

# Getting to know your potential

Conduct a financial assessment of your city

## Objectives of the session

- Understand the main concepts related to funding and financing of urban transport
- Identify the main sources of funding available for urban transport
- Understand how local governments can make effective use of their resources
- Understand the difference between public transport and paratransit business models

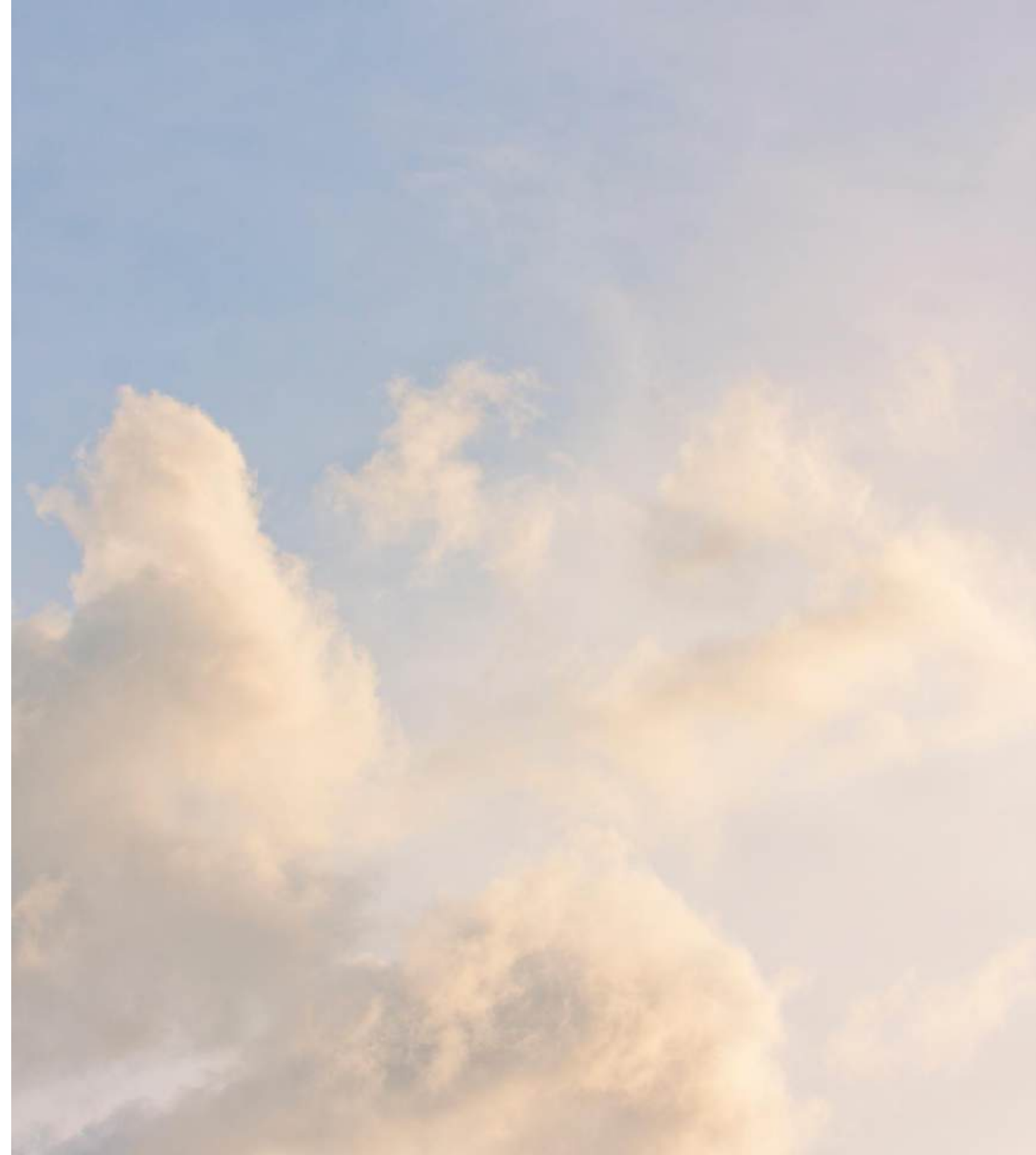
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# Poll

# Poll: Do you know how transport is financed in your city?

1. I don't know
2. Mainly public funds
3. Mainly private sector

**Write your answers in the chat! 😊**



# Understanding the basics of funding and financing in urban transport

Importance of financing sustainable transport and barriers

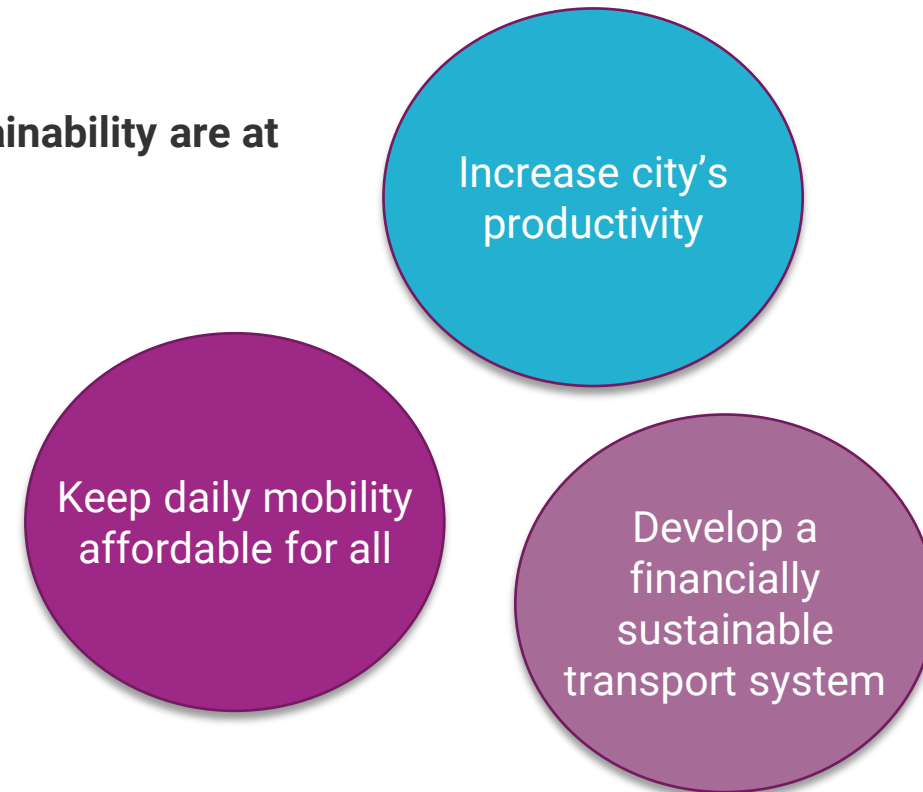
Difference between funding and financing

Assessment of financial flows

# Why financing sustainable urban transport is key?

The different objectives behind financial sustainability are at three levels:

- the city,
- the urban transport system
- and the households.



# Why financing sustainable urban transport is key?

But most of the time the situation is totally different



Heavy Congestion  
reduces the potential  
interactions

Daily mobility is very  
expensive, especially  
for low-income  
people

Transport system is  
profitable just for  
specific stakeholders



# What is the common situation in many cities?

**Financial resources for transport exist, but usually, they are not efficiently allocated.**

- Lack of financial resources for sustainable urban transport solutions in developing cities
- A large number of resources are used on costly options (urban highways, flyovers, ring roads, etc.)
- Corruption occurs especially on non-relevant projects
- High mobility costs for urban dwellers, especially the poorest
- Low efficiency of the mobility system reduces the productivity of the city
- Low capacity to raise funds for urban transport
- Governments have a system to get returns from urban transport (tax on fuel, on car imports, on paratransit, etc.) BUT these are not allocated to improve the system.



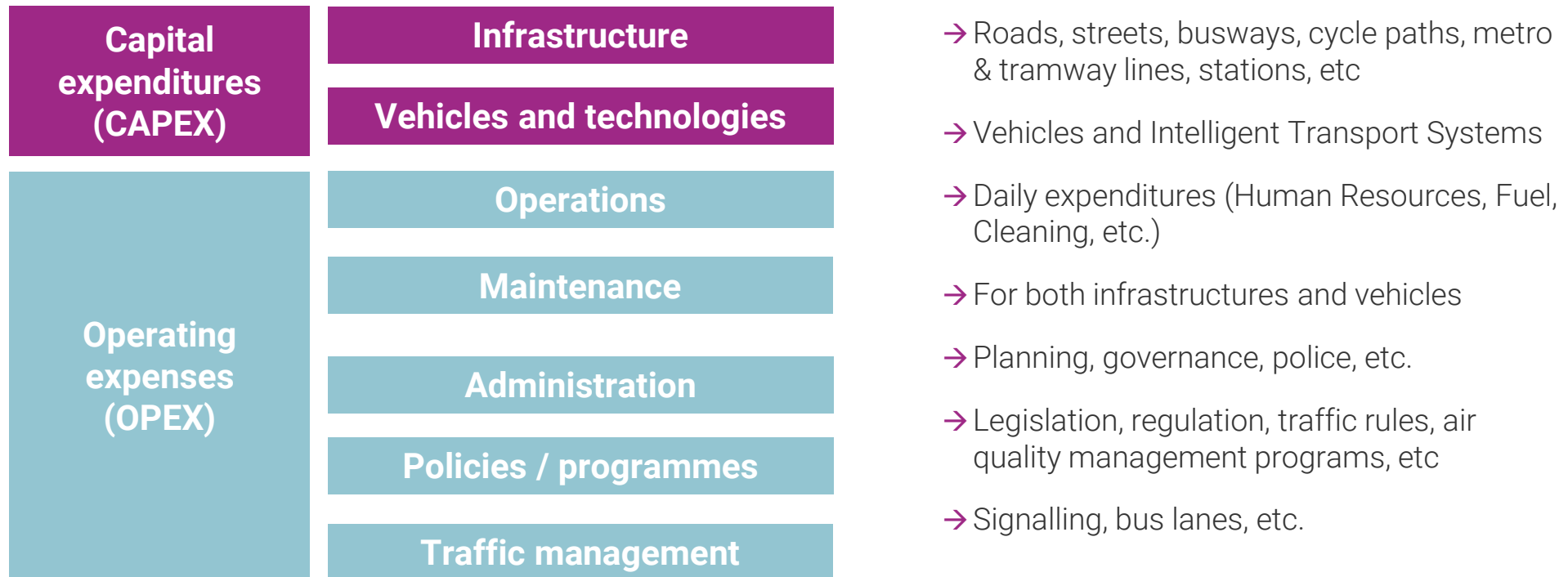
# What are the main barriers for funding sustainable mobility ?

**The dominant car system generates car dependency, which tends to be Business as Usual for decision-makers**

- **Income growth means motorization process!** due to economic growth, households equip themselves with 2-wheelers or cars very quickly (2-wheelers and car fleet sometimes grow at 15-20%). If Governments don't anticipate this trend, they respond with inadequate solutions...
- **Traffic growth generates more car-oriented road infrastructure!** Most of the time, decision-makers want to fix traffic issues and not mobility, with large infrastructure giving priority to motorized transport
- **Urban mobility costs are not what users pay!** Fuel and vehicle prices do not reflect the real costs of transport activities (externalities); but governments are reluctant to subsidize public transport
- **Everybody (or no one) governs urban mobility!** Metropolitan Governance is usually weak and transport projects are often led by different institutions with no coordination. The financial efficiency of such an institutional setup is low...
- **"But no one wants to pay for mobility !"** Public acceptance of taxes is of course low... but earmarked financing instruments could bring more transparency and better planning.

# What needs to be financed?

Two main aspects and many different elements need to be financed within a sustainable urban transport system... and the most expensive is not the one you think of first!



# What is the difference between funding and financing urban transport ?

Financing	vs	Funding
<p><i>“Financing means to mobilize financial resources to cover upfront investments for the construction of infrastructure, the procurement of vehicles and works, or the provision of services”.*</i></p> <p>Who finances a project means who, at the outset, raises the cash to build it.</p> <p>→ Way of financing are:</p> <ul style="list-style-type: none"><li>▪ public budgets;</li><li>▪ debt financing from development banks, private banks;</li><li>▪ Debt financing from investors, notably through PPP.</li></ul>		<p><i>“Funding relates to sourcing financial resources to (re-)pay the upfront and on-going expenditures over the lifecycle”.*</i></p> <p>Who funds a project is a question of who ultimately pays for it over the long term; is it the user/customer, the local, national or another taxpayer?</p> <p>→ Cash flows can be extracted:</p> <ul style="list-style-type: none"><li>• From direct beneficiaries: fees from users</li><li>• From indirect beneficiaries: land value capture</li><li>• From tax-payers through financial transfers from the general budget or other tiers of government.</li></ul>

\* ELTIS(2019) Funding and financing of Sustainable Urban Mobility Measures

# Who pays for what in transportation?

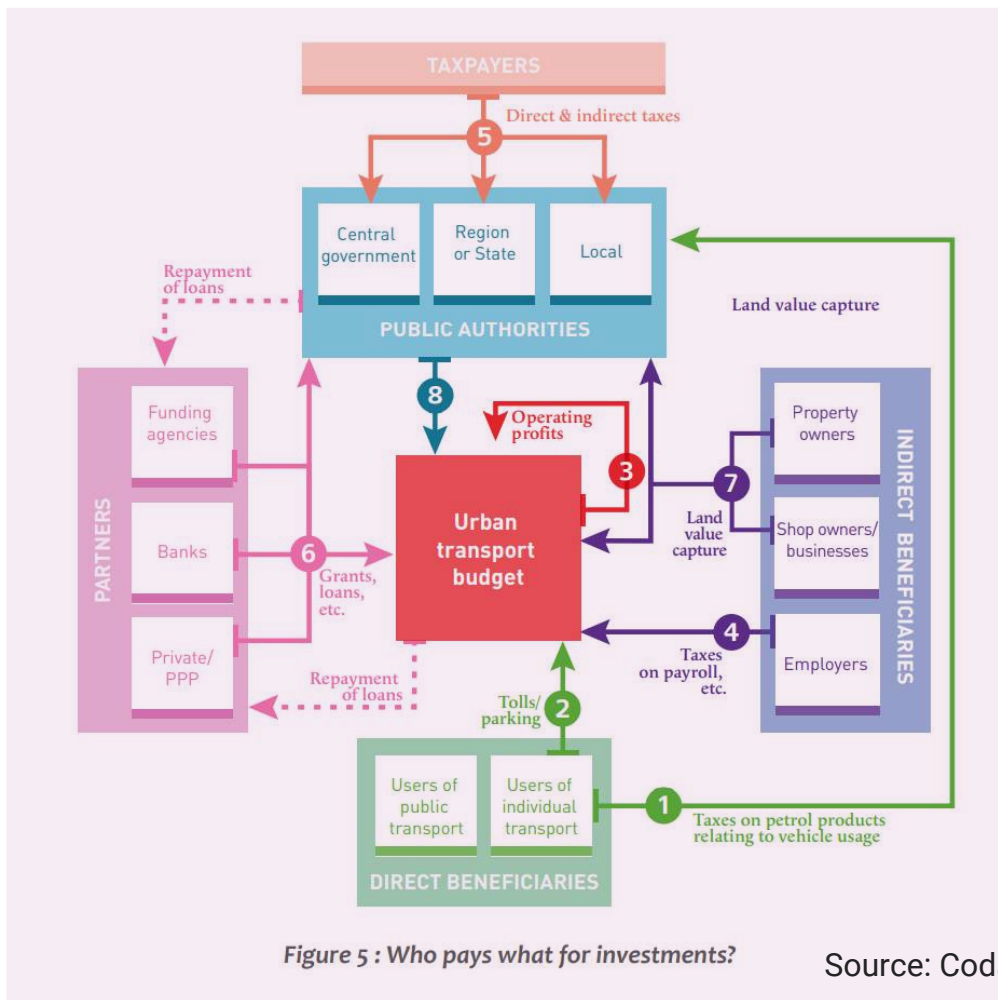
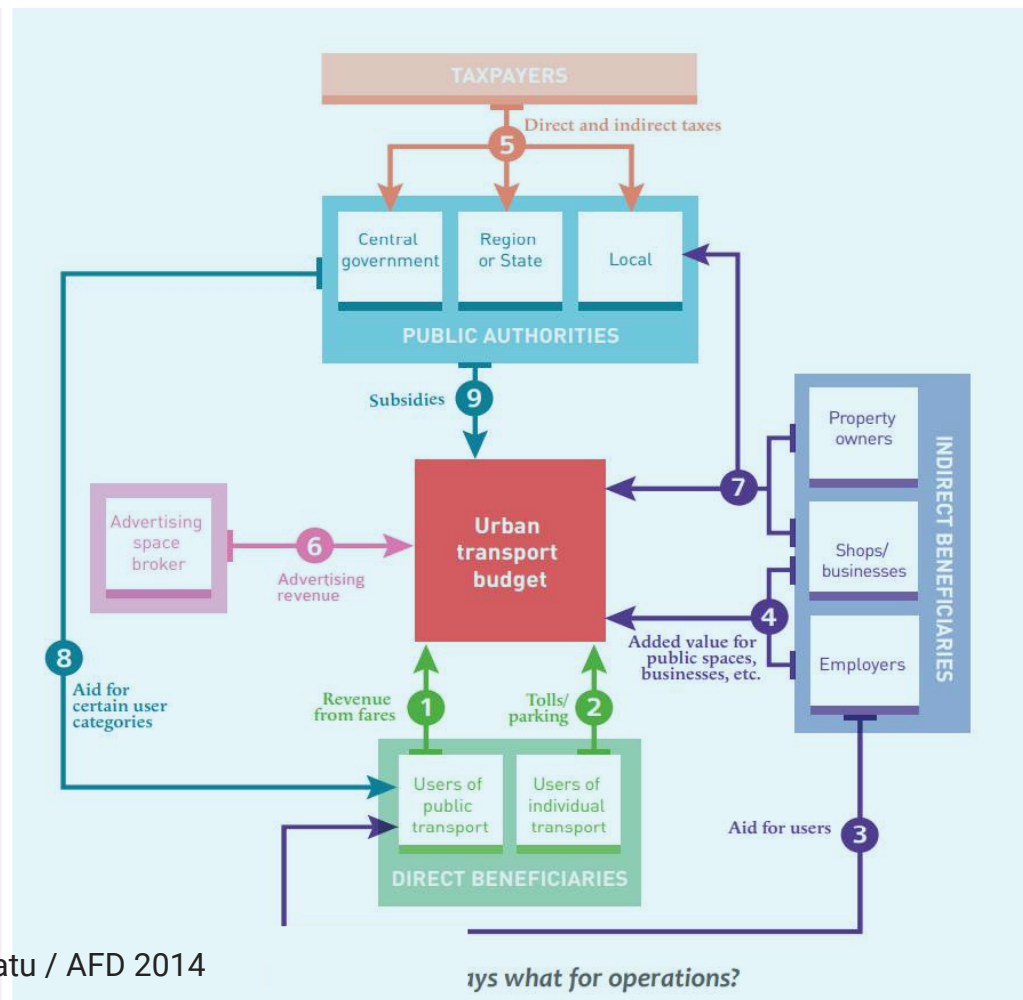


Figure 5 : Who pays what for investments?

Source: Codatu / AFD 2014



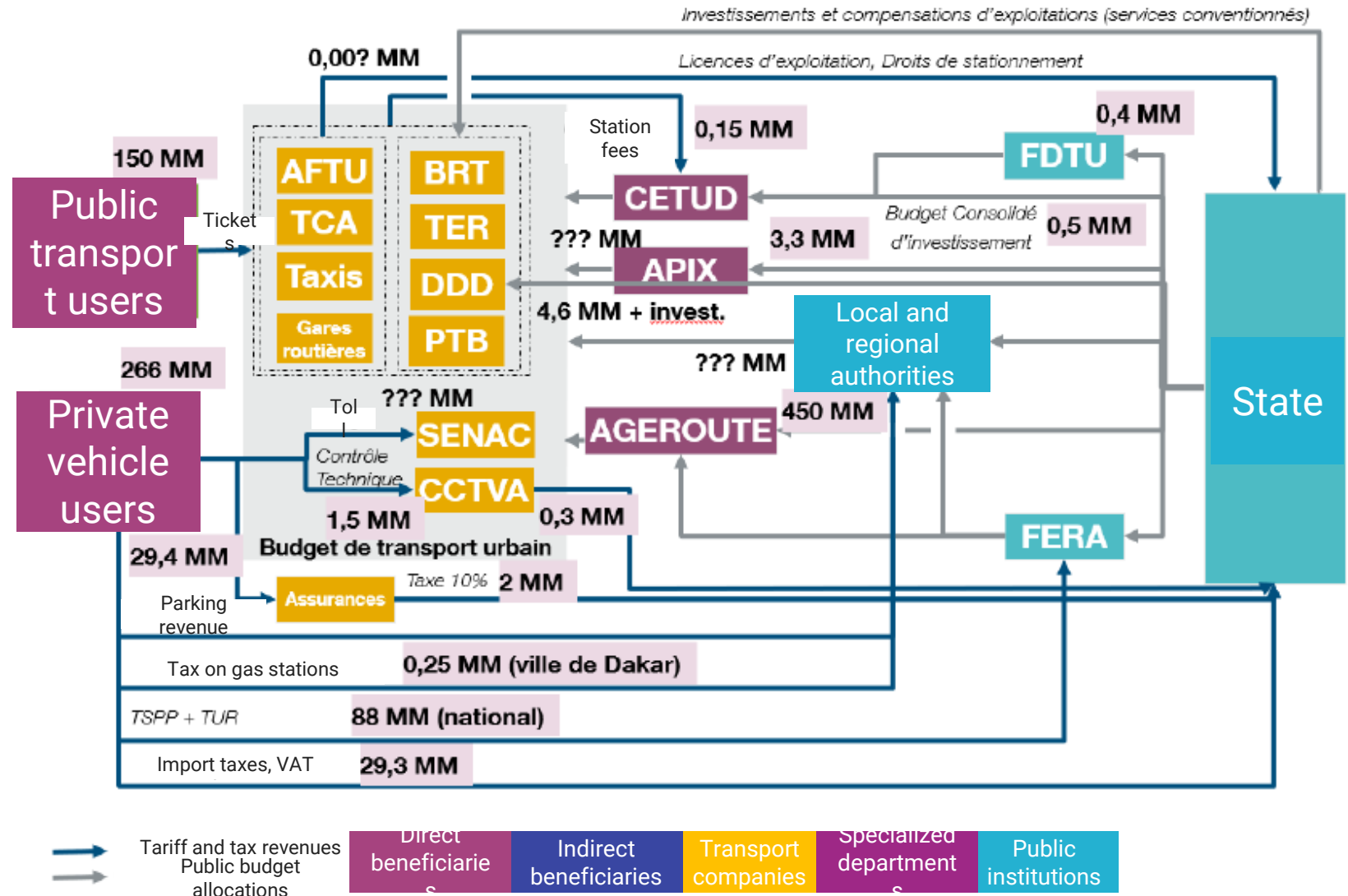
Who pays what for operations?

# Dakar: assessment of financial flows for urban mobility

The capital city of Senegal benefits from the existence of a Transport Authority (CETUD); but financial flows are quite complex



# Dakar: what are the financial flows for urban mobility?



Financial flows scheme of the urban mobility in Dakar

# Dakar: mobility economy

- Households and companies spend much of their budget in operational expenses:
  - Public Transport fares (1st)
  - Fuel, etc.
- About a third of car users' expenses goes to the national budget (tax on fuel and import tax)
- Government invests mainly in road infrastructure
- The annual budget spent by households and companies represents more than twice of the budget spent by the government

		CFA (billions)	Households & companies	Public Budget
<b>CAPEX</b>			<b>70</b>	<b>191</b>
Public Transport	BRT			57
	Express train			25
	Rolling stock (buses)			5
	Scrapping premium			1
Individual Transport	Road infrastructures			104
	Vehicle Purchasing		70	
<b>OPEX</b>			<b>406</b>	<b>10</b>
Public Transport	Users		150	
	Subsidies to public operators			5
Individual Transport	Road Maintenance			5
	Fuel, vehicle maintenance, parking, etc.		236	
	Insurance		20	
<b>TOTAL ANNUAL BUDGET (2015)</b>			<b>476</b>	<b>201</b>

# Dakar: cost of mobility

- The poorest spend a large part of their budget for their daily mobility.
- At the end of the 1990s, externalities represented 4,5% of national GDP.

→ Monthly expenses of households (2015)

Source : EMTSUD 2015	Revenus	Dépenses	Taux d'effort (%)
1 <sup>er</sup> quintile	73 488	24 737	33,7 %
2 <sup>ème</sup> quintile	191 520	26 961	14,1 %
3 <sup>ème</sup> quintile	275 369	37 776	13,7 %
4 <sup>ème</sup> quintile	397 476	50 231	12,6 %
5 <sup>ème</sup> quintile	1 037 695	98 920	9,5 %
<b>Moyenne de l'ensemble des ménages</b>	<b>394 551</b>	<b>45 894</b>	<b>11,6 %</b>

→ Cost of externalities (1998)

Type de dysfonctionnement	Nombre	Coût unitaire (FCFA)	Coût total (milliards CFA)	% du PNB
Accidents	1 053	7 400 000	2,0	0,1
Congestion	224 400 000	185	41,4	1,7
Pollution	2 100 000	30 000	63,0	2,7
<b>total des coûts</b>			<b>108,5</b>	<b>4,5</b>

Source : TRACTBEL, 1998



# Main sources of funding and financing

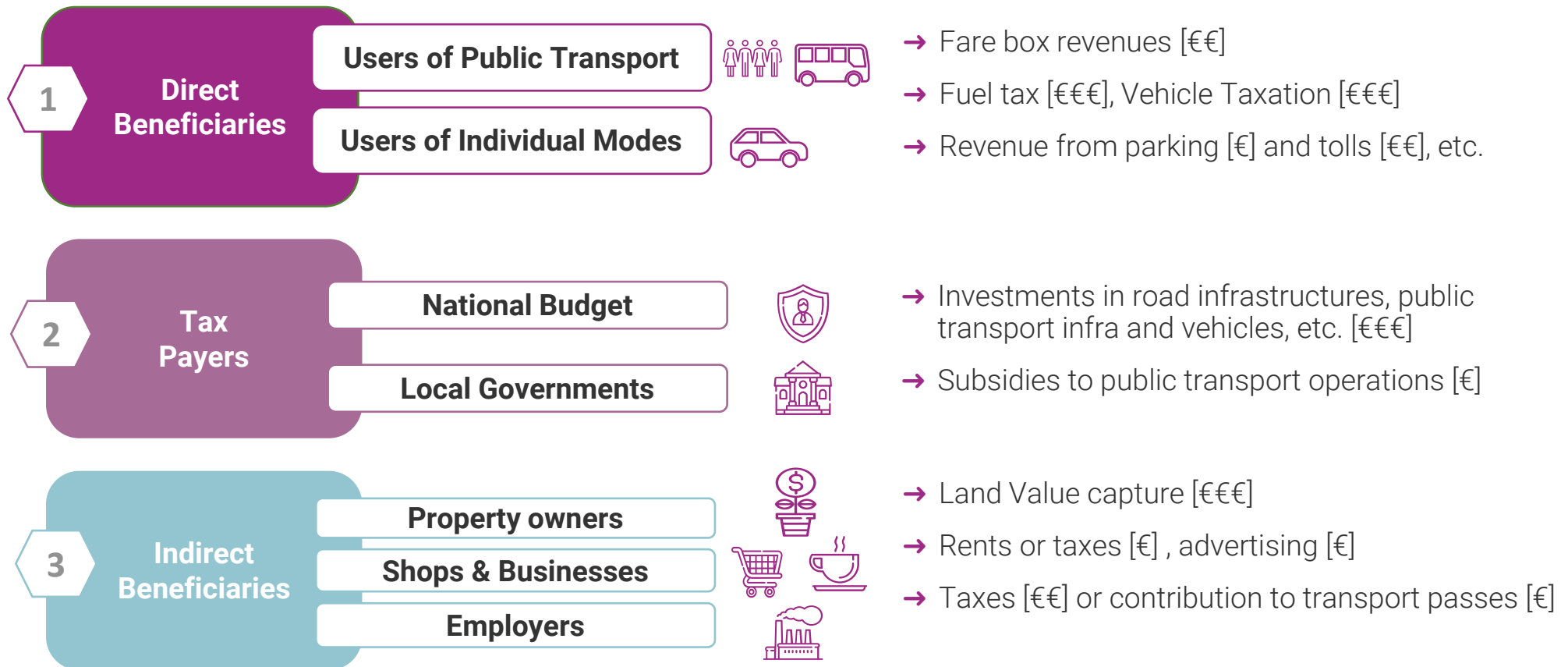
Sources of funding and financing

Financial instruments for mobilisation

How to develop financial scheme

# Who can contribute to urban transport financing?

There are 3 kind of contributors to the “urban transport budget”. All the flows have to be considered in order to assess the financial capacity of the city.



# How much financial instruments can be mobilised?

Level of implementation	Instrument	Support for sustainable transport objectives			Support for financial sustainability		
		Efficiency	Equity*	Environment*	Stability	Political acceptability	Administrative ease
Local	Parking charges	+++	+++	++	++	+	+
	Road pricing/congestion charge	+++	+++	+++	++	+	+
	Employer contributions	++	++	++	+++	++	++
	Fare box revenues	++	++	++	++	++	+
	Public transport subsidies	+	++	+	+	+++	+
	Land development/land value taxes	++	++	++	++	++	+
	Public Private Partnerships	++	+	+	++	++	+
	Advertising	+	+	+	+++	+++	++
National	Fuel taxes/surcharges	+++	+++	+++	+++	+	+++
	Vehicle related taxes and charges, including auctioning of quotas	++	+++	+++	++	+	++
	Loans and grants	++	++	++	+++	+++	++
Global	CDM	+	+	+++	+	+++	+
	GEF	+	+	+++	+	++	+
	Multilateral/bilateral climate funds	+	+	+++	+	++	++

\*Note: Effects on equity and the environment vary depending on how the revenue is used. Here we only consider the first-hand effects – i.e. those which arise through the collection of the revenue and not the usage thereof.

## Advantages and disadvantages of the different potential financial instruments

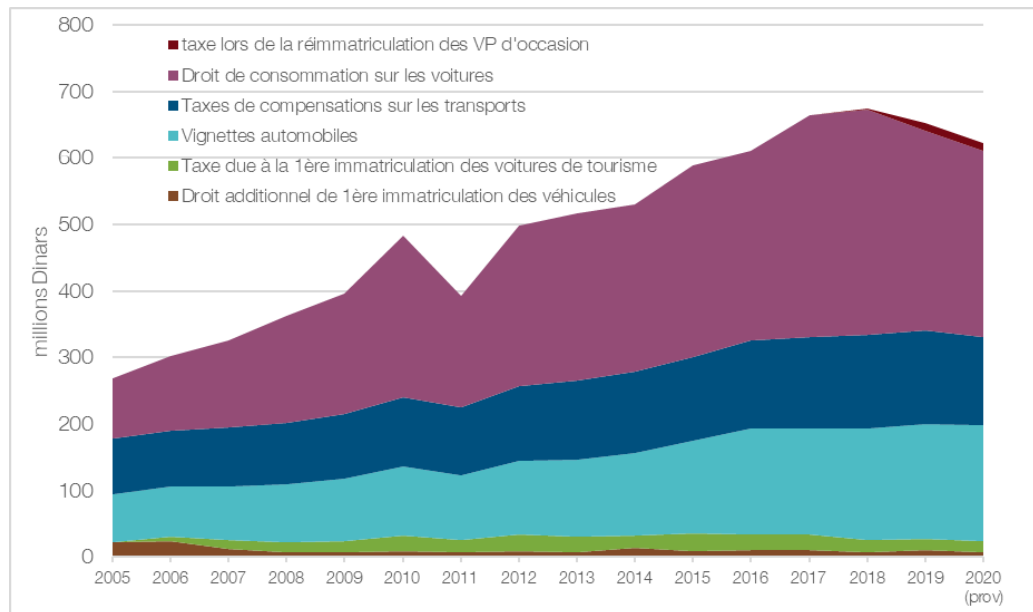
- Some measures are crucial in a multimodal approach: parking charges, road pricing, etc. seek to discourage car use while funding alternative modes.
- Some measures are only available at the national level and the main challenge is to earmark fiscal instruments toward urban mobility
- Financing measures or projects by loans/PPP do not solve the funding issue... it is sometimes just a way to avoid political debate or to hide the real costs.
- Political acceptability could be low for radical changes and it is important to include a communication plan when applying new taxes, increase fares, etc.

# Tunisia: Creation of a National Urban Mobility Fund



# Tunisia: How to develop sustainable financial scheme for urban mobility ?

At the national level, the creation of a National Urban Mobility Fund has been studied. Different resources have been considered



## Urban mobility: a financial black hole

- Between 2010 and 2014, 1,25 M€ has been spent in fuel subsidies
- More than 100 M€ are spent per year for urban roads.
- About 200 M€ per year are spent to subsidize public transport companies which have very low fares and low efficiency.

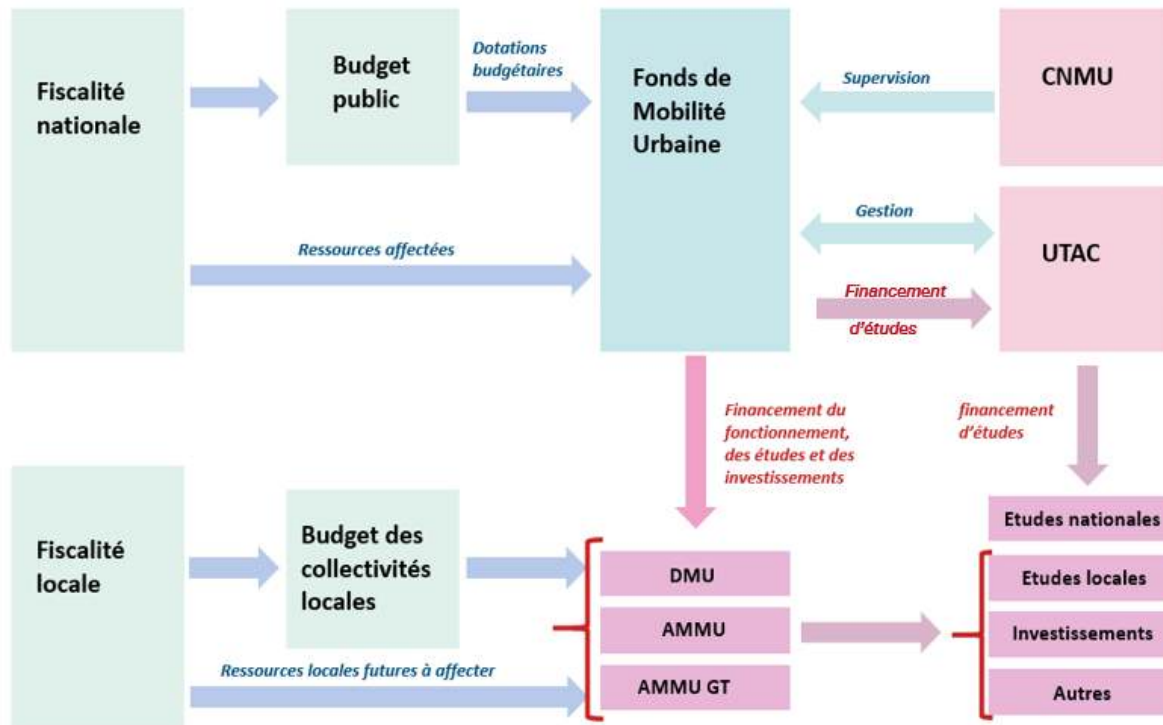
## Substantial revenues from transport

- Tax on road transport
- Tax on car use (*taxe sur la circulation*)
- Vehicle Consumption right (tax on vehicle imports)
- Tax on 1st registration

At the national level, these tax revenues represent 200 M€/year.

# How to develop sustainable financial scheme for urban mobility ?

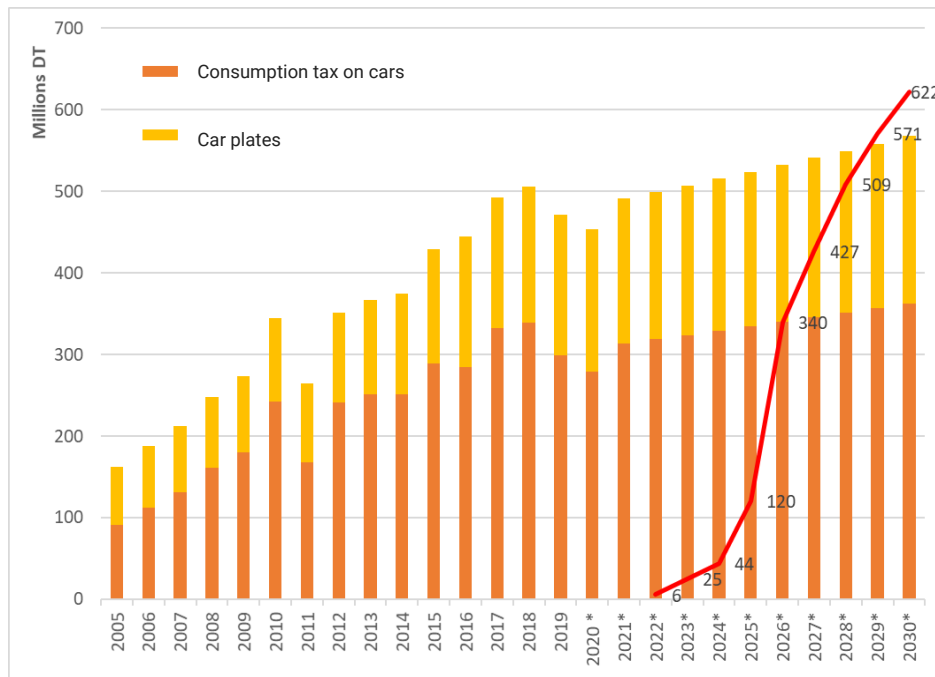
The creation of a National Urban Mobility Fund is linked to a larger reform to boost urban mobility policies at the local level



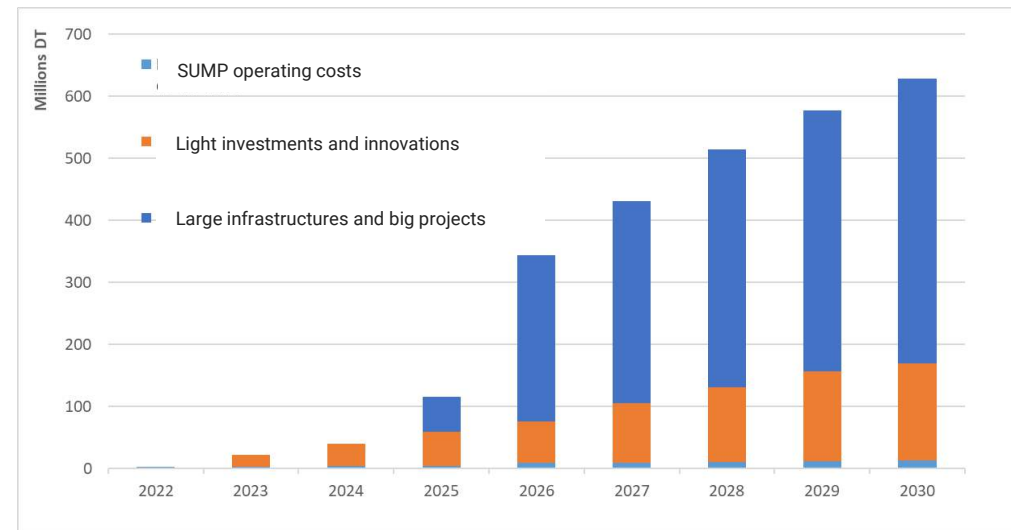
- A National Commission as a steering committee
- A Technical Unit to assist the ministry of transport in the implementation of the reform
- A Fund to finance activities
- Metropolitan Transport Authorities at the local level to decide the urban mobility strategies.
- Would it be possible to earmark fiscal sources?

# How to develop sustainable financial scheme for urban mobility ?

The objective of the National Urban Mobility Fund is to switch after 3 years from an initiation phase to a cruising phase



- 1st Phase: NUMF finances OPEX development of National Technical Support Agency + Metropolitan Transport Authority + Qwick Wins with national budget allocation
- 2nd Phase: NUMF finances CAPEX (mass transport project as the MTAs will have detailed investment plan)



# Borrowing capacity and budget allocation

What is borrowing capacity of a city?

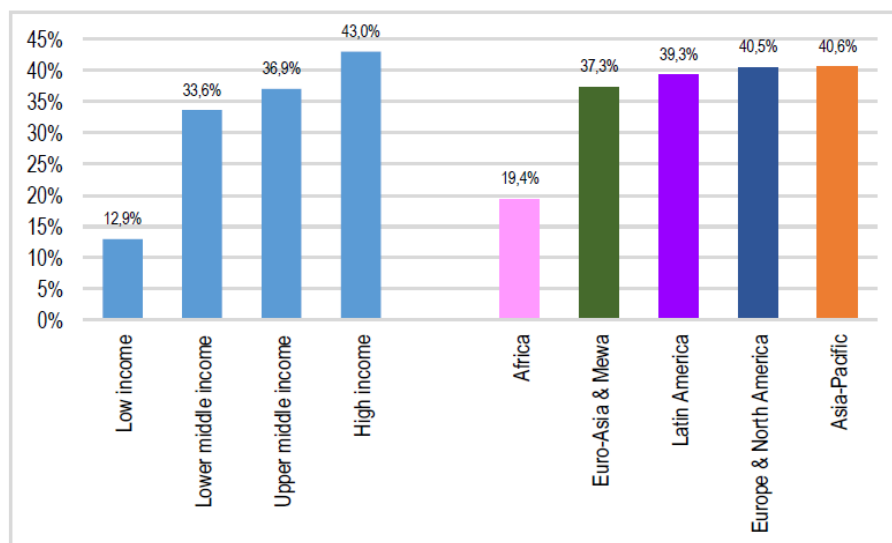
Subnational governments and public investment

Finance and SUMP phases



# How much public investment is led by subnational Governments?

Figure 5.14. Subnational government investment as a share of public investment by income groups and geographical areas (2016)



OECD/UCLG (2019), 2019 Report of the World Observatory on Subnational Government Finance and Investment – Key Findings

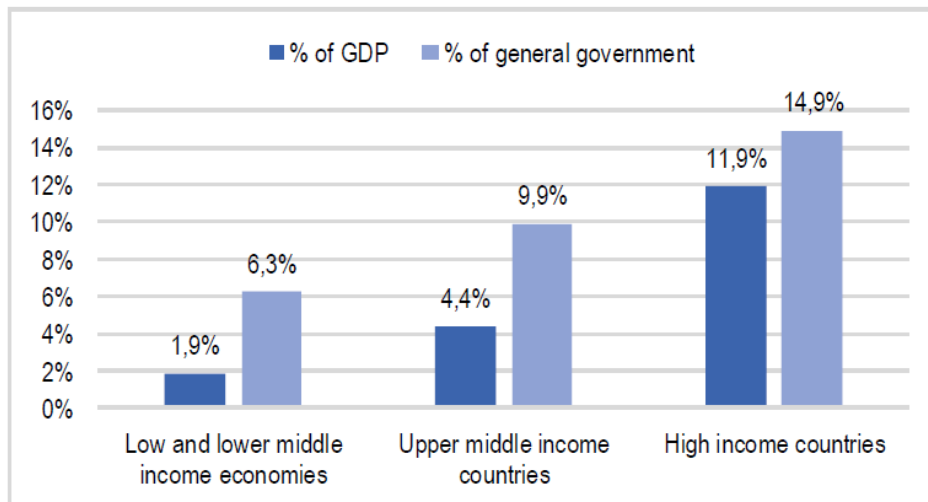
## Subnational governments in low income countries have less responsibility in public investment.

- At the national level, the public investment amounted to **4.0% of GDP** on average (>10% of GDP in Azerbaijan, Bolivia, Malaysia & Rwanda < 1,5% of GDP in Brazil, Portugal, El Salvador & Guatemala)
- Subnational public investment is **1.3% of GDP** around the world on unweighted average (from 0% in Malawi to 7,5% in Bolivia)
- In federal countries, SNG investment in GDP is **higher** (1.7% of GDP) than in unitary countries (1.2% of GDP).

# What is the borrowing capacity of the city?

**Loans can provide local government with access to large amounts of capital that would not otherwise be available:**

**Figure 7.3. Subnational government debt by income country groups as a percentage of GDP and general government debt (2016)**



OECD/UCLG (2019), 2019 Report of the World Observatory on Subnational Government Finance and Investment – Key Findings

**The borrowing ability for urban transport is often restricted by:**

- “golden rule”, a rule that restricts borrowing to finance long-term investment projects
- Legal framework (national governments limit the amount that can be borrowed by local governments without their consent)
- availability of future revenue of the infrastructure

# How Development Finance Institutions could support ?

**Multilateral banks and bilateral public aid help to fund investments in transport systems but not in the operating of the systems.**

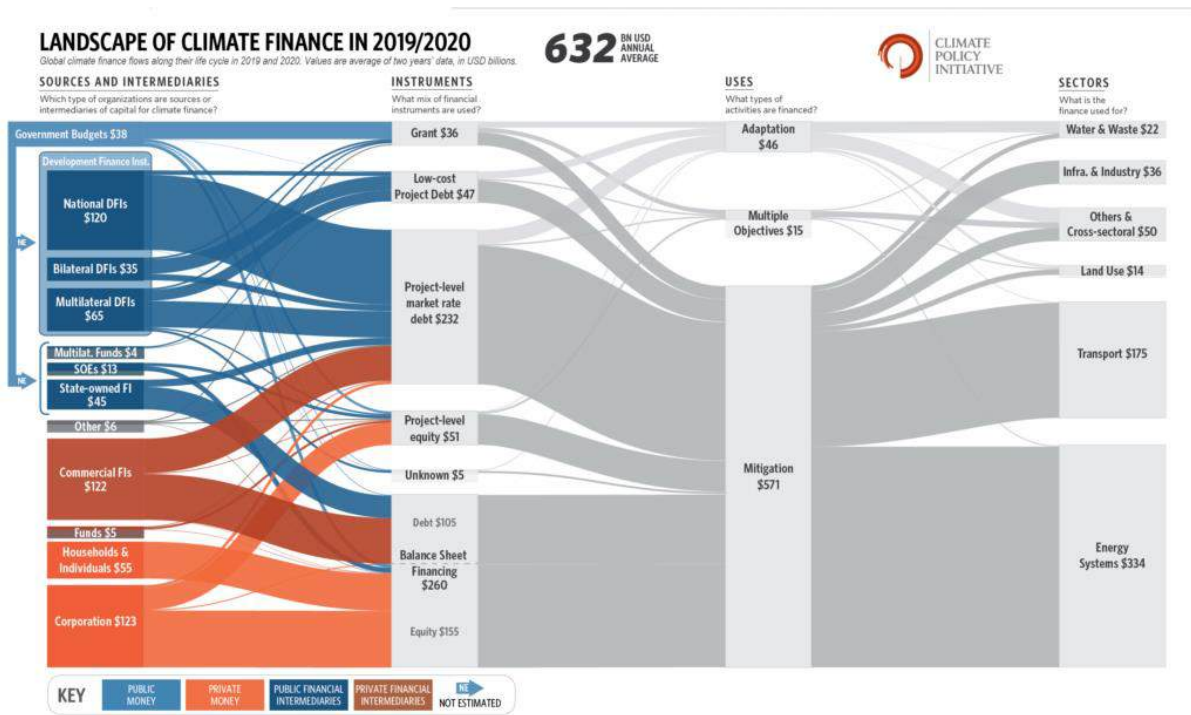
- **Grants** which are very often aimed at studies or to technical assistances (set up a transport authority, training of operators, etc.)
- **Soft loans**, namely, loans with conditions which may be more favorable than bank loans in terms of:
  - duration: very long-term loans of 15, 20 and even 30 years;
  - grace periods given before the first instalment.
  - interest rates - bonus rates which are smaller than those on the banking market (with a rate of 4 % compared to a typical rate of 14 % on the market rate would reduce by nearly 60 % the total cost of the project ;

## **Different options:**

- **Loans to central government:** funding agencies demand guarantees from central governments to lend to cities which do not enjoy complete autonomy in these decisions.
- **Direct loans to local authorities:** few development partners (AFD, IFC, etc.) lend to local governments without any state guarantees.

# How Climate Finance could contribute?

“Climate finance” could become a promising tool for co-funding urban transport projects in developing countries if they contribute to significantly reducing greenhouse gas effects.



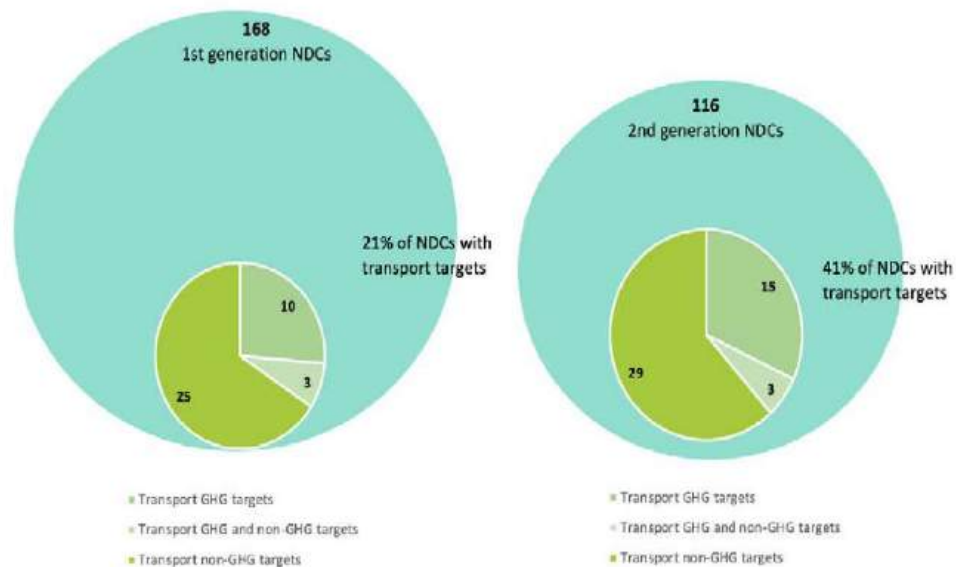
- Large increase compared to 2015 (+ 50%)
- The majority of climate finance –61% (USD 384 billion) –was raised as debt in 2019/2020
- Low carbon transport is the fastest-growing sector, +23% (compared to 2017/2018) due to E-Vehicle development
- Sustainable Transport counts for USD 175 billion in 2019/2020.

**Global Funds:** Global Environment Facility (GEF); Clean Technology Fund (CTF); Green Climate Fund (GCF);  
**Other climate funding agencies:** Clean Energy Financing Partnership Facility (ADB), Fast Start Finance (Japan), International Climate Initiative (Germany), French GEF (France), etc.

Climate Policy Initiative. 2021. “Preview: Global Landscape of Climate Finance 2021.”

# How Climate Finance could contribute?

**Nationally Determined Contributions (NDCs) should be considered as the first way to access climate funds.**



source: slocat.net

- 41% of second-generation NDCs contain transport targets (either transport GHG mitigation targets and/or non-GHG targets for transport).
- But it is mainly on “improved solutions”, decided at the national level.
- “The implementation of transport climate strategies, for example, is largely dependent on action at the local level. However, NDCs do not include enabling frameworks and policies to support cities in improving the sustainability of urban mobility.”
- Local Government should integrate their action plan to NDC in order to make visible their strategies and use the climate agenda as a lever for obtain national and international support.

# Yaoundé: budget allocation during SUMP elaboration process

The capital city of Senegal benefit from the existence of a transport authority (CETUD); but financial flows are quite complex



# Diagnosis : how to make a comprehensive assessment?

**As mentioned earlier, the challenge is to identify the financial flows for urban mobility (who pays what and how?)**

- 1 - Assess the available resources** of the different institutions (both local and national ones) and identify which public institution is responsible for each budget line.
- 2 - Estimate direct financial revenues** (public transport fares and subscriptions, concessions, lease of advertising space, fees for parking etc.) and define the expected degree of cost recovery.
- 3 - Identify potential new resources** that could contribute to urban mobility activities.

An effective financial design for a SUMP builds on current mechanisms, institutions and capabilities

# Yaoundé - Diagnosis: budget allocation during SUMP elaboration process

CUY (milliards FCFA)	2014	2015	2016	2017	2018
<b>1. Investissements de mobilité urbaine</b>					
Construction de voirie (ligne budgétaire 220 150)	1,52	1,05	1,37	4,05	2,85
Equipement et matériel (ligne budgétaire 222 120/150)	0,2	0,15	0,3	0,2	0,15
Par comparaison, total des investissements de la CUY	9,15	8,58	9,64	10,97	10,63
<b>2. Entretien de la voirie</b>					
Compte annexe entretien (ligne budgétaire 610 107)	2,91	3,52	3,70	2,63	4,46
Par comparaison, total du budget de fonctionnement de la CUY	5,18	5,05	11,89	9,85	12,06

Tableau 8 : Budgets de la CUY (en milliards de FCFA)

MINHDU (milliards FCFA)	2015	2016	2017	2018
Budget d'investissement public (BIP)	27,258	38,922	13,978	13,111
Allocation du Fonds Routier	0,755	1,855	1,476	1,953
Total	28,013	40,777	15,454	15,064

- Funds are mainly allocated to road investment
  - 25 billion FCFA for road investment... not enough to cover all needs but rather sizeable compared to benchmarks for similar cities
  - Lack of resources for other expenses: road maintenance (4 billion FCFA yearly on average), traffic management, no public funding for public transport

**Budget analysis conducted as part of the SUMP of Yaoundé (including budget from development partners mainly AFD and WB)**

- 29 billion FCFA available yearly for urban mobility in Yaoundé
- main source of funding: national budget. Other resources: international funding (18%), road maintenance fund.
- most of the funds (92%) is channeled through the state ministries, only 8% by the City ... despite its mandate on urban mobility
- urban mobility represents a large part of the Urban Community of Yaoundé (CUY) budget (but not enough):
  - 20% of CUY CAPEX goes into urban mobility
  - 40% of CUY OPEX goes into urban mobility
  - CUY actual expenses were 23% lower than planned resources in 2016.



# Vision, Goal Setting and Scenarios: how to make scenarios realistic?

Scénario 1	
2025	
Entretien des voiries (5 ans)	25 Mio
<b>Aménagements TC</b>	
Réseau bus	3 lignes TCSP 100 Mio
	2 pôles d'échanges 10 Mio
Minibus	- Mio
Taxis	- Mio
<b>Total</b>	<b>-110 Mio</b>
<b>Aménagements voiries</b>	
Contournement autorouter	60 Mio
Nouvelles voiries	25 Mio
Elargissement voiries existantes	105 Mio
Bitumage axes existants	25 Mio
Aménagements d'intersection	35 Mio
<b>Total</b>	<b>-250 Mio</b>
Total investissements	-360 Mio
2025	
Entretien des voiries (15 ans)	75 Mio
<b>Aménagements TC</b>	
Réseau bus	4 lignes TCSP, 4-5 Lignes principales aménagés 185 Mio
	Lignes rocade 80 Mio
	3 pôles d'échange 25 Mio
Minibus	- Mio
Taxis	- Mio
<b>Total</b>	<b>-270 Mio</b>
<b>Aménagements voiries</b>	
Contournement autorouter	450 Mio
Nouvelles voiries	50 Mio
Elargissement voiries existantes	210 Mio
Bitumage axes existants	50 Mio
Aménagements d'intersection	50 Mio
<b>Total</b>	<b>-810 Mio</b>
Total investissements	-1155 Mio

During the scenario design, to ensure the ability to mobilise funding, it is required to open a dialogue with the various partners to explore the feasibility of alternative financial flows, and relevant changes of regulation framework

## 4- Estimate cost of measures and scenarios (BAU, others):

- Assess the volume of expenditures for CAPEX and OPEX needed for each scenario
- Ensure that such volume is coherent with the ability to mobilize funding for the city.
- Dialogue with local, national and international partners

## 5- Design the alternative scenarios :

- Envisage alternative financial flows (in order to empower a transport authority, to integrate action in a multimodal approach);
- Highlight the potential of new sources of funding to accelerate the implementation of the funds (new fiscal instruments, or loans and grants)
- *Identifying sufficient funding and financial sources is key to ensure sustainable implementation*

# Action plan: how to make it implementable?

**The SUMP should provide descriptions of each action and an integrated package of measures paying attention to technical design, cost, timing, public engagement requirements, anticipated impacts, and potential risks.**

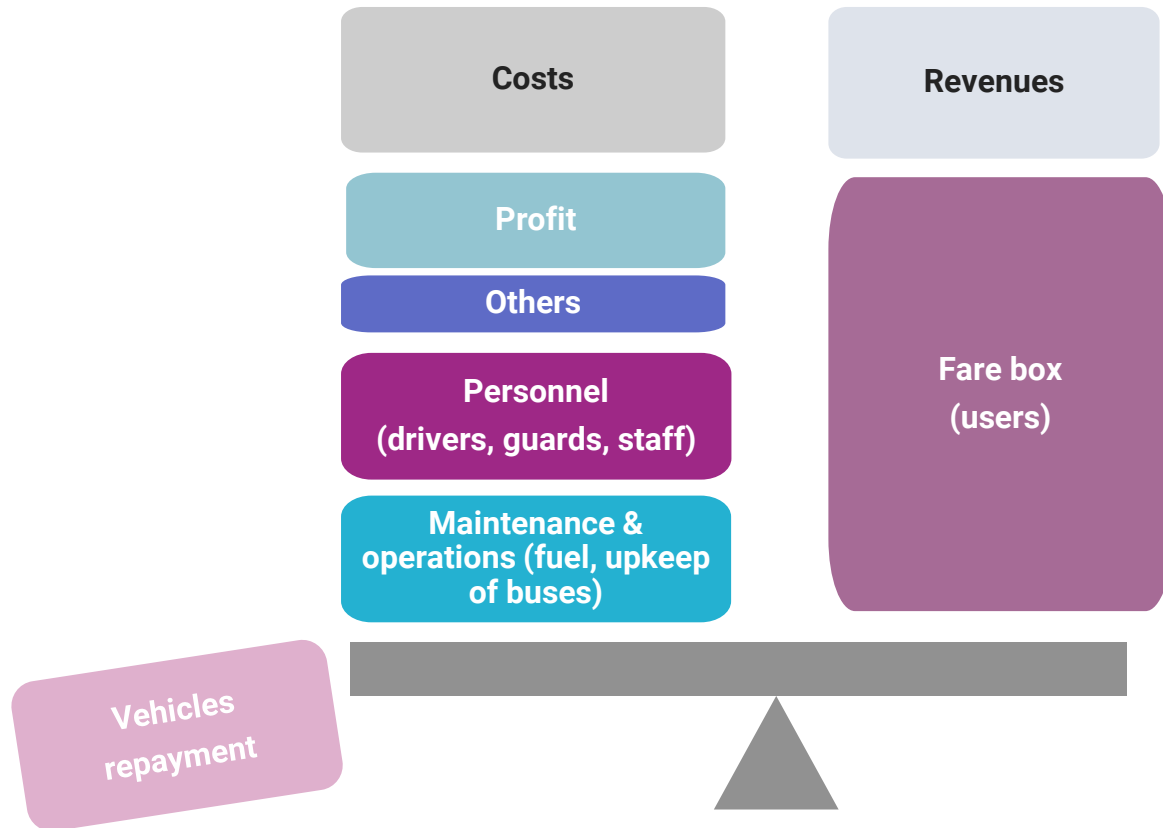
## **6- Establish a clear list of actions (to be implemented, to be studied, to be anticipated)**

- Identification of measures and integrated packages of measures that are financially feasible to implement
- Budgeting and Finance Plan that reflects different budget scenarios and identifies high priority as well as quick-win measures
- Identification of studies that need to be carried out downstream in order to prepare for implementation of the SUMP. These will essentially be feasibility and engineering studies for the selected measures
- Assignment of responsibilities and suggestion of budget allocation to implement measures
- Development of a budgetary framework and financially sound and validated measure action plan that includes a timeline for implementation



# Comparing business models: understand the difference between public transport and paratransit

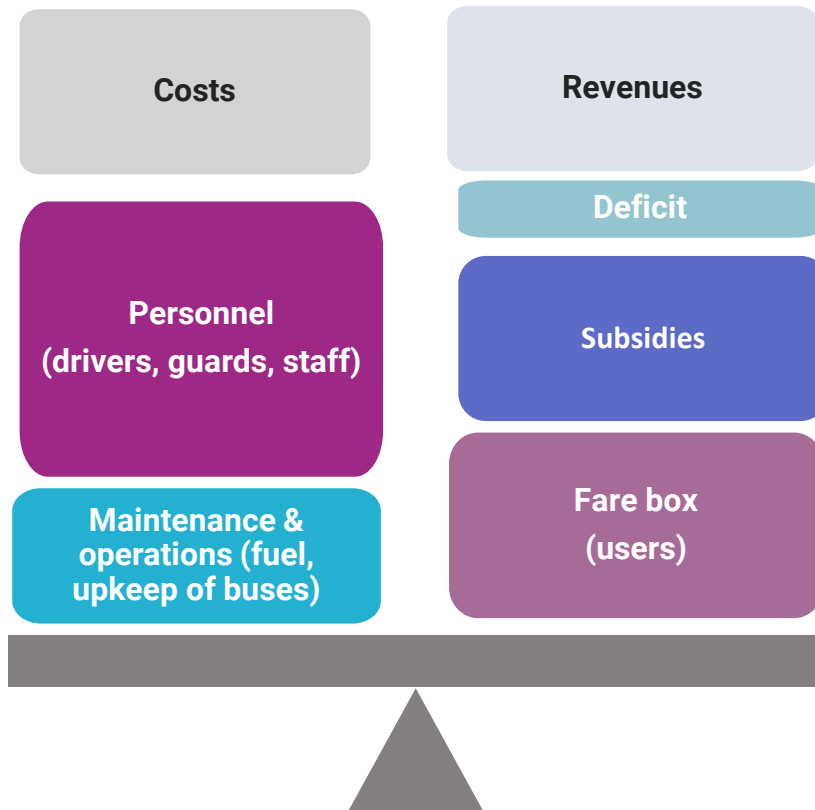
# Public transport: usual business model for paratransit



**In most of the cities, paratransit services are not financially sustainable as they don't envisage vehicle repayment**

- Business model for paratransit is different if the driver owns the vehicle or rents it.
- Most of the time, vehicle owners receive a substantial weekly rent...
- ... but it is not dedicated to vehicle repayment...

# Public transport: usual business model for institutional public transport

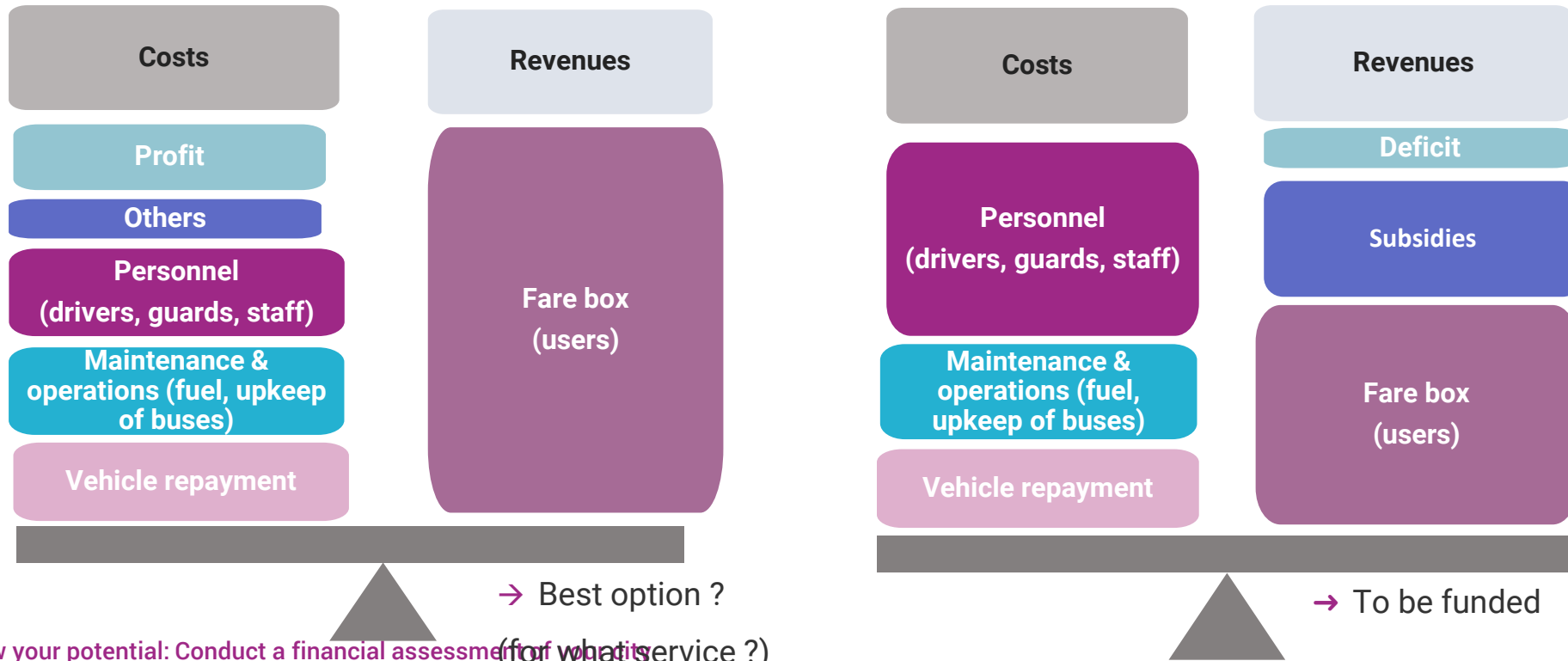


**In most cities in developing countries, institutional public transport – managed by state-owned companies – is also unsustainable ...**

- In many cities, fares are very low and subsidies are necessary to balance the budget
- The subsidies are not sufficient to pay for the total operating costs, and the late transfers weaken the company.
- Vehicle Amortization (or Vehicle repayment) are not effectively considered.
- Sometimes bus fleet are bought by the ministry and there is no clear repayment objectives.

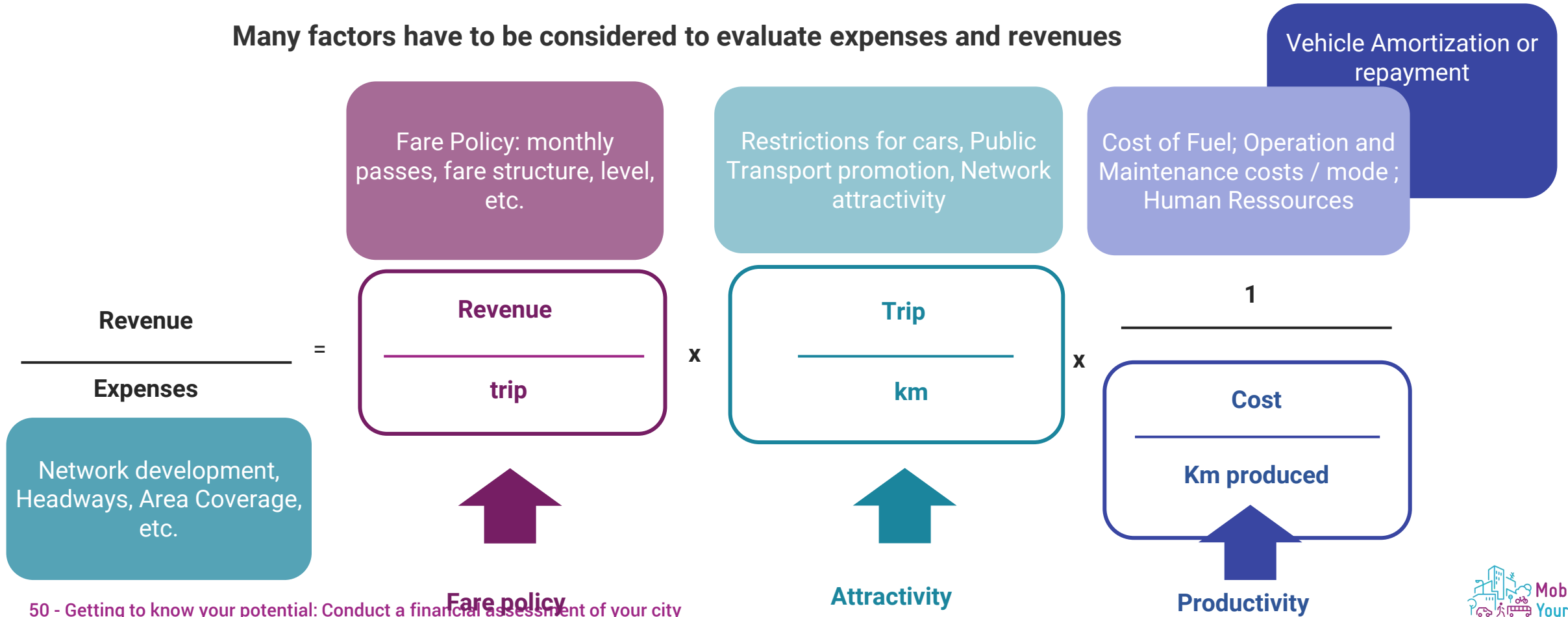
# Public transport: usual business model for institutional public transport

- Depending on various parameters : traffic conditions, fare setting,
- Contract design (net cost or gross cost contract) and contract management would allow sustainability



# The complexity of public transport operation should be considered

Many factors have to be considered to evaluate expenses and revenues





# Conclusions

- Assessment of financial capacities should give the global picture of the urban mobility economy to develop strong arguments in front of Ministry of Finance and other partners
- It should also help to identify the existing sources of funding and financing, and the potential ones
- The creation of a transport fund is recommended to manage earmarked taxes and to secure financial support on the long term
- Consider Nationally Determined Contributions (NDC) as a great opportunity to highlight urban mobility plans and projects
- Making road infrastructure more public transport and active modes oriented is also a way to transfer resources from private vehicles to sustainable ones.

# Thank you for your attention!

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