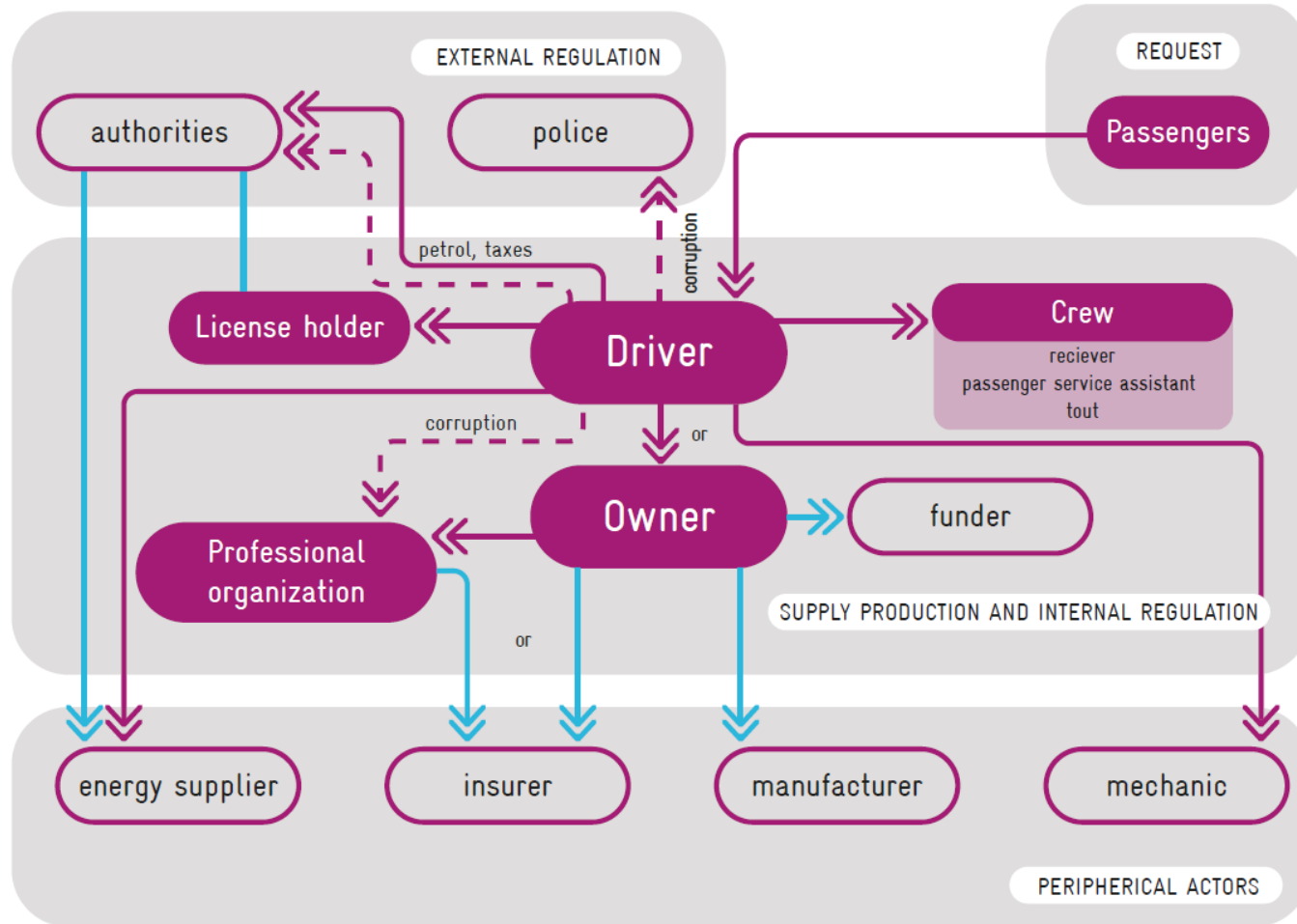
On behalf of:

Federal Ministry
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Paratransit: A complex ecosystem of stakeholders



- A complex set of interactions, each stakeholder having its own **interests** and **arbitration**
- A **political sector**: an important job provider, strong corruption

→ *Crucial to understand the stakeholders' dynamic to introduce acceptable measures & reform*

Making a diagnosis on paratransit: Main questions to ask

Question 0: How to describe the transport system?

- What is the transport offer ?
- Is there a public transport offer ?
- What is the model of regulation ?
- Who are the authorities in charge of regulation ?

Question 1: How is managed the business risk?

- What kind of agreement and/or contract exist?
- How to trace the operating accounts?
- What is the impact of the ticketing systme on operations?

Question 2: How is the sector regulated?

- How are the licences granted?
- How are the routes fixed?
- Who fixes the fares?
- Is the regulation enforced on the field?
- Who is responsible for the fleet operations?

Question 3: How are the facilities managed?

- How are stops and stations managed?
- Do operators pay taxes?
- Are they depots, maintenance centers & parkings?

Question 4: What is the role of the passengers?

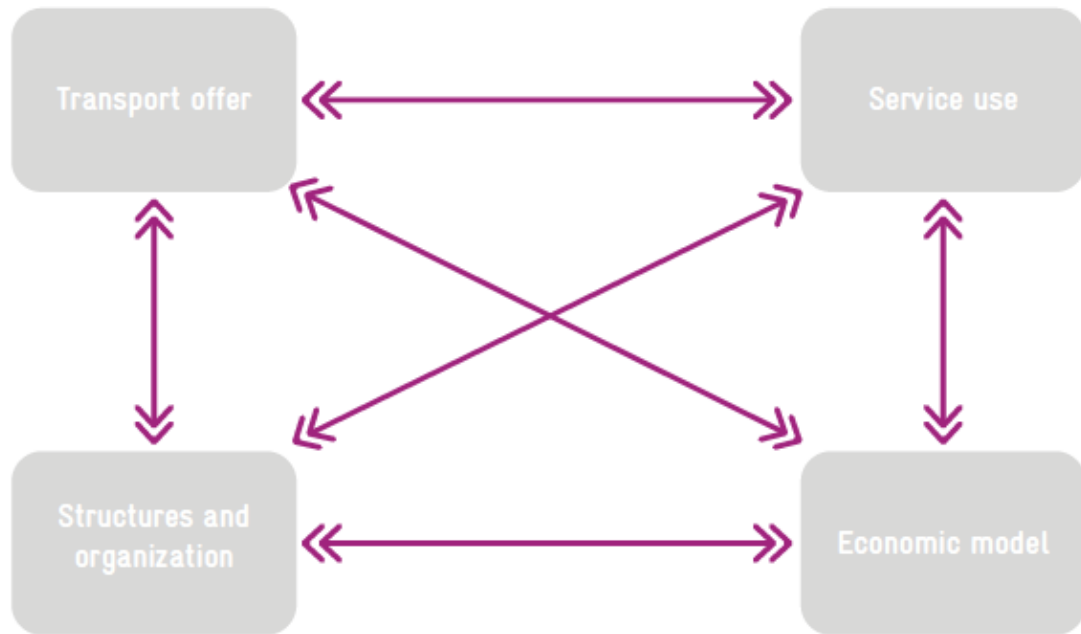
- What is the socio-economic profile of users?
- Is there a passenger information?
- What is the behaviour towards digital technologies?

Question 5: What are the performances and inefficiencies of the system?

- What are the inefficiencies of the system?
- What are the current undercosts that should be included?
- What are the hidden costs that can impact the business model?

Making a diagnosis on paratransit: Suggested methodology

- The 4 components to elaborate the diagnosis



- Sources that can be used for the diagnosis

	Interviews	Field investigation	Data
Service offer	Interviews with drivers at assembly points Interviews with companies or paratransit organisations if they exist	GPS tracking records Surveys and counts at assembly points and on-board Identification and characterisation of assembly points	Licensing/authorisation database (public authorities)
Demand	Interviews with drivers at assembly points Interviews with companies or paratransit organisations if they exist	Surveys and counts at assembly points and on-board Passenger surveys	Household travel surveys
Business model	Interviews with drivers, owners, paratransit organisations and companies: pricing, cost structure, remuneration method, trends		Fuel price indexes
Structures: internal and external	Interviews with regulatory authorities (state, municipalities, etc.) Interviews with drivers/riders, owners, paratransit organisations and companies		Agreements, laws and regulations Database of licences/permits

Paratransit: Positive & negative externalities - SWOT analysis



USERS

STRENGTH

WEAKNESS

INTERNAL	<ul style="list-style-type: none"> - Availability of the offer - Flexibility - Door to door service - Fares - Speed 	<ul style="list-style-type: none"> - Not reliable - No passenger information - Fares - Congestion - Pollution - Road safety - Insecurity (in and around vehicles)
EXTERNAL	<ul style="list-style-type: none"> - Trip planning tools - Modal and fare integration - Comfort in the vehicles 	<ul style="list-style-type: none"> - Less availability if reform - Fare increase



LOCAL GOV.

STRENGTH

WEAKNESS

INTERNAL	<ul style="list-style-type: none"> - No subsidies - Adaptation of the offer to the demand - Job proving sector - No – or few – infrastructures needed - Sector part of the local culture and identity 	<ul style="list-style-type: none"> - Not a public service - Competition with the public transport offer (if it exists) - Congestion - Pollution - Road safety - Difficult to regulate - Lack of information - Political power
EXTERNAL	<ul style="list-style-type: none"> - New tools to facilitate and improve regulation - Modal and fare integration - Safer and cleaner vehicles 	<ul style="list-style-type: none"> - Political opposition of the stakeholders in case of a reform - Job loss - Discredit of the new transport offer (if applicable)



DRIVERS

STRENGTH

WEAKNESS

INTERNAL	<ul style="list-style-type: none"> - Job access (if permit) - Income - Social status - In some case, form of social protection 	<ul style="list-style-type: none"> - Strong competition - Target system - No social protection - Poor working conditions - Corruption
EXTERNAL	<ul style="list-style-type: none"> - Improvement of working conditions - Optimization of the filling rate of the vehicles - Vehicles less costly to maintain - Access to social advantages 	<ul style="list-style-type: none"> - Job loss if reform - Decrease of daily income - Difficulties to access the sector



OWNERS

STRENGTH

WEAKNESS

INTERNAL	<ul style="list-style-type: none"> - Regular income - Small capital needed - Pooling of needs in some professional organization - Importance of the demand - Social status 	<ul style="list-style-type: none"> - Strong competition - No economies of scale - Pressure from professional organization - Corruption - Commercial risk
EXTERNAL	<ul style="list-style-type: none"> - Optimization of the filling rate of the vehicles - Vehicles less costly to maintain - Buyout 	<ul style="list-style-type: none"> - Loss of revenue - Difficulties to access the sector

Paratransit: Overall goals when reforming the sector

- ❑ More efficient paratransit : reduced transport time, more reliable services, reduced fares,...
- ❑ Expanded services towards non profitable services: time, geographical coverage
- ❑ Better quality for users: information, comfort, gender-friendly,...
- ❑ Better job conditions
- ❑ Reduced negative externalities: GHG emissions, air quality, road safety



Thank you for your attention!

Solène BAFFI
sbaffi@codatu.org
CODATU - Project Manager

<https://www.codatu.org/>
<http://mobilisecity.net/>

Paratransit in Asia

Overview of paratransit dynamics in the region and the challenges related to sector's modernisation

29th November 2021



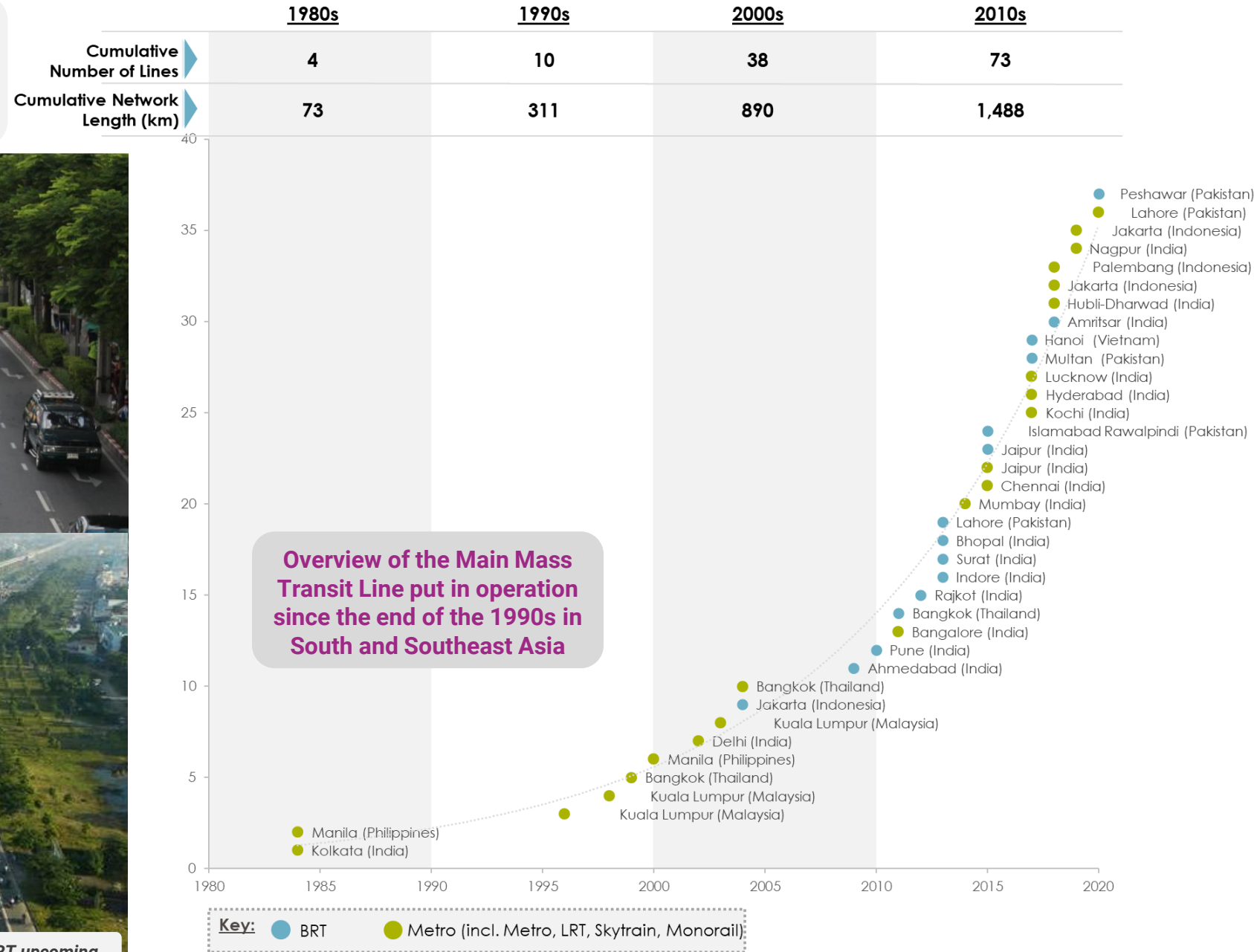
Clément Musil

(PMO MobiliseYourCity Asia – Espelia)

Paratransit in Asia - Regional urban & mobility dynamics



Development of Mass Rapid Transit Systems in Major Cities in the Region



Bangkok – BRT 2011

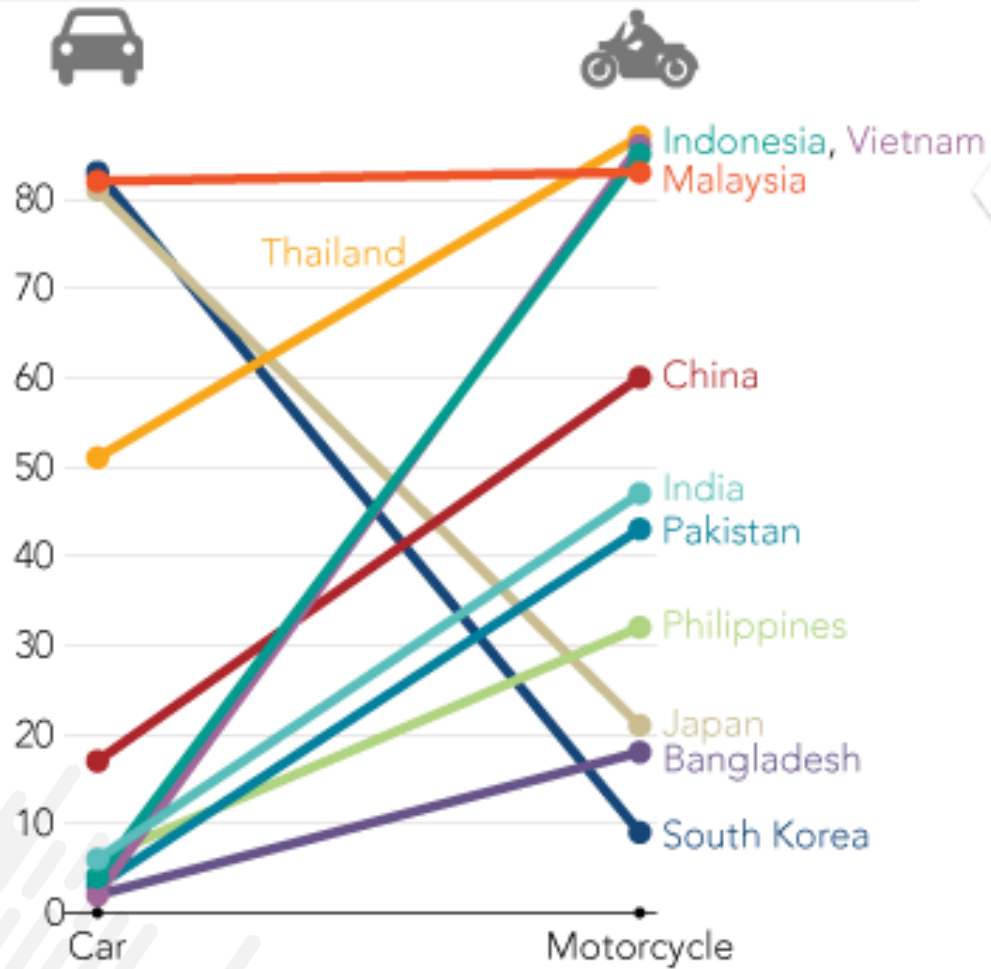


Ho Chi Minh City – MRT upcoming

Paratransit in Asia - Regional urban & mobility dynamics



High usage of motorized 2 wheelers ...



Households that have a motorcycle or a car (in percent)

Source: Pew Research Center, 2015

Ho Chi Minh City – Dien Bien Phu axis at rush hour



1. **Car dominates in relatively few Asian countries.** Instead in places like Indonesia, Vietnam and Thailand, **motorized 2 wheelers rule.**
2. As these countries grow richer, they are likely **to move towards car ownership** (with a consequence to increase the burden on already overcrowded roads)
3. Despite attempts to improve PT infrastructure, due to rapid economic growth the **car is set to take over from the motorcycle** as the dominant form of transport

Glimpse of the paratransit universe in Asia

Types of Vehicles



2-Wheelers



Motorcycle
(1-2pax)



3-Wheelers



Tricycle
(1-2pax)



Motorised Tricycle
(2-8 pax)



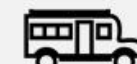
4-Wheelers



Car
(4-8 pax)



Van
(c. 10 pax)



Minibus
(15 to 25 pax)

CAMBODIA



Motodop



Cyclo



Remork



Bajaj

INDIA



Cycle-Rickshaw



Auto-Rickshaw



Vikram/ Tempo



Force Cruiser

Tata-Magic



Maruti Omni



Mahindra Glo



Mikrolet



Angkot

INDONESIA



Ojek



Becak



Betor



Bemo

PHILIPPINES



Pedicab



Tricycle



Van UV Express



Jeepney

VIETNAM



Xe Om

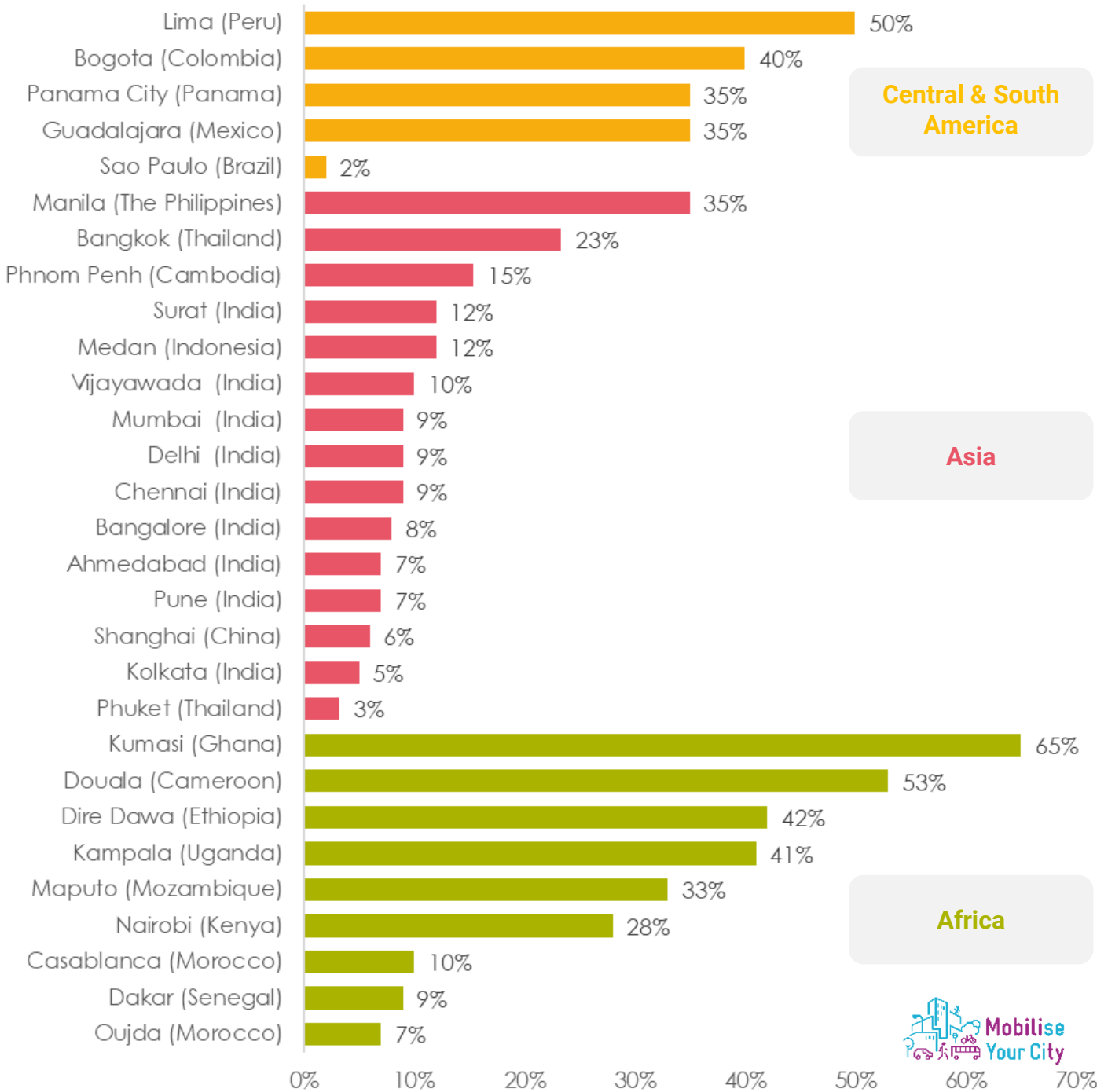
Overview of the Paratransit Modal Share in Asia



High-Level Overview

Comparison of Paratransit's Modal Share* (in terms of daily trips) in Various Cities in Asia

Source: compilation of various references.
*The modal split is calculated differently in each city



Regional Paratransit Key Dynamics



Emergence of Digital Tools

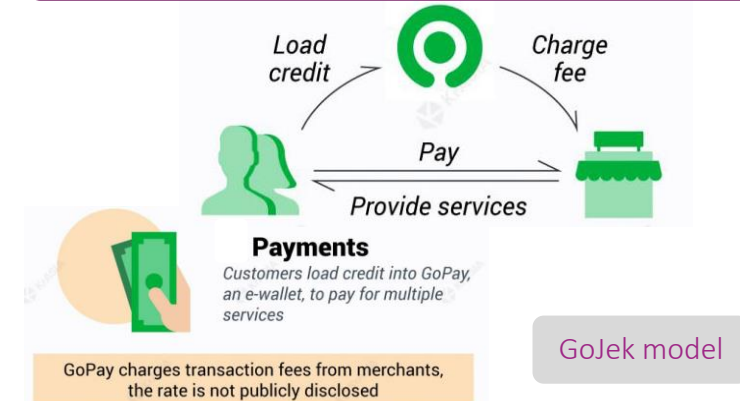


Mobile Internet Users in 2019 → 48% of population in Asia

E-hailing services



E-payment & smart ticketing



GPS and mapping tools



Pakistan (2016)
Uber, Careem, Shahi Sawari

Bangladesh (2015)
Uber, Pathao, MUV, SAM, Shohoz Rides

India (2010)
Ola Cabs, Uber, Meru Cabs, Carzonrent, Savaari Car Rentals, FasttrackTaxi App, Mega Cabs

Thailand (2013)
Grab, Line Man, Bolt, True Ryde

Mapping RHAs (2018)

Sri Lanka (2015)
PickMe, MyCabz, Bolt, Uber

Myanmar (2015)
Grab, Oway Ride, Hello Cabs, FastGO, GetRide, OK Taxi

Cambodia (2016)
Grab, PassApp, WeGo, TADA, Eagle

China (2011)
Didi Chuxing, Dida Pinche, Caocao Zhuanche, Yidao YongChe

Vietnam (2013)
Grab, GoJek, Be, GoDee, Mai Linh

Lao PDR (2016)
LOCA, DriveUp

Philippines (2013)
Grab, Go Lag, Hirna, HYPE, Micab, OWTO, U-HOP

Indonesia (2010)
Grab, GoJek, BlueBird, UBER

Regional Paratransit Key Dynamics



Adoption of New & Clean Vehicle Technology



E 3W Market: India fast growing market by 2024, nearly half of new 3W sold will be EV (Crisil, 2021)

Country	Number of electric 2/3-wheelers	Year
Number of electric 2-wheelers registered		
Vietnam	1,350,000	2020
Malaysia	2,000	2020
Thailand	2,300	2020
Indonesia	3,000	2018
India	600,000	2019
Number of electric 3-wheelers registered		
Philippines	4,318	2020
India	2,380,000	2019

Number of E-Vehicles (EV) Registered in Selected Asian Countries

Cleaner technologies (CNG / LPG)

Many major cities India in successfully converted from gasoline to CNG 3-wheelers

- ➔ The immediate result has been reduced emission of pollutants
- ➔ But fuel supply (and fueling infrastructure) is a concern (long queues for CNG refueling in Delhi)

Vehicle modernization (electrification)

Electric mobility policies (for production and usage)

- ➔ **Roadmap and Targets** (EV production)
- ➔ **Fiscal incentives** (reducing import tax, subsidy for buyers of electric jeepneys, motorcycles and tricycles, ...)
- ➔ **Non fiscal incentives** (charging infrastructure, registration and licensing)



Safa Tempo drivers in Kathmandu (Nepal) (source: Shilu Manandhar, GPJ Nepal)



Piaggio CNG 3-Wheelers in Bhopal (2019)

Paratransit services in Asian Cities:

Scalable Solutions to Reform, Modernise and Integrate

Based on accurate knowledge and a detailed understanding of the local paratransit industry

Three levels of actions

National Government Level

National Urban Mobility Programme (NUMP)

- Legislative
- Regulatory
- Fiscal policy
- Institutionnal framework
- Financial

Local Government Level

Sustainable Urban Mobility Plan (SUMP)

- Regulatory
- Planning
- Contractualisation /
- Labelling / Accreditation
- Industry structuration
- Enforcement
- Development of infrastructure & equipments
- Passenger information
- Fare policy & ticketing
- Capacity building

Project Level

Integration with Mass Transit Projects:

- Institutional framework
- Appropriate preparatory studies (technical, E&S)
- Tailored infrastructure design
- Operation planning
- Paratransit industry transition plan
- Contractual arrangements
- Fare and ticketing integration

Targeted Actions (specific to paratransit):

- Support for fleet renewal
- Capacity building
- Development of transport hubs
- Formalisation of fixed lines or on demand
- Business incubator

Thank you for your attention!

Clément MUSIL

clement.musil@espelia.fr

Programme Manager Officer (PMO)

MobiliseYourCity Asia – Espelia

Consultant



On behalf of:

 Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

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Q&A

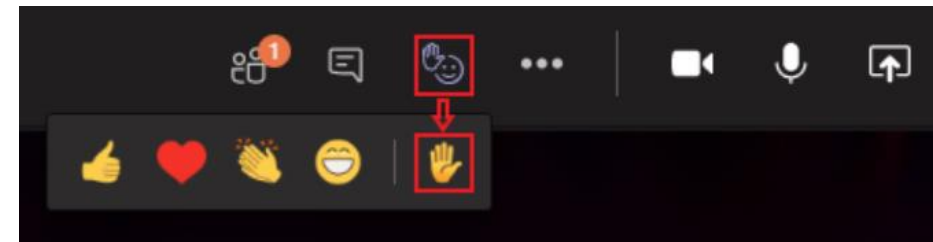
Chat

- Pose your questions in the chat and we will include them in the Q&A



Speak

- Select “Show reactions” in the meeting controls, and then choose “Raise your hand”. Everyone in the meeting will see that you've got your hand up.



Reforming paratransit with MobiliseYourCity's newest catalogue of measures

Reforming paratransit: A catalogue of
practical actions for policy-makers and
practitioners

29 November 2021



Solène Baffi (CODATU)



On behalf of:

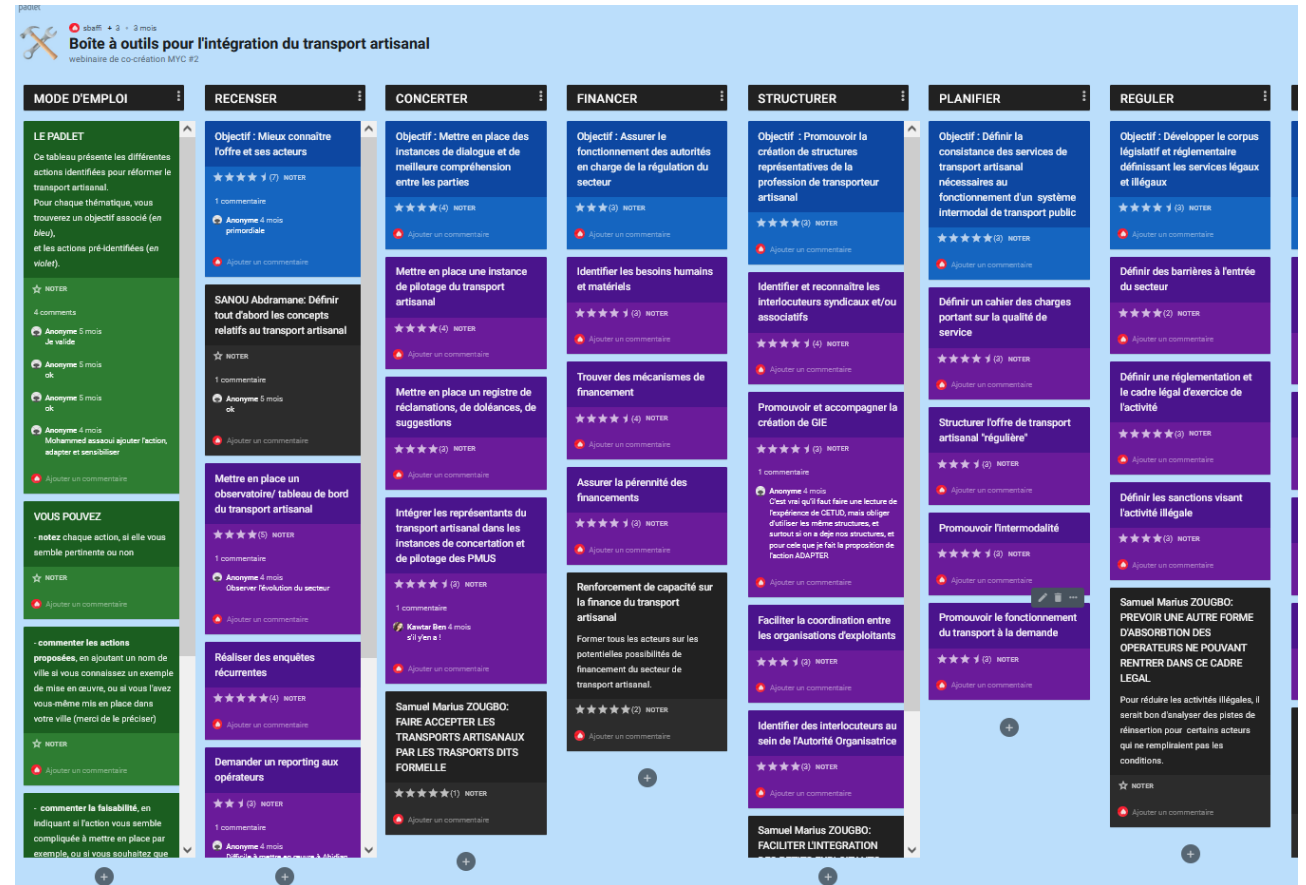
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Methodology of the toolbox

- Objective of the toolbox: after the diagnosis, to facilitate the implementation of actions
- Elaboration of the toolbox: a co-constructive methodology
- Actions to implement « à la carte », according to:
 - The needs identified in the diagnosis
 - The means available
 - The goals of the SUMP, if any
- the tools are adaptive
- The actions proposed are progressive, with some « basic » actions, and more elaborated solutions



Integrating paratransit into a SUMP

1

PREPARING THE REFORM

2

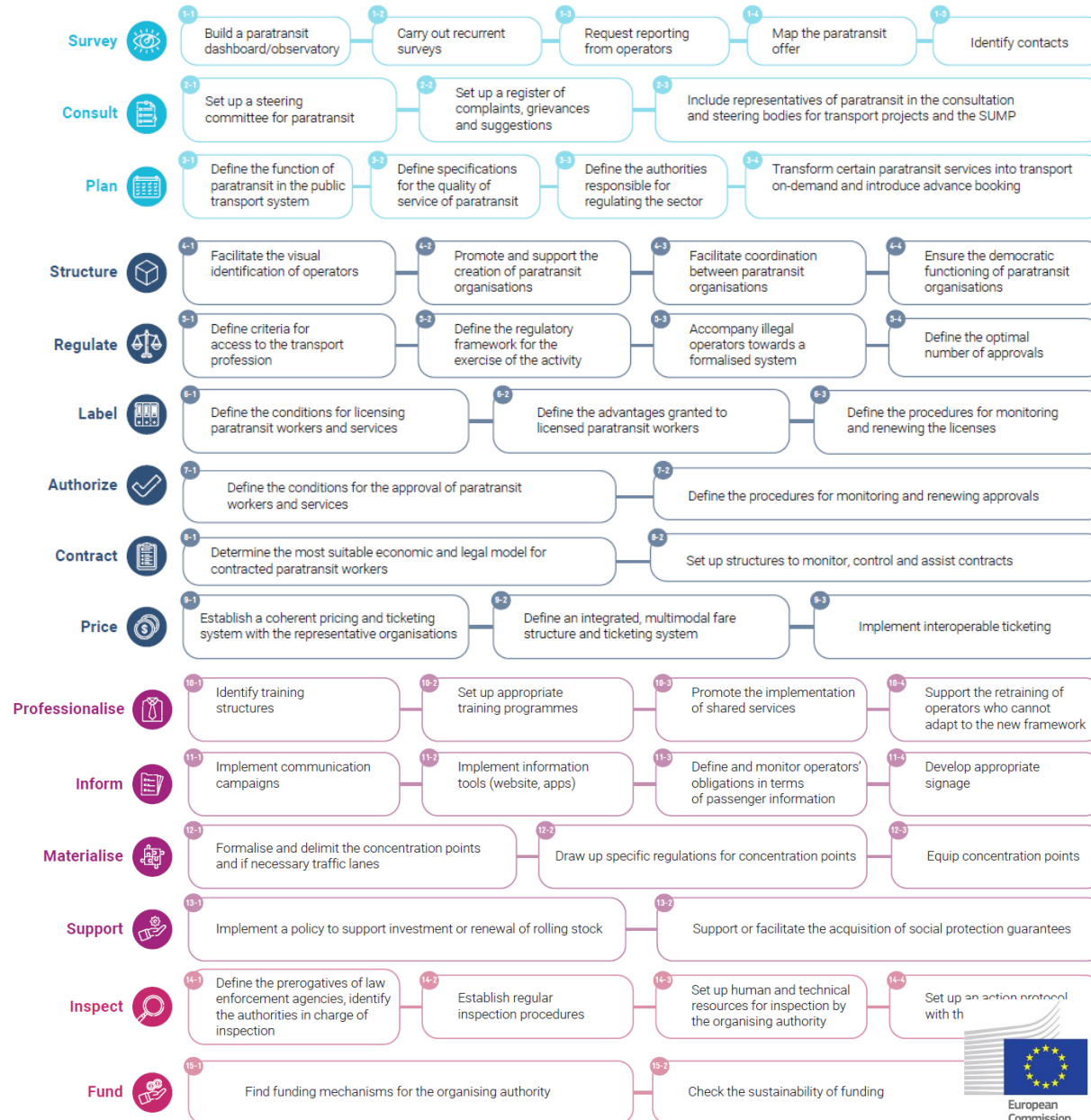
REFORMING THE SECTOR

3

SUPPORTING THE REFORMS

4

ENSURING THE IMPLEMENTATION



SUMP Cycle

4-Implementing

proper management
& communication

1- Preparing well

key actors & process

3- Elaborating

Effectives measures
Clear responsibilities
Allocated budgets

2- Rational & transparent goal setting

Priorities and
common targets

Focus on specific actions: Preparing the reform - Survey

SURVEY

Become familiar with the state of the paratransit offer

IMPORTANCE



COST



Map the paratransit offer

Using survey data and/or GPS tracking, map the paratransit network and the main assembly points and stations.

The mapping of regular services can be done in two ways:

- On the one hand, it is a diagnostic and steering element for the organising authority. This map, which is the result of the diagnosis (objective 1), should be kept up to date according to the information provided by the paratransit workers.
- On the other hand, although graphic representation of transport networks for users is rare in the countries of the south, it may be worthwhile to experiment with the creation of a graphic representation of transport services, which could be used in various applications and on various media. Preference will be given to schematic, symbolic presentations that allow users to make the link between their destination and the vehicle that serves it.

Type of paratransit involved	Regular services.
Prerequisites	Diagnosis of the paratransit offer.
Stakeholders	Supervisory authorities
Level of effort	Financial effort: medium, the necessary equipment is not very expensive (computer equipment, GPS), but it is also necessary to be able to store and save the data created. Human effort: medium, team of experienced computer technicians to build and feed the database. The database can then be provided with information from users. It is also possible to rely on the local Open Street Map community.
Level of importance	Secondary. A mapping tool is essential in highly formalised networks, but may be considered optional in lightly regulated systems.
Points of focus	Need for an updating and refreshing facility.
Time frame	Permanent. Can be implemented as part of an overall project to improve and monitor paratransit.
Evaluation criteria	Depending on the type of support chosen, e.g., number of leaflets distributed with network map.



Example, reference

Accra, Nairobi (with choice of a graphic representation close to that of London), South African cities, Maputo (map of chapas deployed near bus shelters), etc.

Different steps to implement the action :

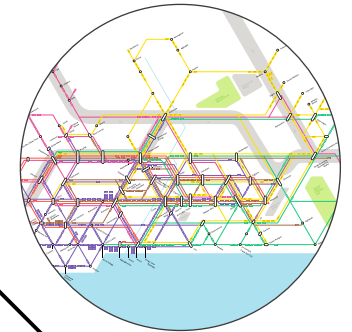
GPS tracking



Creating a database



RT passenger info



A strategic action:

- Formalizing the operators
- Acknowledging the sector and the service offer
- A planning tool
- Useful for passenger information and improved service quality

Focus on specific actions: Reforming the sector - Structure

STRUCTURE

Promote the creation of representative structures within the paratransit sector

IMPORTANCE

COST

VARIABLE

Promote and support the creation of paratransit organisations

The creation of a professional organisation is based at least on a certain pooling of the means available to operators and recognition by the public authorities. This pooling may, for example, concern the management of the fleet, which can be done in a shared manner, through a regulator made available by the professional organisation. Beyond the organisation of the professional activity, more advanced forms of corporatization make it possible to have access to financial facilities, to optimise the operation of services and to regulate competition, to respond to calls for tenders from the Organising Authority, and even to offer social guarantees to paratransit workers.

Once its existence is recognised by the local authorities, the organization(s) can take on all or part of the following responsibilities:

- Management of licences,
- Definition of routes and timetables,
- Rationalisation of operating methods,
- Pooling of financial resources to improve the borrowing capacity of owners (renewal of rolling stock),
- Verification of compliance with safety standards,
- Training of drivers and crew,
- Protection of paratransit workers (insurance, mutual insurance) and regulation of relations between the operators themselves (between crew and owner),
- The operation of an e-hailing application or a central booking office (see action 3-4)


Depending on the legislation in force, the professional structure may acquire a legal existence of the EIG type in order to bid for public contracts.

The public authorities can support the process of creating an EIG by clarifying the specifications and facilitating certain administrative procedures. In the case of mass transport projects (such as BRT), calls for tender can be drafted in such a way as to make them more accessible to operators grouped in an EIG.

In addition to grouping operators into EIGs, attention should also be paid to operators who do not have the means to join existing EIGs or who prefer to remain at the level of an individual operation. In the case of operators who would like to join EIGs, a registration or waiting list system can be encouraged by local authorities. For operators who prefer to remain at the scale of an individual operation, they will also have to comply with the regulations in force concerning the paratransit activity.

Type of paratransit involved	All legal types, although more appropriate for regular service type modes.
Prerequisites	Diagnose the paratransit sector and internal stakeholders.
Stakeholders	Local authorities/ Authorities in charge of the management and regulation of paratransit, operators, professional organisation, if any

Level of effort	Financial effort: varies from regular monitoring to providing loans or credits at favourable rates. Human effort: significant. Time to establish a dialogue with the operators.
Level of importance	High. Central lever for the integration of paratransit.
Points of focus	Degree of representativeness and knowledge of the sector of the representatives of the paratransit organisations. Non-democratic functioning of paratransit organisations
Time frame	Permanent.
Evaluation criteria	Degree of corporatization of means. Obtaining legal status by the paratransit workers. Capacity to respond to calls for tender issued by the public authorities.



Example, reference
The motorbike taxi camps in Dar Es Salaam, the EIGs created in Dakar (AFTU), VOC (Vehicle Operating Company) in Cape Town and Johannesburg to operate BRT services. Another example is in a secondary city, George, South Africa, where a company has been established to bring together minibus and bus operators.

→ Some actions are **crucial** to reform the sector, within or without a SUMP

→ Supporting the creation of **democratic professional organization**

STRUCTURE

Promote the creation of representative structures within the paratransit sector

IMPORTANCE

COST

+

Ensure the democratic functioning of paratransit organisations

Ensure that the paratransit organisations function democratically, that they are representative of the sector, and that they do not interfere with the regulatory procedures of the public authorities.

To this end, it is necessary to monitor more specifically:

- The conformity of the organisations' regulations or statutes with the legislation in force;
- The representativeness of the operators gathered within the organisation (via the establishment of communication channels in particular) and the existence of links between these representatives and the sector (to avoid the organisation's operation being dictated by individuals disconnected from the sector);
- The fact that the mandates for which the organisation's representatives are elected/appointed are not exceeded, and the existence of staff turnover within the organisation for management and leadership functions;
- The number of licences issued by the organisations, and the conformity of the number of licences with the number of vehicles in circulation (the use of scanned files and a data storage platform facilitates these control procedures);
- The payment of professional taxes or property taxes according to the amounts fixed in the legislation;
- The absence of conflict of interest with members of law enforcement and local authorities.

Type of paratransit involved	All legal types. Ultimately, differentiated modalities can be envisaged for taxi type modes and regular service type modes.
Prerequisites	Existence of identified paratransit organisations.
Stakeholders	Supervisory authorities, local authorities, professional representatives
Level of effort	Low, human resources to carry out controls and monitor the functioning of professional structures.
Level of importance	Important, essential measure to ensure the enrolment of operators, the representativeness of professional structures and the good governance of the sector.
Points of focus	Absence of conflicts of interest between individuals in charge of regulation within local authorities and members of paratransit organisations.
Time frame	Permanent.
Evaluation criteria	Development of the number of operators within paratransit organisations, quality of dialogue with all governance actors, compliance with the legislation in force and the regulatory framework.

Focus on specific actions: Reforming the sector - Plan

PLAN

Define the function of paratransit in the public transport system

IMPORTANCE



COST



Define the function of paratransit in the public transport system

When drawing up a SUMP or any other transport reform framework, the aim is to identify the current function of paratransit services, to define the place of the various forms of paratransit in the multimodal service plan and to check whether some of them can be contracted out to the Organising Authority.

The approach comprises three stages:

- 1) Drawing up the multimodal service plan and defining the desired role for the various forms of paratransit;

Several configurations exist:

- The paratransit offer is the only offer available in all or part of the city. The transport offer can be organised in certain districts and/or certain time slots with regular lines, and in certain districts and/or certain time slots as a service on demand.
- The paratransit offer complements the public transport offer. Complementarity can be organised according to the "trunk and feeder" model, with paratransit workers providing a feeder service to the high-capacity public transport mode.
- Paratransit provides a parallel service, for example a short-distance service (omnibus type) parallel to the express service provided by the higher capacity service.
- Paratransit reinforces the public transport offer, particularly during peak and off-peak hours, for example with "peak looping" (reinforcement of the public transport offer on certain sections during peak hours) or as a replacement, for example during off-peak hours, paratransit is sometimes better adapted to meet a more erratic and less important demand.

Whatever the required configuration, this definition will undoubtedly have to be accompanied by a restructuring of the network or the service offer to make it more coherent and efficient: it is indeed likely that the services offered have been added together without overall coordination, according to individual initiatives. This restructuring should be carried out in close consultation with the professionals concerned, seeking to respect the current economic balance as much as possible. This could be an opportunity to offer operators new services, such as night services or premium services.

The planning of the paratransit offer can be accompanied by urban developments, such as the implementation of dedicated lanes to improve performance at peak times.

- 2) Reconstitute the typical business plan of the paratransit workers involved and check that it is possible to offer them a "win-win" agreement.

Rationalising public transport will often aim to ensure that the main routes are served by high-capacity formal transport, and to confine paratransit to the fine-tuned service of outlying districts and localities. It is therefore not necessarily easy to define a perimeter of activity that is sufficient to guarantee the continuity and number of existing jobs.

- 3) Set up consultation with the representatives of the paratransit workers to test the acceptability of the principle of contractualisation, in parallel with the development of the contractual model.

Not all paratransit services are suitable for contractualisation. Several conditions must be met: firstly, the service provided must be integrated into a public transport offer, and secondly, the paratransit workers must be sufficiently organized and professionalised to accept and follow the terms of a contract. Depending on the role assigned to paratransit, different types of contractualisation are recommended, such as a monopoly or a concession. A coherent pricing system must be established according to the defined function.

Type of paratransit involved

All legal types, although more appropriate for regular service type modes.

Prerequisites

Diagnosis of paratransit, creation of EIGs / existence of paratransit organisations. If possible, mapping of the paratransit network(s).

Stakeholders

Local authorities/ Authorities in charge of planning, management and regulation of paratransit, operators, professional organisation if any

Level of effort

Financial effort: variable. Depending on the function given to paratransit, facilities may be required, as well as the granting of licences.
Human effort: significant. Include experts and representatives of the paratransit sector in preparing planning documents.

Level of importance

High. Central step in developing an integrated and sustainable mobility plan.

Points of focus

Facilitate inter-modality as part of complementary services. It is preferable not to embark on this process in the absence of a strong political will and technical means for steering and monitoring.

Time frame

Permanent.

Evaluation criteria

Adapting planning documents to the defined function of paratransit. Monitoring performance indicators of the different transport services. Meeting the needs of the demand.



Example, reference

Example of clando taxis in Dakar: an informal transport offer that complements the more capacity-driven offer on certain routes.
Role of minibuses in Phase 2 of the BRT in Cape Town.
Example of Polokwane in South Africa: rather than a BRT, minibus services operate on some sections with a regular service.

→ Some actions are **crucial** to reform the sector, within or without a SUMP

→ Defining the **cost** of the reform and its frame

PLAN

Define the function of paratransit in the public transport system

IMPORTANCE



COST



Define specifications for the quality of service of paratransit

Establish specifications, in consultation with operators and paratransit organisations, to limit negative externalities and improve service quality.

The standards of the specifications may involve in particular:

- Quality of service (number of passengers, frequency, service - routes and stops, passenger information, timetable)
- Safety (maximum speed, helmet use, compulsory licence)
- Type of vehicle (size, comfort, condition, engine)
- Environment (type of fuel used, age of rolling stock)
- Working conditions (formalisation of employment, number of hours worked per day, insurance for vehicle and driver)

In order to promote compliance with the standards by the operators, the specifications can be developed in consultation with the operators. As compliance with these standards can sometimes lead to a loss of income for the operators, compensation can be put in place; whether financial, or granting operators the right to operate in certain areas, at certain times etc. or even licencing systems.

Type of paratransit involved

All legal types, although more appropriate for regular service type modes.

Prerequisites

Establish a diagnosis to identify the positive and negative externalities of paratransit, and the expected level of service.

Stakeholders

Local authorities/ Authorities in charge of the management and regulation of paratransit, operators, professional organisation, if any

Level of effort

Financial effort: variable (may require compensation measures)
Human effort: significant. Collaborative development of specifications, monitoring of indicators.

Level of importance

High.

Points of focus

Define precise indicators (GHG emissions, status of operators, maximum number of seats per vehicle, compulsory wearing of helmets, etc.) upstream for monitoring the specifications. Internal monitoring bodies for compliance with the specifications.

Time frame

Permanent.

Evaluation criteria

Based on precise indicators identified in consultation with paratransit representatives. Monitoring of indicators to be carried out at least annually.



Example, reference

Sierra Leone Road Transport Corporation's specifications in Freetown.
The Moja Cruise project in eThekweni (Durban), South Africa.

Focus on specific actions: Reforming the sector – set of actions

Same approach for the different actions:

- Define the conditions & the advantages granted
- Define the procedures and conditions to renew

Authorise

→ *Controlling the access to the sector*

Obligations: buy/get a licence and permit, specifications to respect

Advantages: legal operations, service more visible, less inner competition

Formal service

Contract

→ *Definiying the rights/duties of each stakeholders*

Obligations: structuration of the sector, possible taxes

Advantages: sharing the risk, possible compensations, possibility to respond to a call for tenders

Label

→ *Improving the quality of service*

Obligations: abiding to quality criterium

Advantages: access to specific infrastructures, label on the vehicle...

Unregulated service

Focus on specific actions: Reforming the sector - Price

PRICE

Implement a coherent, even multimodal, pricing system

IMPORTANCE



COST



Establish a coherent pricing system and ticketing system with the representative organisations

The question of pricing is a central issue in the integration of paratransit. A first level of action in this respect consists of negotiating, with the paratransit operators and their representative organisations, a set of pricing principles designed to avoid overbidding on prices, whether downwards or upwards. The ways in which this action can be done, as well as their results, can be multiple. At a minimum, it may consist of setting floor and ceiling prices for each type of service. At the most, it can lead to a general tariff agreement, for example, a concentric zonal tariff.

A related but important issue is ticketing. In almost all cases, paratransit workers do not issue proof of payment. The introduction of a ticketing system can help to improve the visibility, security and traceability of the service, and can be a prerequisite for moving towards more elaborate forms of pricing. The introduction of a ticketing system is a very important lever for reforming paratransit, as the traceability of fare income makes it possible to move away from the "target system" (where the driver pays a fixed amount to the owner of the vehicle) and to move towards an operation where the driver can be salaried employee. This ticketing system can take very simple forms (receipt on a counterfoil booklet, etc.) or be more elaborate, in preparation for the implementation of a modern ticketing system.

Type of paratransit involved	All legal types. Ultimately, differentiated modalities can be envisaged for taxi type modes and regular service type modes.
Prerequisites	Knowledge of the operating accounts of the operators. Existence of channels of consultation with the operators, and preferably a form of conventional relationship (labelling, authorisation, contractualisation) allowing the sanctioning of any frauds observed. Existence of human resources to manage and verify the process.
Stakeholders	Supervisory authorities, professional representatives, paratransit workers, clients.
Level of effort	Use of human and technical resources to carry out the tasks described above. Possibly some implementation costs if they cannot be fully borne by the operators.
Level of importance	Variable according to the context and the level of structuring of the offer.
Points of focus	Beware of fraud risks. Need for regular controls by mystery clients.
Time frame	Permanent once the agreement has been concluded with the craftsmen.
Evaluation criteria	Follow-up of penalties and possible sanctions.



Example, reference

PAMU programme (Programme d'Amélioration de la Mobilité Urbaine) in Madagascar, AFTU in Dakar.
Accra, with zonal kilometre pricing of BRT, which corresponds to the prices of trotros in the same zones.

- Some measure are **politically complex** to implement due to the set of interactions between stakeholders
- Efficient and strategic actions **do not necessarily entail costly or sophisticated technology**

Focus on specific actions: Supporting the reform - Professionalize

PROFESSIONALISE

Implement activities to promote the development of operators' skills

IMPORTANCE



COST



Set up appropriate training programmes

The training programmes meet previously identified needs. On the basis of these needs, objectives are drawn up in terms of skills acquisition, on the basis of which the body responsible for organising the training proposes an educational model. The training may target several types of skills, for example:

- Safety rules and standards related to the quality of service defined in consultation with all stakeholders.
- Function(s) defined for paratransit as part of the SUMP.
- Fleet management, vehicle operation and maintenance.
- Business model of the paratransit activity, and the sustainable financing methods of the sector.
- Awareness of the use of digital tools, in particular when these are mobilised as part of the SUMP through GPS surveys, network and flow mapping, passenger information and ticketing.

Type of paratransit involved	All legal types. Differentiated modes can be envisaged for taxi type modes and regular service type modes.
Prerequisites	The training expectations can be defined in the SUMP (capacity building). Training needs are expressed by the different stakeholders, and can also be identified from passenger satisfaction surveys.
Stakeholders	Local authorities/ Authorities in charge of the management and regulation of paratransit, on-demand transport platforms.
Level of effort	Financial effort: medium. It is above all a question of setting up platforms for exchange between the various players in order to bring out training needs. Training is provided internally or by specialised organisations. Human effort: limited.
Level of importance	Moderate. Particularly relevant in the context of professionalisation programmes.
Time frame	Permanent.
Points of focus	Conformity of the training content with the specifications. Ensure the neutrality of the trainer(s).
Evaluation criteria	Number of hours of training provided per type. Follow-up of the skills of the training participants. Satisfaction surveys of training participants and trainer(s).



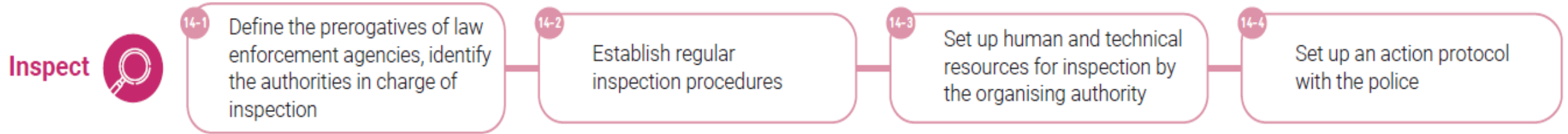
Example, reference

Training implemented by UCT in Cape Town, South Africa (training on economic management, regular services, and vehicle maintenance) and in Johannesburg by University of Witwatersrand on business development for operators in BRT projects (funded by the project). Skills and customer service programme implemented by the Department of Transport and National Transport Education and the Training Authority at the KwaZulu Natal Taxi and Commuter, not funded by BRT.
5-day mandatory training to join the SafeBoda digital platform in Uganda delivered in partnership with the Red Cross. The training covers safety, customer service, first aid and motorbike taxi maintenance. Drivers are required to follow a code of conduct (respecting the rules of the road, use of safety equipment, punctuality and control of vehicles).

→ Supporting a reform also implies to **invest in the stakeholders** through capacity building programmes and trainings

→ « win-win » type of actions, as it enables to capitalize on the operators' knowledge

Focus on specific actions: Ensuring the implementation – Inspect



Main objectives throughout the « Inspect » actions :

- Control if the regulation is enforced
- Prevent informal practices, such as racket or road blocks for instance

→ *Not just reforming the sector, but making sure the reform is implemented **over the long-term***

→ *Make sure that the legal framework **is fair for all stakeholders***

Through the actions: identify levers for the local authorities

Strategic approach for local authorities: identifying levers to reach overall goals

Levers	Expected outcomes	Overall goals
Scrapping programme	Introduce new vehicles, less polluting	improve air quality & road safety
Mapping of the routes	Building passenger information and enabling fleet management	improve service quality & working conditions
Support the creation of operating companies	Less competition in the market	improve service quality & working conditions
Plan dedicated lanes	Reduce congestion, optimization of the operations	Improve service quality & air quality
Trainings for the operators	Professionalisation of the operators	improve service quality & working conditions
Tax reduction on fuel	Use of less polluting fuel	improve air quality
...		


HOWEVER: important spillover effects... which calls for a systematic approach of the sector !

Thank you for your attention!

Solène BAFFI
sbaffi@codatu.org
CODATU - Project Manager

<https://www.codatu.org/>
<http://mobilisyourcity.net/>



On behalf of:
 Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety
of the Federal Republic of Germany



Paratransit reforms in Dakar



Contents



Urban mobility context
in Dakar



Fleet renewal programme



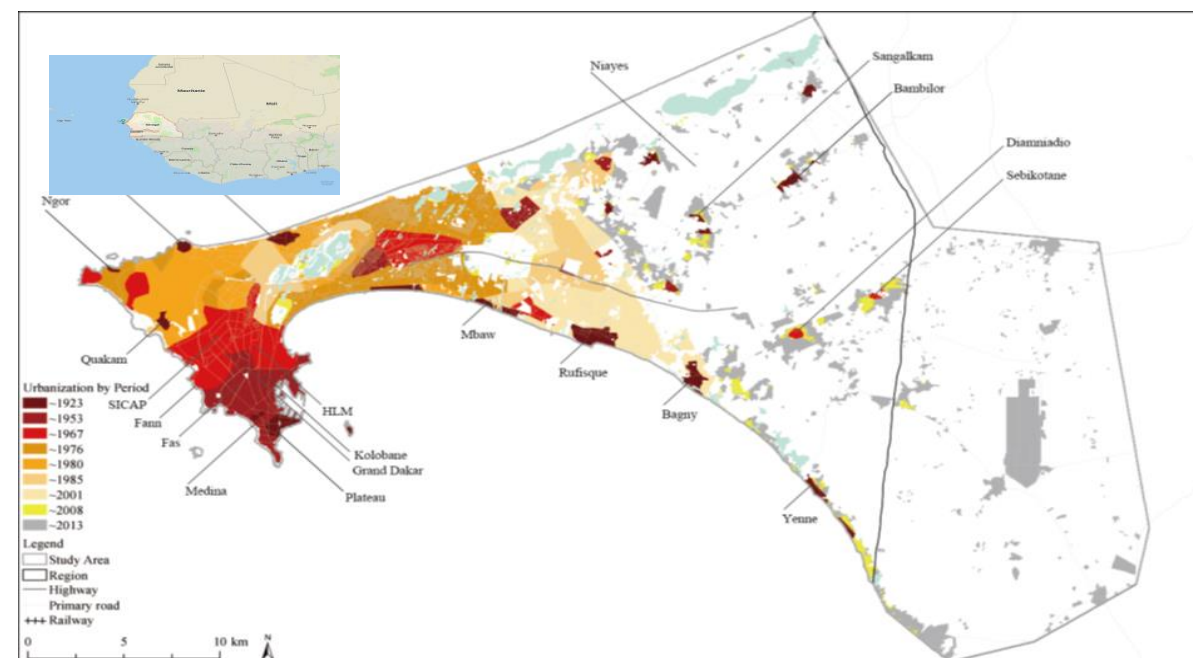
Perspectives

Urban mobility context

Strong demographic and urban growth

Key figures

- Peninsula of 550 km².
- 23% of the country's population on 0.3% of the national territory
- 2.6 M inhabitants in 2005 / 3.5 M in 2017 / 5M in 2030
- ~100,000 new inhabitants/year
- 50% of the country's urban population and 72% of the car fleet



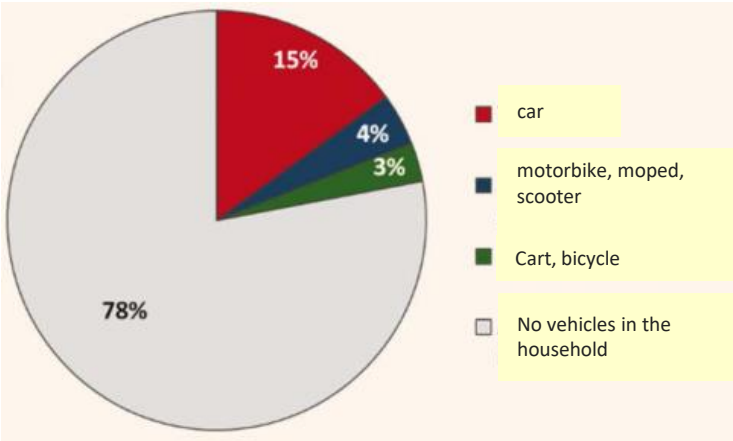
Mobility of Dakar residents

Still limited motorisation

	Motorised vehicles	Passenger cars
Number of vehicles per 1000 households	256	169
Number of vehicles per 1000 individuals	40 (20 in 2000)	25 (16,6 in 2000)

7.2 million trips/day in 2015

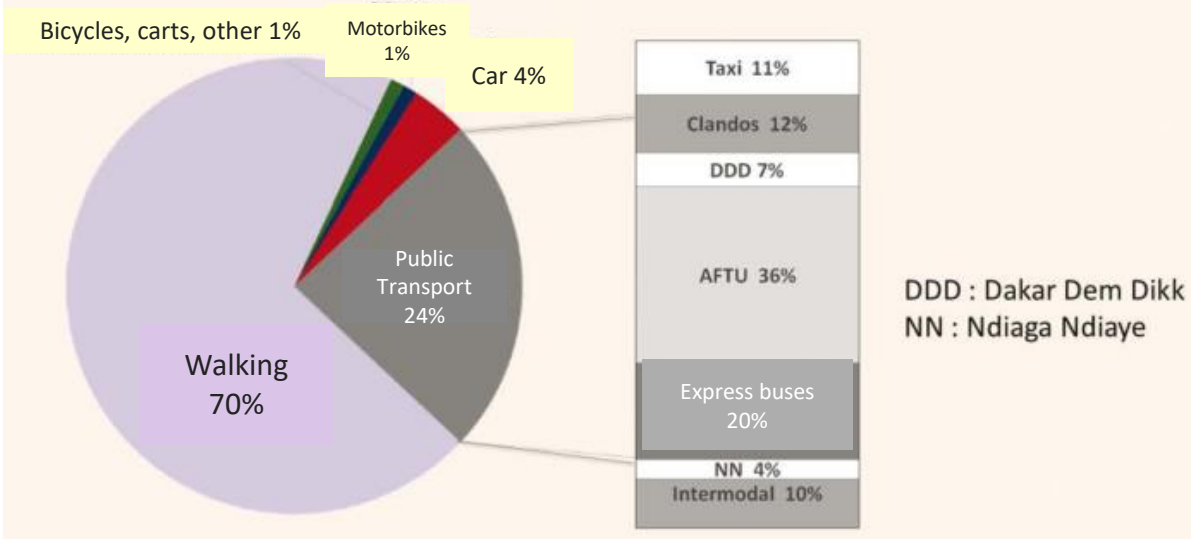
70% of daily trips are made on foot



Mobility of Dakar residents



80% of motorised trips made by public transport and preponderance of small-scale operators



Status of the offer

- Very old vehicles with 25 to 45 seats and an average age of 28 years
- A fragmented market with disorganised and unregulated informal operations (1294 operators for 2558 vehicles; 95% of operators had less than 4 vehicles)
- A traditional banking system that is not adapted and does not trust artisanal operators
- Two public operators (bus and train) in difficulty

➔ **Unmet demand with very high costs for the community (congestion, pollution and insecurity)**

➔ **Adaptation of governance**

➔ **Introduction of mass transport (TER, BRT)**

➔ **Organisation of paratransit and its professionalisation**

Fleet renewal programme

Objectives of the programme

- Replacement of express buses and ndiaga ndiaye
- Professionalisation of the actors



Consolidation and professionalisation of operators



- The transport operators are grouped into 14 EIGs



- 14 MSEs federated through the Association de Financement des professionnels du Transport Urbain (AFTU)



- The setting up of a Mutual Savings and Credit Association for Transporters (MECTRANS)



- Setting up a social mutual insurance scheme (Transvie)

Modalities and organisation



Removal of the old vehicle with payment of a scrapping premium by the State



Leasing system with a deposit of 25% of the vehicle price and the rest payable over 5 years



The pilot programme was funded by the World Bank

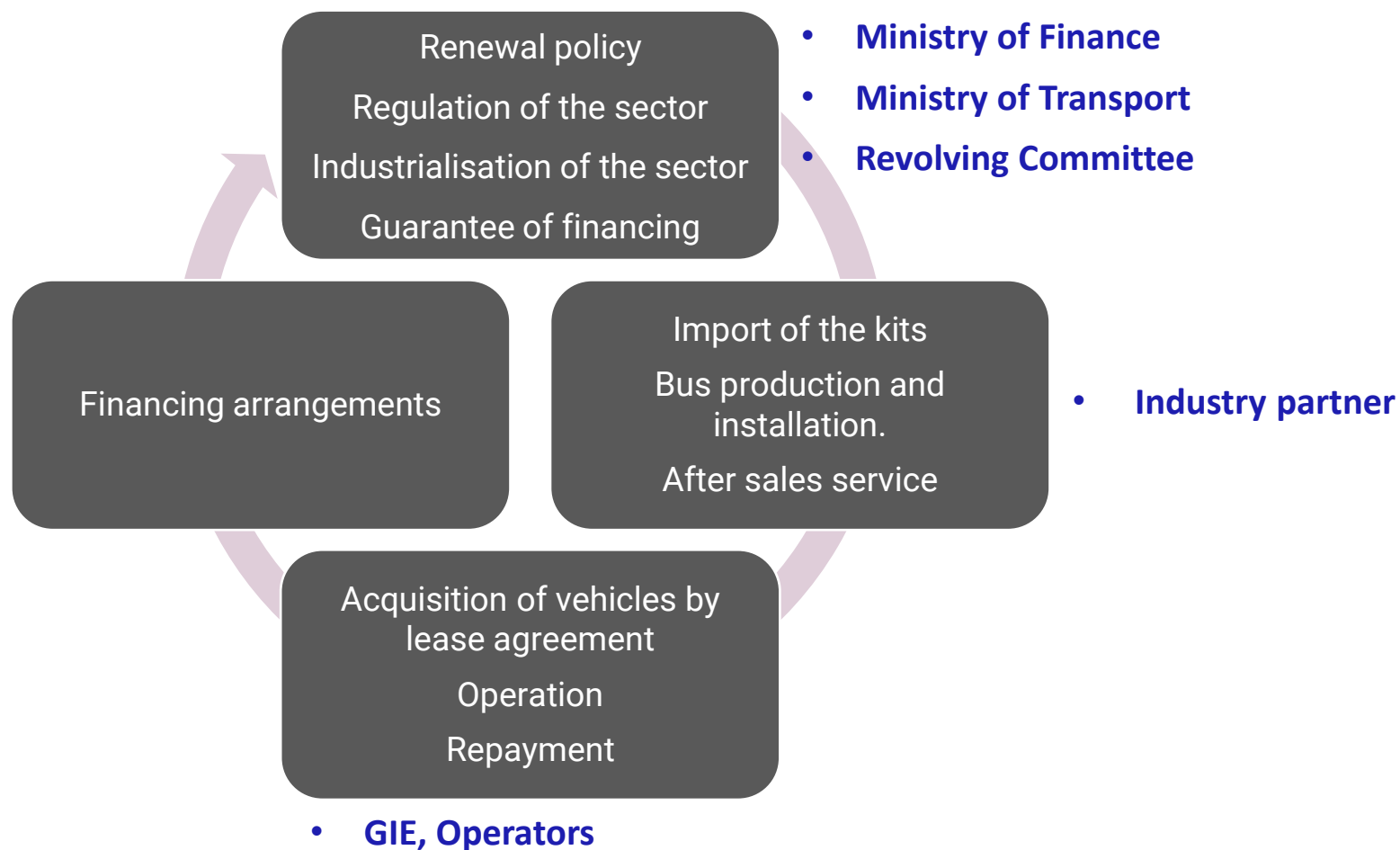


From the operators' repayments, the State creates the revolving fund to continue the operation

Modalities and organisation



- **Investor**



Leviers financiers

- Mobilisation of the contribution
- Financial support for operators

MECTRANS



- Creation of a joint and several guarantee with 3% of the repayments
- These amounts are returned at the end of the payments to refurbish the vehicle

**MUTUAL
GUARANTEE
FUND**



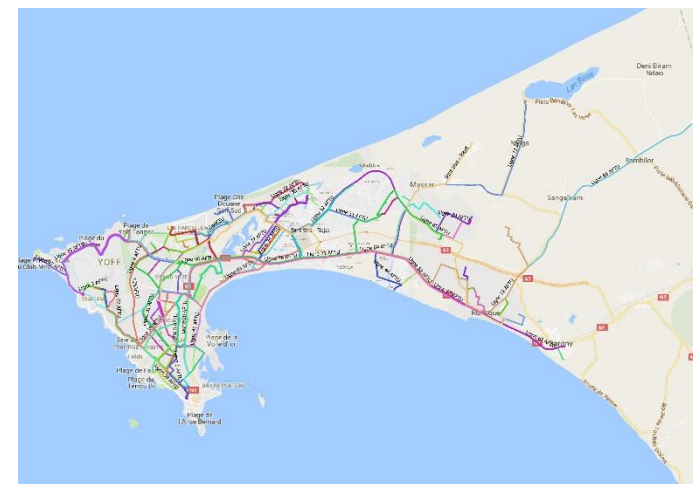
- This fund is built up from repayments, to continue operations

**REVOLVING
FUND**



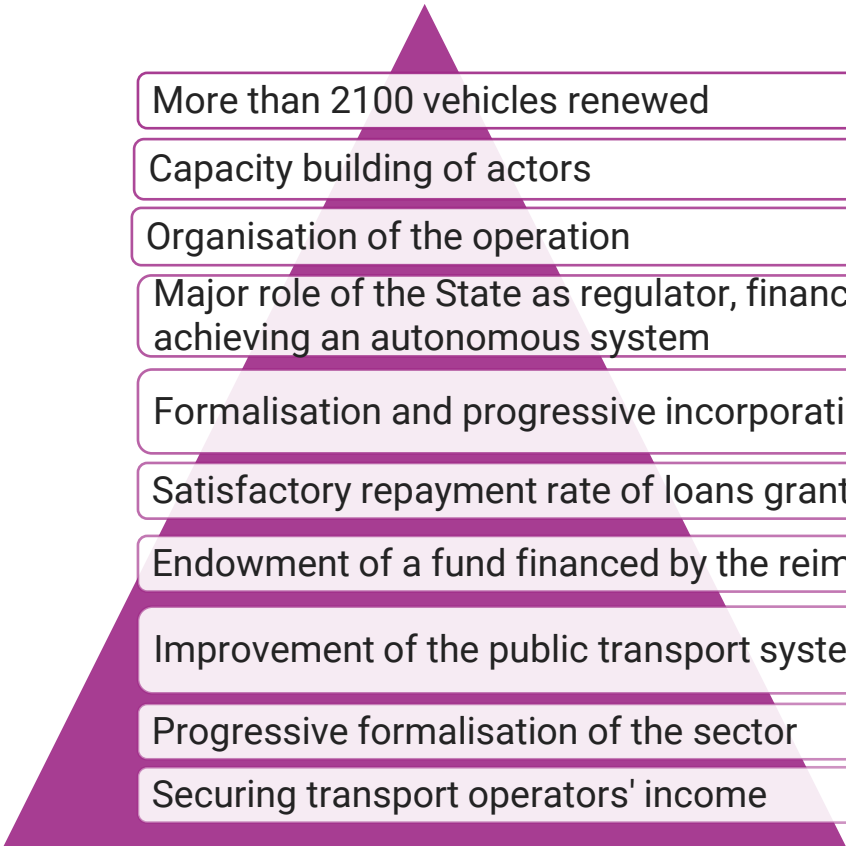
Professionalisation

- ❖ Operation to improved standards
- ❖ Capacity building of actors
- ❖ Introduction of ticketing
- ❖ Organisation of operations by line
- ❖ Creation of Captrans to
 - ❖ ensure the pooling of resources
 - ❖ coordinate the operation of vehicles
 - ❖ supervise the network with support staff



Results & Challenges

Results achieved



More than 2100 vehicles renewed

Capacity building of actors

Organisation of the operation

Major role of the State as regulator, financier and guarantor while gradually achieving an autonomous system

Formalisation and progressive incorporation of the sector into the banking sector

Satisfactory repayment rate of loans granted

Endowment of a fund financed by the reimbursement of credits

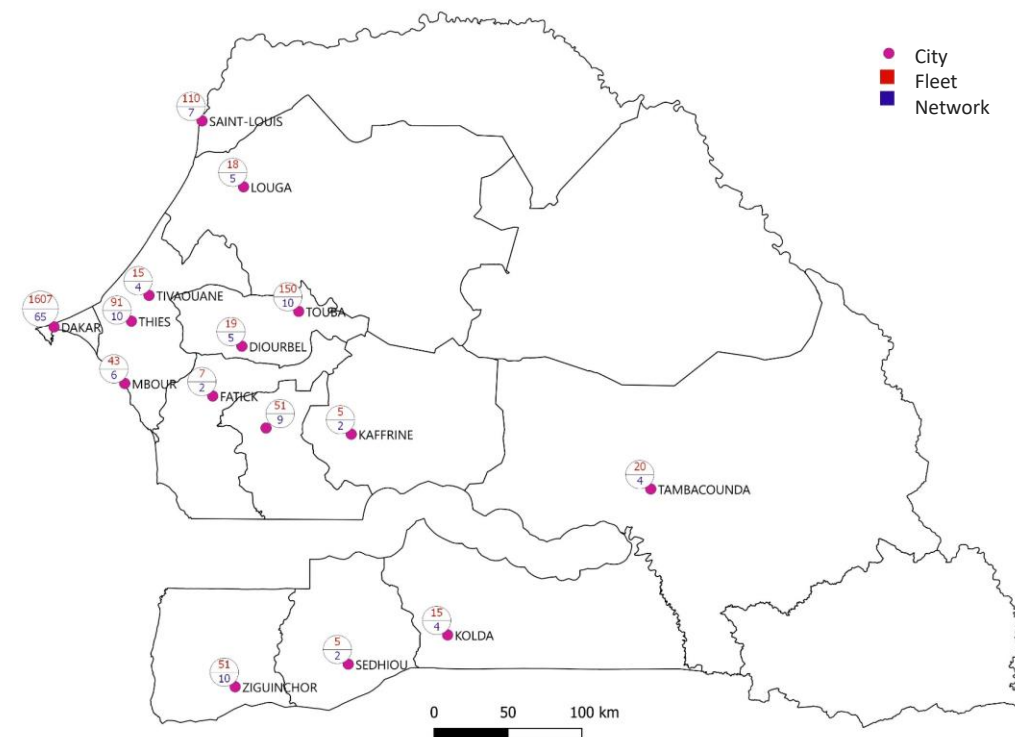
Improvement of the public transport system (mobility, safety, environment),

Progressive formalisation of the sector

Securing transport operators' income

Results achieved

- The programme has made it possible to organise the sector and give access to financing to actors who are "ineligible" with the traditional banking system;
- The monitoring of the framework put in place and the new organisation of the operation have ensured the profitability of the service, a guarantee of repayment;
- The structuring of the financial scheme also made it possible to obtain stable interest rates, and even slightly lower rates in the last two phases.
- Mectrans, Transvie Senbus
- 35% market share of public transport trips in Dakar



Various challenges

Improved urban public transport environment and better regulation of public transport supply

- High concentration of the car fleet in Dakar: 72% of the Senegalese fleet (over 325,000 vehicles)
- Adequacy of traffic regulation facilities and systems: configuration and layout of roads and junctions, traffic regulation strategy
- Occupation of public space: better organisation of road space to increase capacity
- licensing regulations to be improved for better organisation and control of supply
- Capacity and networking of the road network: peninsular urban configuration limiting the capacity to extend the road network
- Institutional and organisational framework to be improved: better management of traffic and parking



Thank you for your attention



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

City of Cape Town: Paratransit Case Study

Transport Operating Company Pilot Reform

29 November 2021

Making progress possible. **Together.**

Outline

- Key Facts
- Definitions & Objectives
- Key Lessons Learnt in MyCiTi
- Minibus-Taxi Transformation Model
- Pilot Project - Video

KEY FACTS

- **Cape Town population** – est. 4.7 million
- **Public Transport Network, Modes and Services**
 - **Rail** (backbone) – failing
 - **Scheduled Bus** – Government subsidy
 - **MyCiTi BRT** – City contracted, Grant funded
 - **Minibus-Taxi** – (+/- 12,000 legal and +/- 5,000 illegal) informal and unsubsidised
 - **Metered Taxis** – declining
 - **E-hailing services** – licensed and unlicensed
 - **Sedan Taxis** (Amaphelas) – very few licensed



Definitions

What is **TRANSITION** vs **TRANSFORMATION** in the Cape Town Minibus-Taxi context?

Transition

- Replacing existing MBT operators and establish MyCiTi bus operators, e.g. MyCiTi Phase 1
 - VOC formation
 - Compensation / Shareholding



Transformation

- Transforming the broader MBT industry to give effect to legislative provisions
 - Improved passenger experiences
 - Empowerment
 - Capacity Building strategies



Industry Transition & Transformation Objectives

Transition

- To facilitate the **establishment of VOCs** that will operate the **MyCiTi services** and that will **create economic opportunities** for minibus-taxi operators in whose area MyCiTi will be implemented.

Transformation

- To create a mechanism through which the **economic empowerment** can be facilitated, viz. **establishment of Transport Operating Companies (TOCs)** – NLTA - S41 (1) (b)
“promoting the economic empowerment of small business or of persons previously disadvantaged by unfair discrimination”
- To facilitate broader **capacity building strategies** that can achieve **management and technical capacity** through which the minibus-taxi industry can provide **improved passenger experiences**.

LESSONS LEARNT



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LESSONS LEARNT

Not always desirable to replace ALL minibus-taxis with MyCiTi buses, especially on feeders routes

1. Minibus-taxis can offer more frequent and flexible services
2. Understanding user preference
3. Not cost effective for MyCiTi to offer the same services
4. Enforcement challenges



LESSONS LEARNT

ALSO **Limited funding availability**

Need to consider a combination of minibus-taxi and MyCiTi services on feeders routes



..., BUT TRANSFORMATION IS REQUIRED!



- Bad taxi driver behaviour
- Negative passenger experiences

- Overcrowding
- Poor quality vehicles
- Unmanaged PTIs



LESSONS LEARNT

WHAT IF TAXIS CAN OFFER?

- Recapitalised vehicles
- Driver training and accreditation
- Reduced pressure on limited enforcement capacity
- Right-sized vehicles dispatched based on demand
- Capacity to manage PTIs
- MyCiTi branding (same look and feel)



Transport Operating Companies (TOC)

How the TOC project came about?

Influencing Factors

- The experience gained in planning and implementing BRT Phase 1 and N2 Express has allowed us to learn many valuable lessons
- Need to apply these lessons in the planning and implementation of Phase 2 notwithstanding the peculiar challenges
- Funding parameters and constraints



Four Categories of TOCs

- 1) Performing **Feeder** Services in Phase 2A area
- 2) In the MyCiTi Phase 2A area, but **not part of the feeder network**
- 3) In the **MyCiTi Phase 1** area, where demand for MBT increased after MyCiTi
- 4) MBTs **outside** the Phase 1 & 2 areas



Approach towards Transformation

Interchange Management Entity (IME)

- For **remaining MBT services**, a formal entity to contract with the City for :
 - **Public Transport Interchange (PTI) management**
 - **Cleaning services**
 - **Security and Access control**



Benefits of TOCs

- **Better able to deal with the concern of passengers**
 - Safety from accidents
 - Behaviour of the drivers towards passengers
 - Overcrowding
 - Roadworthiness
- **Better opportunities for the operator**
 - Potentially more profitable
 - Opportunity for new business
 - Positioned to enter into contracts
 - Positioned to receive subsidy



BUSINESS IMPROVEMENTS – 7th Avenue Test

Moving to a scheduled service

- a) Reduce fleet requirements from 78 to 37 (+ 3 spare)
- b) Continue to employ all the drivers
- c) Drivers working on shifts with 1 day off per week
- d) Drivers' salary on par with what they earned before
- e) Number of routes increased/amended to better meet passengers' needs



BUSINESS PLAN

Overview of the 7th avenue MBT business plan
based on the scheduled service introduced on a
trial basis on 10 January 2019

1 year / 3 year / 6 year / 8 year /.... 16 year

B U S I N E S S P L A N

Fleet replacement /renewal

Current fleet = 78 vehicles

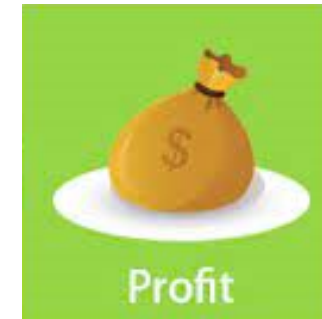
Required fleet = 37 + 3 spare = 40 vehicles

YEARS

	Current	1	2	3	4	5	6	7	8
Old veh sold	0	46	8	8	8	8	0	0	0
Old vehs in use	78	32	24	16	8	0	0	0	0
Additional New vehs	0	8	8	8	8	8	0	0	0
Total New vehs	0	8	16	24	32	40	40	40	40
Total vehs in use	78	40	40	40	40	40	40	40	40

BUSINESS PLAN SUMMARY

- a) 8 and 16 Year financial plan shows that the operating cost can be covered by the revenue generated from fares
- b) This would allow the current license holders (TOC shareholders) to earn, on average, the same profit they are earning now
- c) The plan shows that the TOC will require financial assistance with the once of set-up costs as well as with the capitalisation of the new fleet



SCALABILITY

How replicable is this
TOC model to other
associations in the City?

102 associations

Scalability / Replicability

- Projections were made from **existing available data**.
- Looked at **feeder** and **line-haul** associations
- Desktop analyses show that TOC viability can be obtained by approx. **30%** assoc. (30/102)
- However, key is **appetite**, **willingness** and **structure** of taxi associations and members.

SUMMARY

1. Efficiency measures introduced (scheduled services) showed good improvement for both the drivers, owners and **more importantly** the passengers
2. The 8-year business plan for the 7th Ave pilot showed these improvements can be sustained provided assistance is obtained with set-up costs and **recapitalisation** of the fleet
3. The results of this pilot can potentially be applied to **25-30%** of the associations in the City

FURTHER WORK

1. Other TOCs need to be implemented to confirm the extent to which the TOC model **replicated** and the extent to which **government support** is required to roll out the model
2. 7th Avenue Pilot needs to proceed to the **next step of forming the TOC** and transferring the operating licenses and vehicles to the TOC.
3. Need to assess how a scheduled service rendered by a TOC can be **integrated into the IRT Phase 2 system plan.**

A Case for implementation of TOC Model

GOVERNMENT

- Urgent need for a minibus-taxi improvement intervention
- City invested much in terms of our Transition and Transformation strategies
- Implementation on MyCiTi Phase 1 showed that initiatives have the potential to reduce taxi violence and conflict.

MBT INDUSTRY

- Need for government financial support
- Tired of taxi violence and conflict / Willingness to comply
- “Red Dot and Blue Dot” showed to an extent that there is formalisation potential



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Thank You

For queries contact: reggie.springleer@capetown.gov.za

Making progress possible. Together.

Q&A

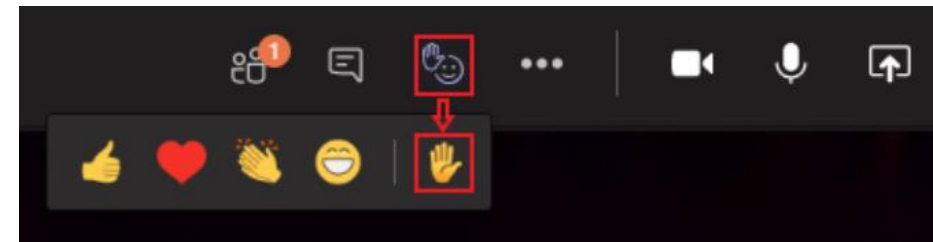
Chat

- Pose your questions in the chat and we will include them in the Q&A



Speak

- Select “Show reactions” in the meeting controls, and then choose “Raise your hand”. Everyone in the meeting will see that you've got your hand up.



Breakout groups: put together a project on paratransit for city x using the catalogue of measures

Dear participants, we will now have a group discussion. You will be automatically redirected to the breakout groups. The moderator of the group will share the activity and guide you through the sequence.



Thank you for your attention!

Keep in touch



Mobiliseyourcity.net



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On behalf of:

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