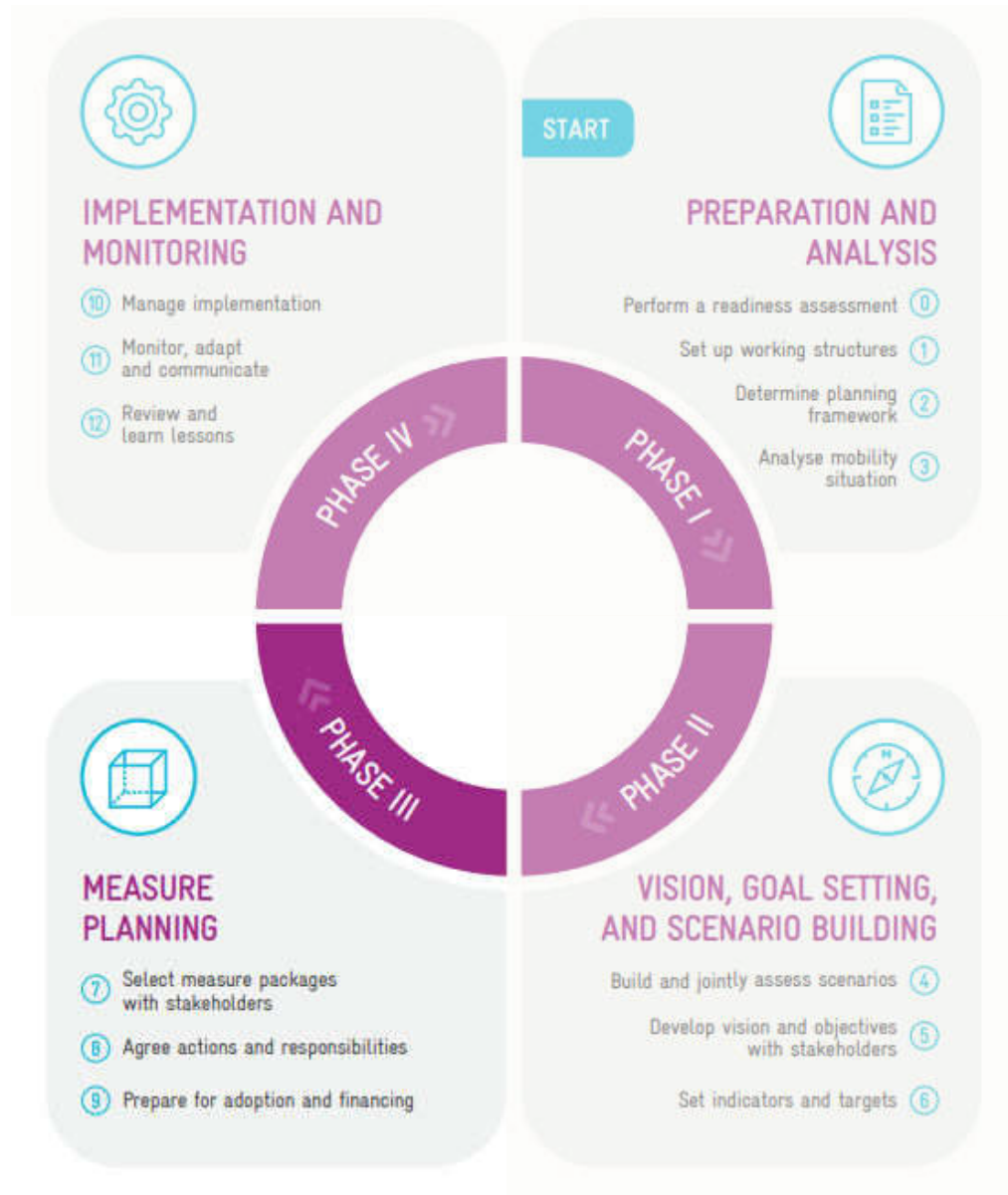


Phase III: Measure Planning

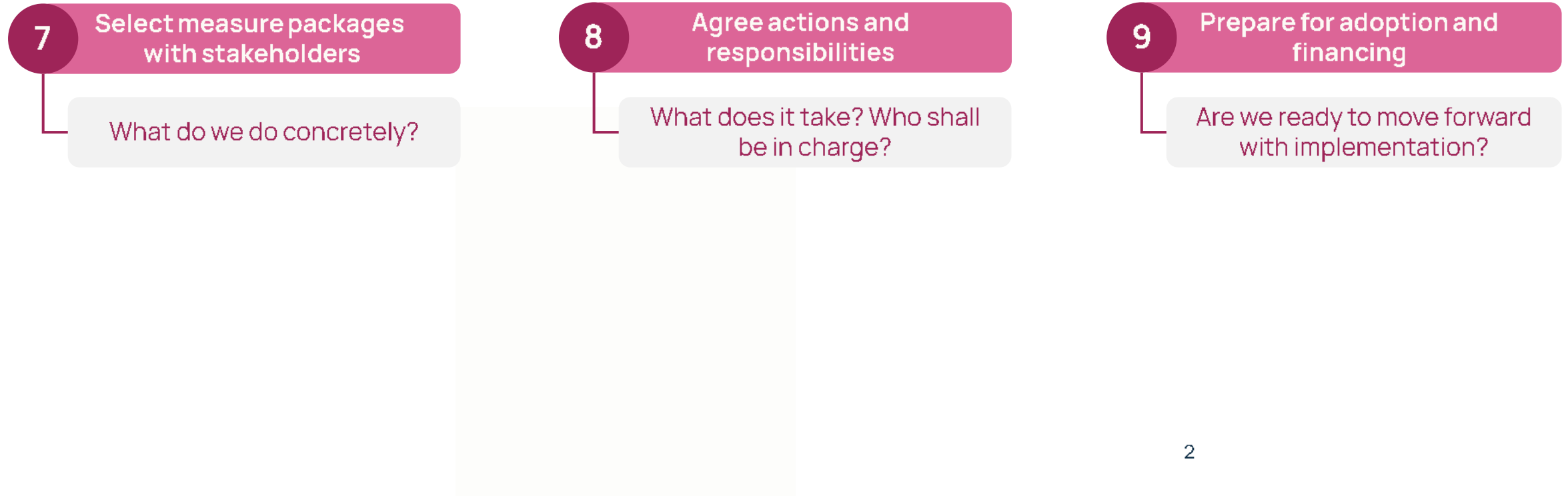
July 2026

SUMP Fundamentals Training

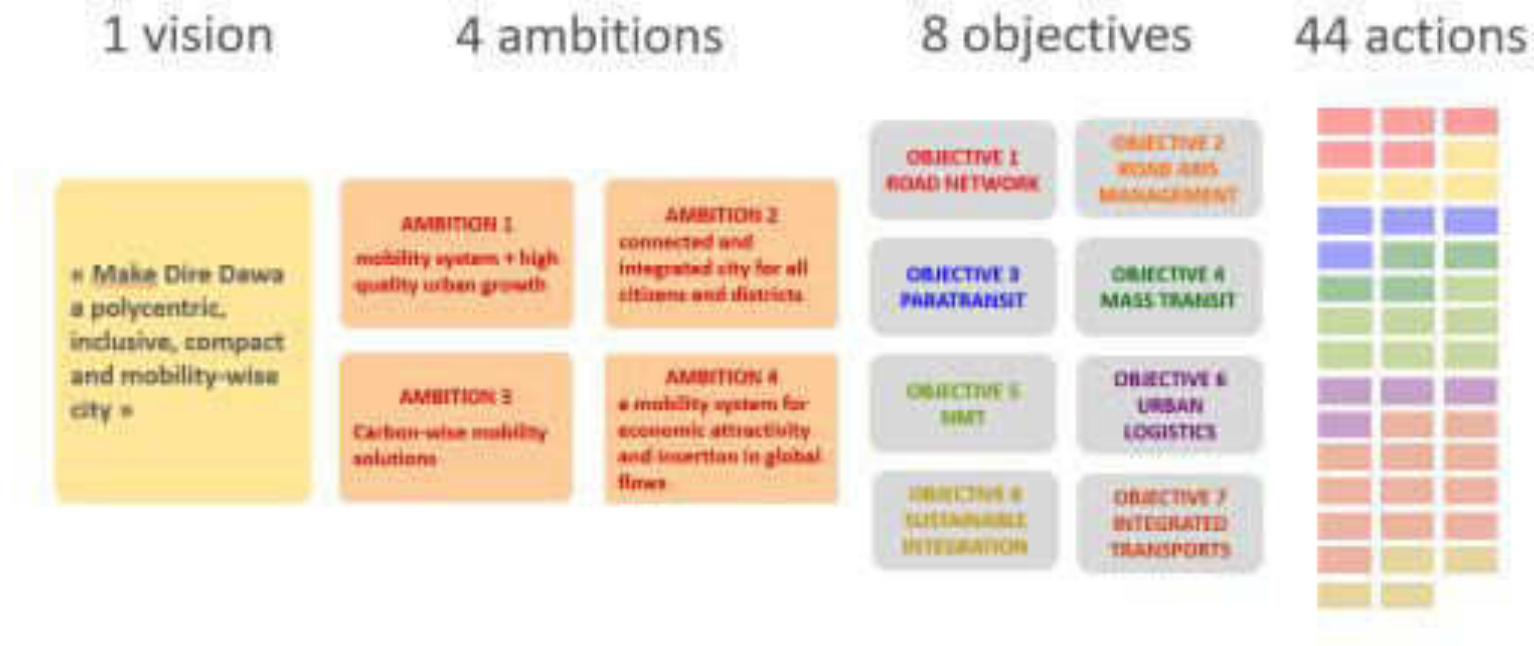


The SUMP Cycle: *4 Phases* and *13 Steps*

Source: own elaboration based on Rupprecht Consult, Guidelines for developing and implementing a sustainable urban mobility plan



Measures as actions to achieve objectives



A measure is a broad action implemented to achieve one or more policy objectives in a SUMP or to overcome one or more identified problems

Ex: land use, infrastructure, regulation, management, service measures, ...



Measure selection

Types of measures



INFRASTRUCTURE AND OPERATIONAL PROJECTS

«Hardware» investments in mobility and transports

e.g. road upgrade, BRT network, bus network reorganization, etc.

GOVERNANCE & FINANCE

Distribution and articulation of competences between stakeholders
Management and financing schemes

e.g. PTA creation, institutional reform

PROCESS, REGULATION & GUIDELINES

Processes or regulation for adequate project implementation

Design guidelines/standards for adequate and coherent projects

INTELLIGENCE & CAPACITIES

Knowledge management - training, capitalisation, networking, tools

e.g. inclusive, green and gender aware mobility

POLICIES & STRATEGIES

Policies and strategies to formulate specific targets and principles per area

e.g. circulation plan, urban logistics plan

AWARENESS & EMPOWERMENT

Citizen and civil society awareness raising and empowerment

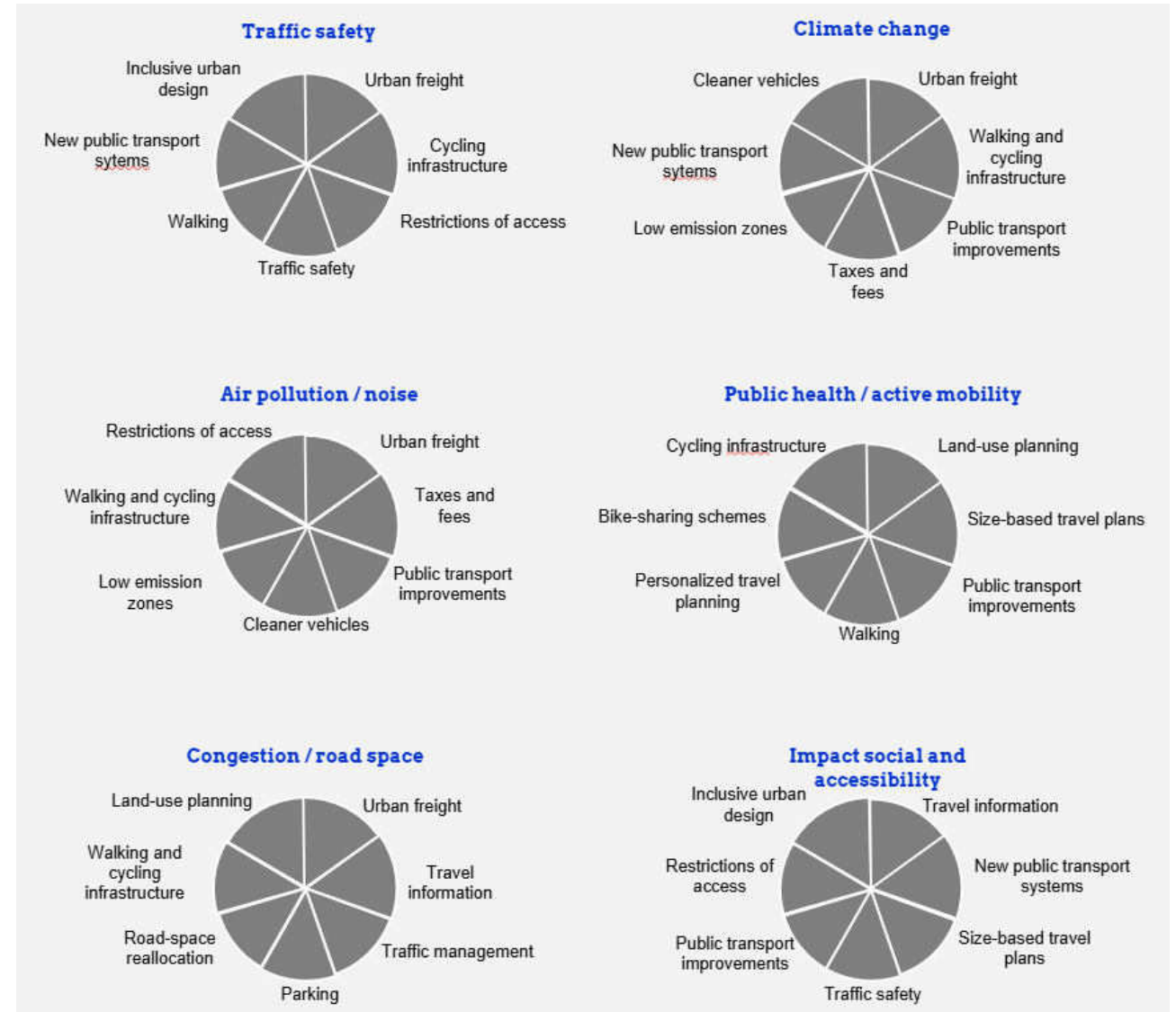
e.g. car free day, bike-riding lessons

Contribution of measures to objectives



A challenge can be addressed through a wide range of measures.

These graphics illustrate the different areas for action and can be used as a checklist to verify whether a city is considering all relevant areas for the issue at hand.

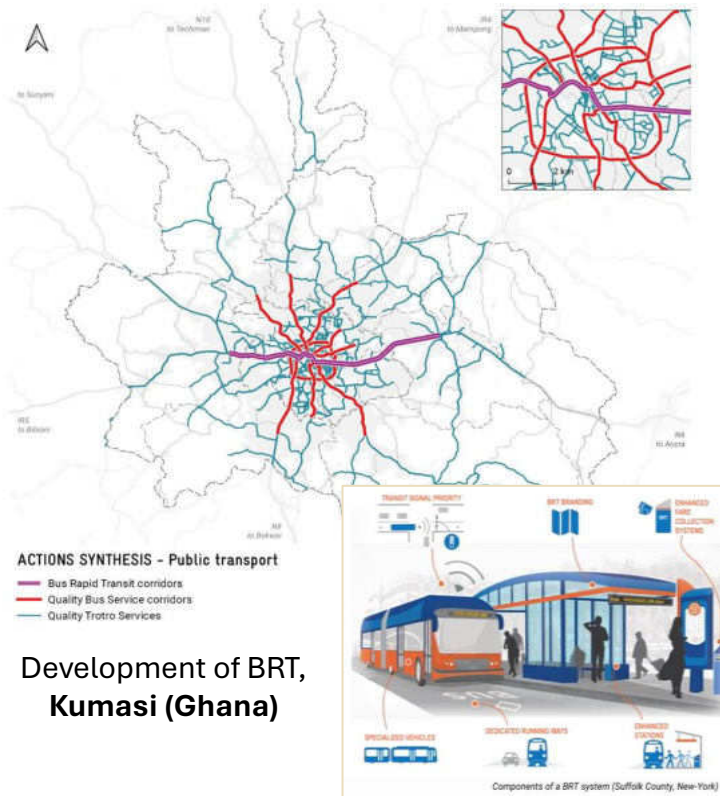


The universe of measures — public transport



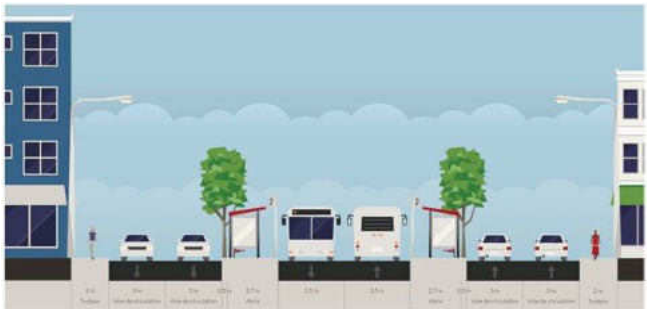
PUBLIC TRANSPORT

INFRASTRUCTURE



Development of BRT,
Kumasi (Ghana)

Development of BRT corridors, Yaoundé (Cameroon)



GOVERNANCE

3.1 DAR UNA REALIDAD INSTITUCIONAL A UN SISTEMA DE MOVILIDAD A NIVEL DEL GRAN SANTO DOMINGO
ACCIÓN 3.1.1 : FORMALIZAR LA GOBERNANZA DE LOS TRANSPORTES A NIVEL METROPOLITANO

ACCION
3.1.1

Contexto

- El INTRANT es la principal entidad competente para la administración del sector transporte, y ejerce a nivel nacional.
- No existe una administración o forma de coordinación de nivel metropolitano, lo que resulta en una falta de integración en la planeación urbana.

Objetivos

- Identificar un actor que pueda desempeñar el papel de autoridad organizadora a nivel metropolitano y ser responsable por la ejecución y seguimiento del PMUS, coordinando con los actores involucrados.

Principio de acción

- Fundir una división metropolitana dedicada al Gran Santo Domingo, por aplicación de la ley 63-17, responsable por
 - Supervisar la implementación del PMUS así como su evaluación y revisión;
 - Dirigir el diálogo con los Municipios (posiblemente tras desplazamiento de personal);
 - Articular políticas urbanas y de transporte junto con la contraparte a nivel metropolitano (ver acción 3.1.3)

Actor responsable
■ INTRANT

Nivel de impacto
■ Medioambiental

■ Social
■ Urbano

Formalize the transport governance at a metropolitan level,
Santo Domingo

CAPACITIES

Court terme : programme d'actions « mobilités » accompagnant la mise en place du réseau de transport

- Campagnes de sensibilisation au bien collectif qu'est l'environnement urbain et naturel, ainsi que de lutte contre les incivismes: programmes scolaires; événementiels; formations professionnelles conducteurs/agents de la circulation-police; sanction des infractions...= CUD/CAD

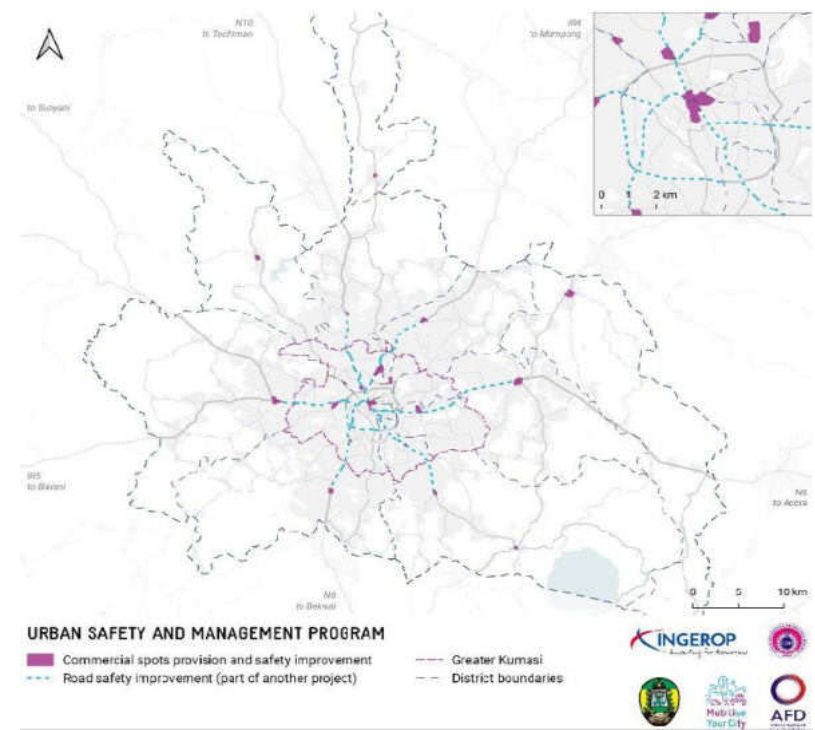
Awareness and capacity building for drivers and police officers,
Douala (Cameroon)

The universe of measures — road safety



ROAD SAFETY

INFRASTRUCTURE – POLICIES & STRATEGIES



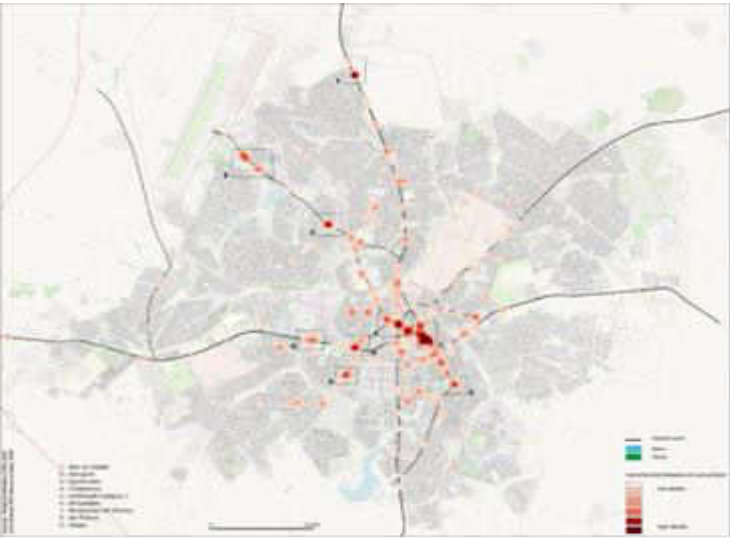
Road safety program, tackling black spots and areas with high pedestrian density, **Kumasi**

INFRASTRUCTURE



Pilot project to improve road safety around schools, **Bouaké**

POLICIES & STRATEGIES



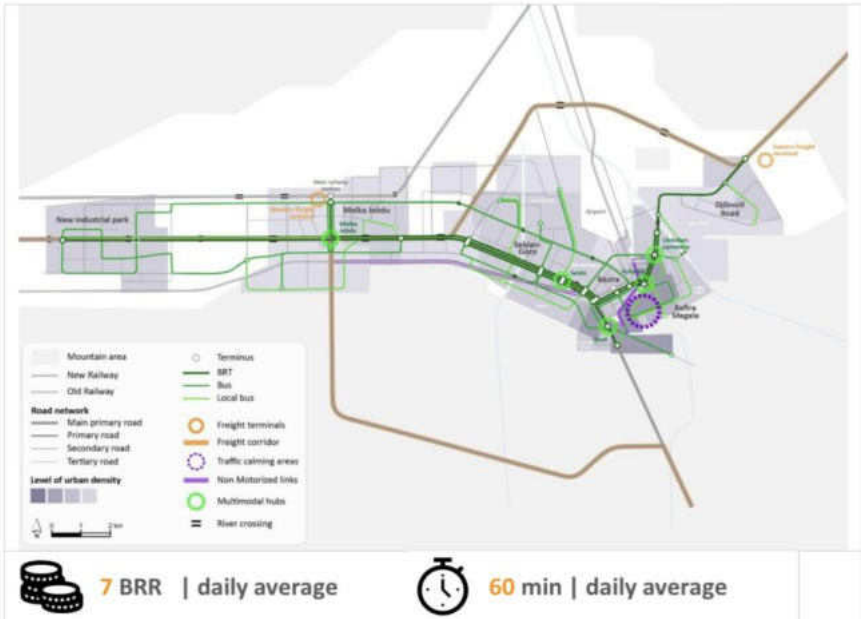
Development of a road safety observatory, **Bouaké**

The universe of measures – urban freight and logistics



URBAN FREIGHT

INFRASTRUCTURE



Freight terminals & urban logistics projects, **Dire Dawa (Ethiopia)**

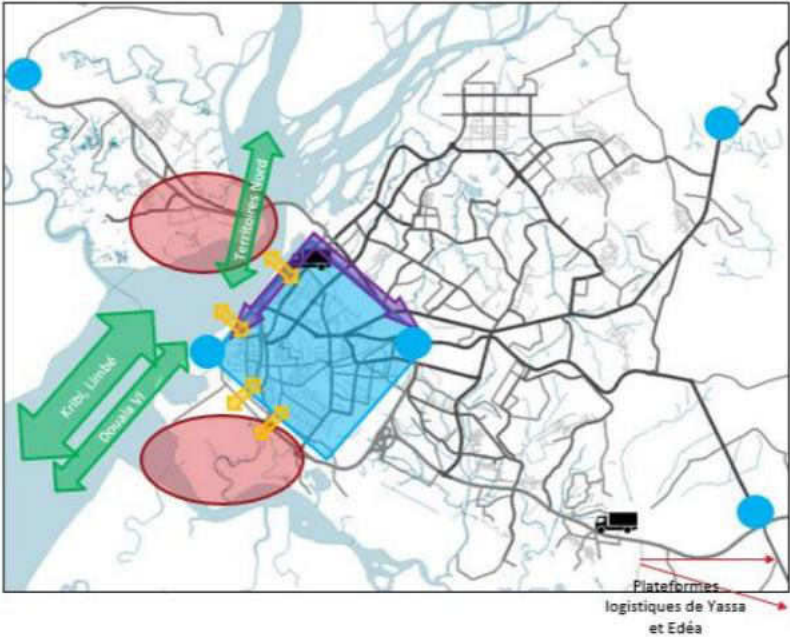
REGULATIONS



Khusus Truk
06⁰⁰ - 18⁰⁰

Limit freight vehicles circulation,
Medan (Indonesia)

POLICIES & REGULATIONS



Development of logistical hubs and truck parking spaces + limit freight vehicles circulation in the city center, **Douala (Cameroon)**

INFRASTRUCTURE – POLICIES – GOVERNANCE

Actions

Operational projects	6.A.1	Freight terminals
Operational projects	6.A.2	Urban logistics projects
Policies & strategies	6.C.1	Urban logistics development plan
Governance & Finance	6.D.1	Urban logistic manager

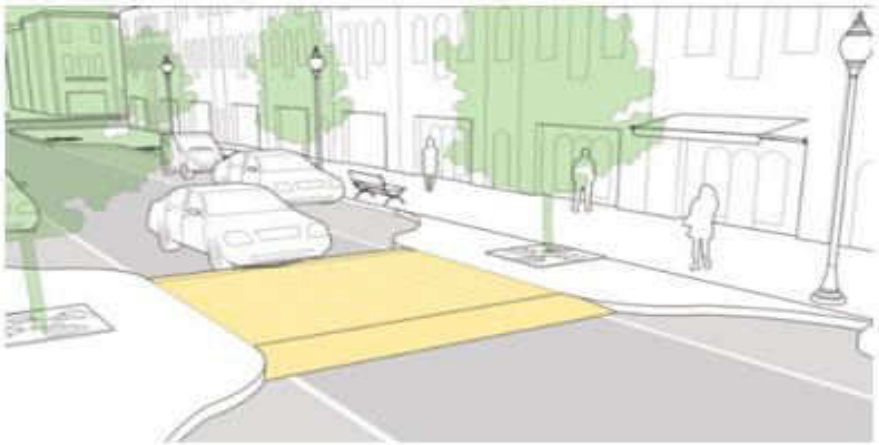
Implement an efficient urban logistics system, **Dire Dawa (Ethiopia)**

The universe of measures – active modes



ACTIVE MODES

INFRASTRUCTURE



Safe pedestrian crossing on a speed table (ITDP)

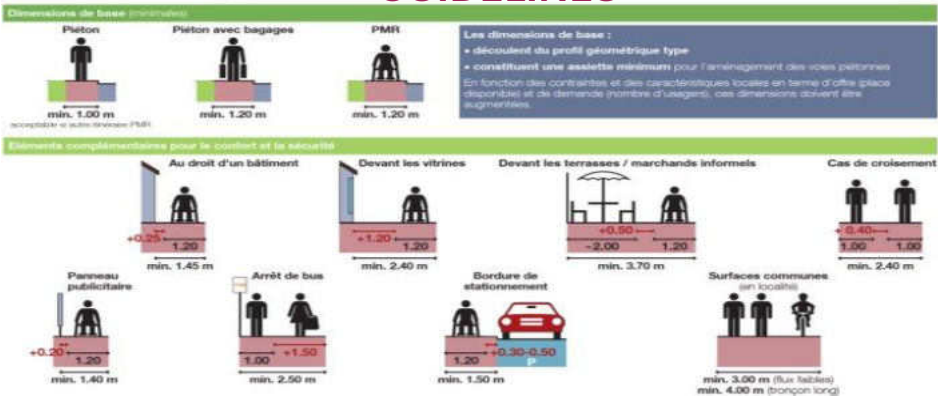
Urban safety and environment improvement, **Kumasi (Ghana)**

Figure 39 - Linéaire proposé pour le projet pilote de piste mixte piétons/cyclistes



Develop cycling and pedestrian routes along the main network, **Bouaké (Ivory Coast)**

GUIDELINES



Producing a toolkit that defines minimal characteristics of what sidewalks need to be to improve walkability in the centre,

Yaoundé

ALL

Operational project	S.A.1	NMT projects
Operational project	S.A.2	Bikes for all
Process & guidelines	S.B.1	NMT integration in transport and mobility projects
Policies & strategies	S.C.1	NMT development plan
Intelligence & capacities	S.E.1	Pedestrian-centered approach
Awareness & empowerment	S.F.1	Walking in Dire Dawa

All active mobility actions, **Dire Dawa (Ethiopia)**

ALL

Objectifs / Types d'actions	TYPE A : Infrastructure & services	TYPE B : Méthodes & process	TYPE C : Politiques & stratégies	TYPE D : Gouvernance & finance	TYPE E : Gestion de la connaissance	TYPE F : Sensibilisation & communication
OBJECTIF 5 Modes actifs	5A1 Aménagements modes actifs 5A2 Aménagement de l'espace	cf. 1B1	5C1 Schéma directeur des modes actifs	19	5E1 Formation des acteurs institutionnels	5F1 Sensibilisation du public 5F2 Expérimentations Modes actifs

All active mobility actions, **Lomé (Togo)**

AWARENESS



Raise awareness on good transport practices and promote cycling, **Bouaké**

REGULATIONS



Regulated commercial area on the roadside (ITDP)

Urban safety and environment improvement, **Kumasi (Ghana)**

The universe of measures – paratransit



PARATRANSIT

REGULATION – FINANCE – INFRASTRUCTURE

ACTION 5.3: DEVELOPMENT OF QUALITY TROTRO SERVICES

Description

Quality Trotro Services (QTS) are the third level of hierarchy of the transport network and will consist of the far most of its routes. The development of these new services is based on the improvement of the existing system, by enhancing regulation from the public authorities and providing renewed rolling stock to improve safety and comfort conditions.

Quality Trotro Services encompasses several features, the main ones being:

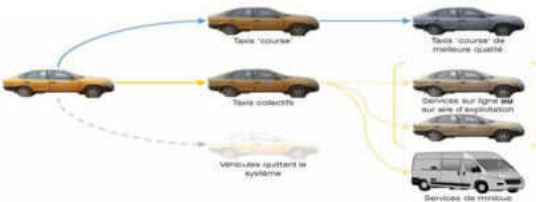
- Enhancement of control and regulation from public authorities; more incentive to enter the legal system thus tackling the waga issue, mandatory use of the monitoring tool (action 5.0)
- Ambitious vehicles renewal program with an easier access to loans from banks and donors (the Transport Authority engages loans with banks and the vehicle owners contract loans with the Transport Authority), with a scrapping bonus to encourage renewal (example of AFTU model in Dakar), thus encouraging operators to join the legal system
- Improvement of stations, formalisation of stops with basic infrastructure, development of two new terminals in KMA CBD (plus one terminal included in action 4.2)

PUBLIC TRANSPORT

Simplified stop point in Dakar (UEF140) *Renewed "Taxis" in Dakar (AFTU)*

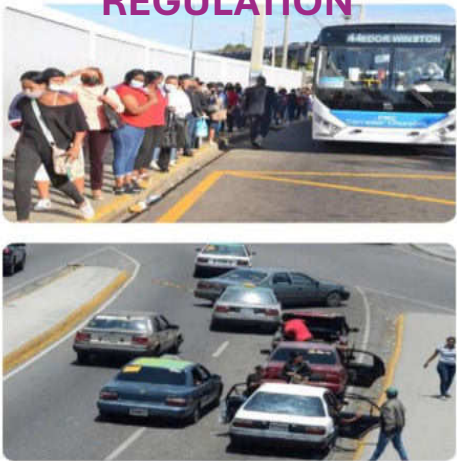
Development of quality Trotro services. **Kumasi**

REGULATIONS – OPERATIONS – CAPACITIES



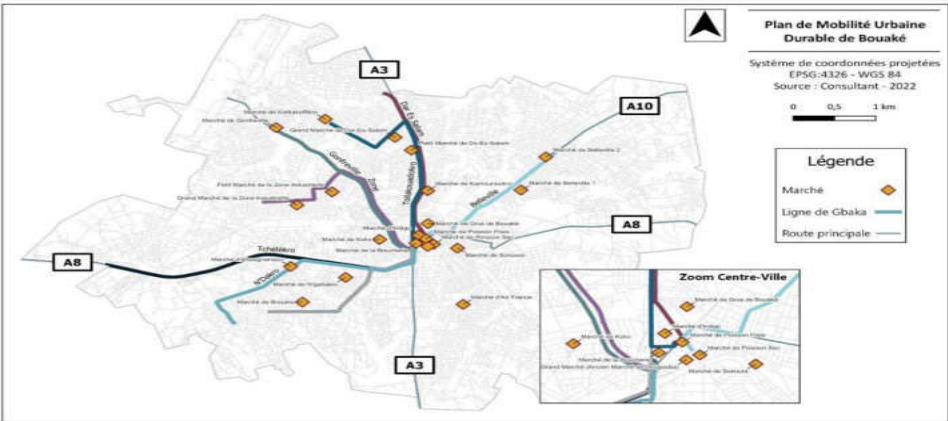
Paratransit reform: digital registration, monitoring of operations, training programmes for drivers, **Yaoundé**

INFRASTRUCTURE – REGULATION



Formalization of paratransit corridors + new buses, **Santo Domingo**

INFRASTRUCTURE – GOVERNANCE



Revitalize the gbaka network and strengthen its governance, **Bouaké**

INFRASTRUCTURE

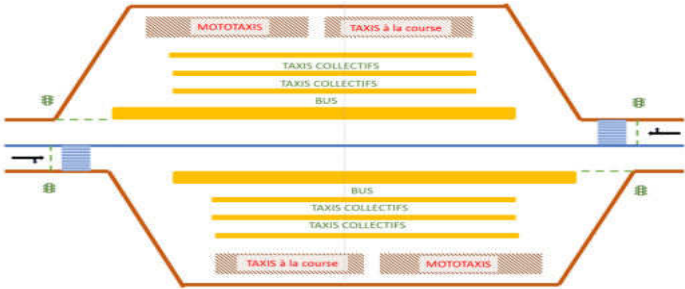


Figure 43 : Schéma de principe d'un pôle d'échange

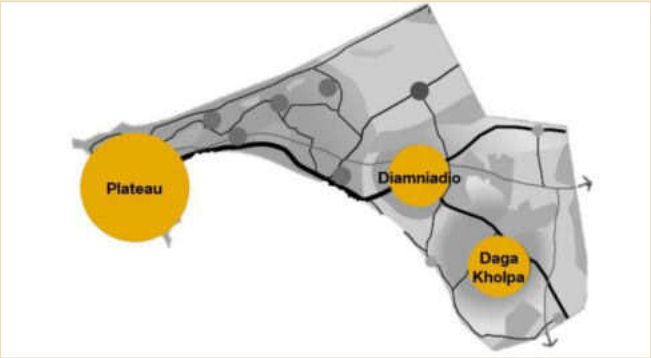
Develop transfer areas between informal transport and buses, **Bouaké**

The universe of measures — land-use integration

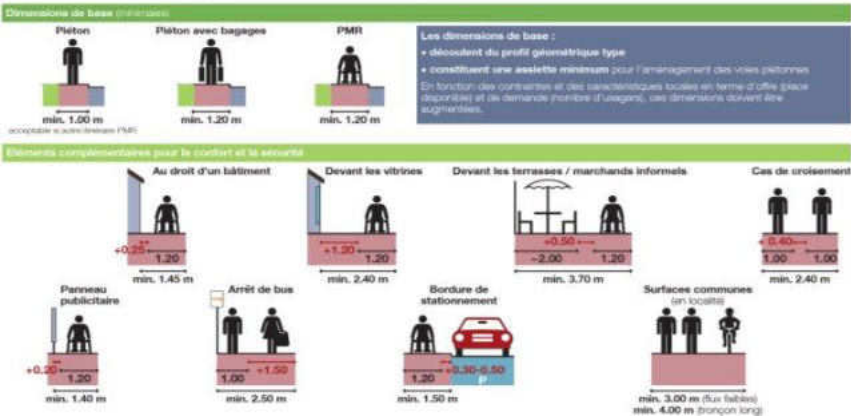


LAND-USE INTEGRATION

POLICIES & STRATEGIES

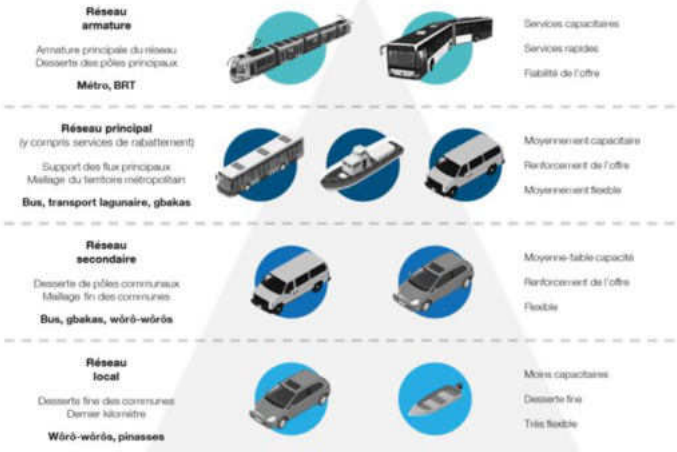


Rebalance territorial development by promoting secondary urban centres to reduce monocentric travel patterns, **Dakar (Senegal)**



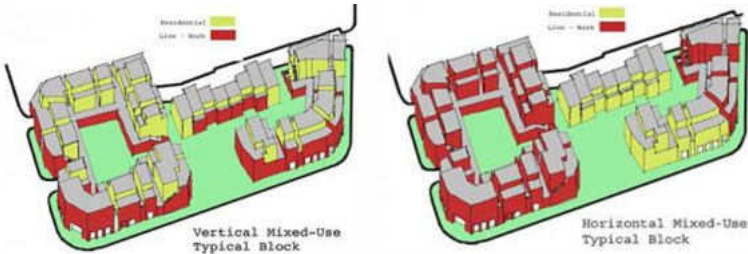
Toolkit defining sidewalks depending on the nearest land use, **Yaoundé (Cameroon)**

INFRASTRUCTURE



New hierarchy in the urban mobility systems, **Abidjan (Ivory Coast)**

POLICIES & STRATEGIES – REGULATION



Mixed-use zones in secondary urban centers, **Medan (Indonesia)**

POLICIES & STRATEGIES



Secondary poles development, **Ouagadougou (Burkina Faso)**

What to keep in mind when creating a list of measures

Draw on expert knowledge, stakeholder and citizen input, experiences from other cities and existing databases. Select the most promising options — ensuring efficient use of resources, realistic acceptability and cost-effectiveness, and demonstrating their effectiveness and feasibility.

1. Prepare a systematic summary

2. Create an extensive list

3. Ensure a balanced combination

4. Engage stakeholders

5. Learn from others



Focus groups on SUMP actions, Dire Dawa (Ethiopia)

From a list of measures to measure packages



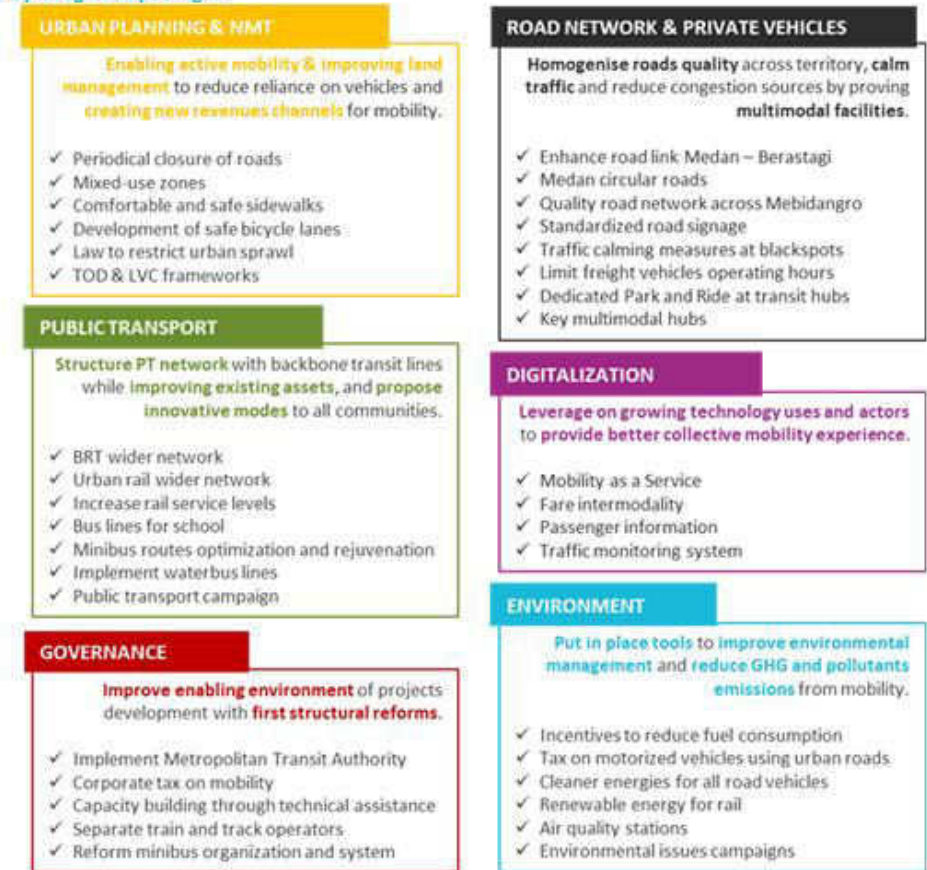
Isolated measures have limited impact. **Coordinated packages**, however, enable measures to:

- Reinforce one another
- Overcome implementation barriers
- Contribute more effectively to objectives while improving acceptance
- Guarantee integration of transport modes

Measure packages are **most commonly grouped by policy area**, but they can also be grouped by:

- By objective (measures that address the same problem)
- By geographic area (measures affecting the same location)
- By cost (e.g. combining a costly flagship measure with revenue-generating ones)

Figure 83. Actions by integrated packages



Actions regrouped in integrated packages by policy area, Medan (Indonesia)

Examples of measure packages



Yaoundé (Cameroon)

Voiries primaires			
Número	P1	P2	P3
Nom	Petite rocade Nord-Est	Rehabilitation de l'axe Nguesso	Petite rocade Est
Horizon de réalisation	2022 - 2024	2020 - 2021	2023 - 2024
Coût	9 milliards FCFA	2,5 milliards FCFA	8 milliards FCFA
Partie prenante	MOA : CUY, avec accompagnement du MINHOU	MOA : CUY, avec accompagnement du MINHOU	MOA : CUY, avec accompagnement du MINHOU
Número	P4	P5	P6
Nom	Petite rocade Sud-Est	Petite rocade Sud-Ouest	Barreau Nkolobisson - Biyem Assi
Horizon de réalisation	2026 - 2027	2026 - 2027	dés 2030
Coût	3,5 milliards FCFA	13 milliards FCFA	12,5 milliards FCFA
Partie prenante	MOA : CUY et CAY concernées, avec accompagnement du MINHOU	MOA : CUY, avec accompagnement du MINHOU	MOA : CUY et CAY concernées, avec accompagnement du MINHOU
Número	P7	P8	P9
Nom	Barreau Nkolafemi - Mfoundi	Petite rocade Nord-Ouest	Pont en traversée du Mfoundi
Horizon de réalisation	dés 2031	2029 - 2030	2026 - 2027
Coût	13 milliards FCFA	13 milliards FCFA	7 milliards FCFA
Partie prenante	MOA : MINHOU comme pilote, accompagnement CUY	MOA : CUY et CAY concernées, avec accompagnement du MINHOU	MOA : CUY, avec accompagnement du MINTP et du MINHOU

Transports en commun			
Número	TC1.1	TC1.2	TC1.3
Nom	Amenagement de la ligne TCSP Nord-Sud y.c. pôles d'échanges	Amenagement de la ligne TCSP Ouest y.c. pôles d'échanges	Amenagement de la ligne TCSP Est y.c. voies
Horizon de réalisation	2022 - 2024	2026 - 206	dés 2031
Coût	36 milliards FCFA	19,5 milliards FCFA	47 milliards FCFA
Partie prenante	MOA : MINHOU et MINTP	MOA : MINHOU et MINTP	MOA : MINHOU et MINTP
Número	TC2.1	TC2.2	TC2.3
Nom	Etudes d'un réseau bus pour la CAN 2021	Réorganisation des lignes de bus pour l'horizon 2025	Réorganisation des lignes de bus pour l'horizon 2035
Horizon de réalisation	2019 - 2020	2021 - 2025	2026 - 2035
Coût	350 millions FCFA	6 milliards FCFA	12,5 milliards FCFA
Partie prenante	MOA : MINHOU, CUY, MINTP et CAY	MOA : MINHOU, CUY, MINTP et CAY	MOA : MINHOU, CUY, MINTP et CAY
Número	TC3		
Nom	Amenagements des gares de minibus		
Horizon de réalisation	dés 2025		
Coût	0,7 milliards FCFA		
Partie prenante	MOA : CUY		

Aménagements d'espaces piétons			
Número	MD1.1	MD1.2	MD1.3
Nom	Quartier pilote Centre Ville	Quartier pilote Cité Verte	Quartier pilote Nkolmessong
Horizon de réalisation	2019 - 2020	2019 - 2020	2019 - 2020
Coût	1,9 milliards FCFA	0,7 milliards FCFA	0,7 milliards FCFA
Partie prenante	MOA : MINHOU dans le cadre du PDVIR sur financement Banque Mondiale	MOA : MINHOU dans le cadre du PDVIR sur financement Banque Mondiale	MOA : MINHOU dans le cadre du PDVIR sur financement Banque Mondiale
Número	MD2	MD3	
Nom	Aménagements à proximité des écoles	Aménagements de trottoirs et itinéraires piétons	
Horizon de réalisation	dés 2020	dés 2020	
Coût	0,7 milliards FCFA / an	0,7 milliards FCFA / an	
Partie prenante	MOA : CUY	MOA : CUY	

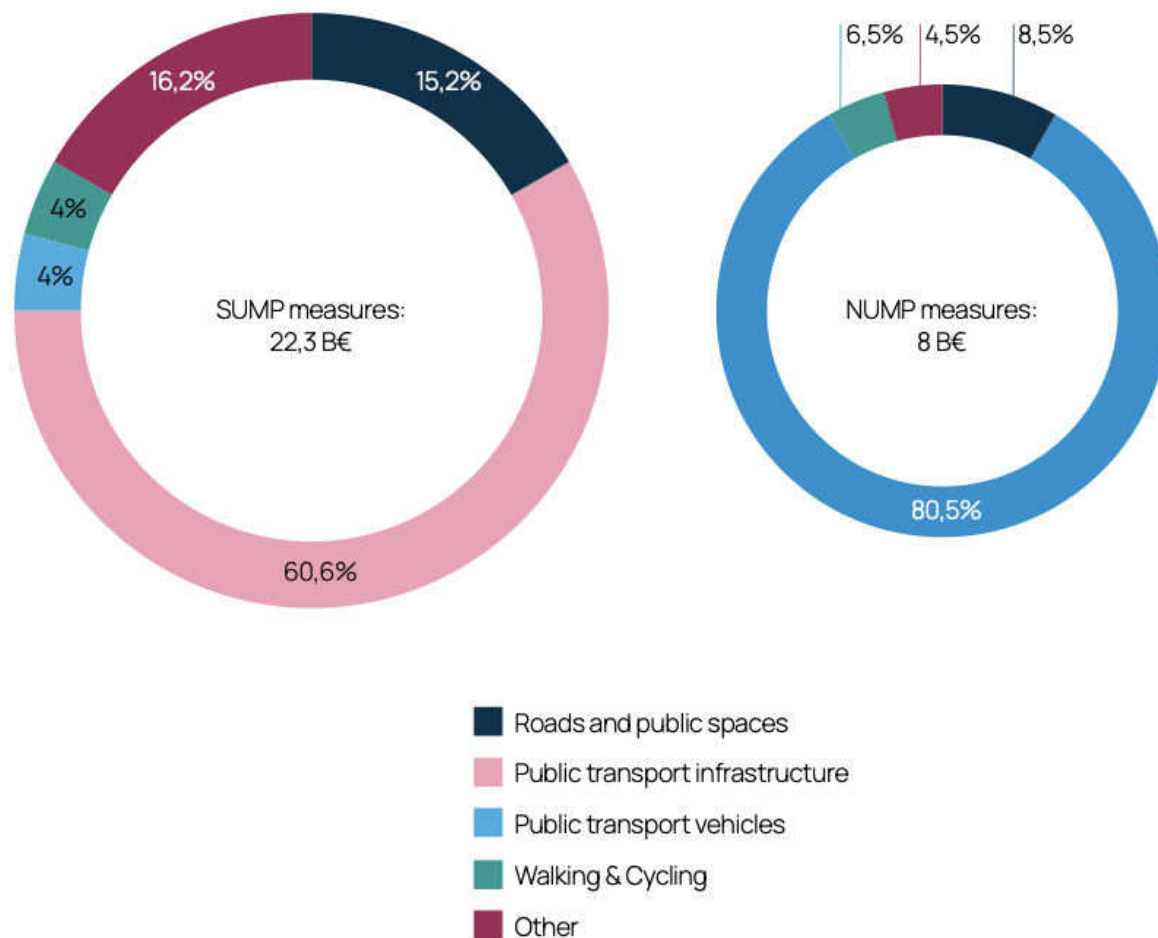
Mwanza (Tanzania)

#	OBJ ID	OBJECTIVE	ACTION TYPE	ACTION ID	ACTION NAME
1	1	Road Network	Operational projects	1.A.1	Main road projects
2	1	Road Network	Policies & strategies	1.C.1	Target road and crossroad network
3	1	Road Network	Policies & strategies	1.C.2	Circulation Plan
4	1	Road Network	Governance & finance	1.D.1	Traffic Management Unit
5	2	Urban Transit	Operational projects	2.A.1	BRT System Development
6	2	Urban Transit	Operational projects	2.A.2	Paratransit Upgrade
7	2	Urban Transit	Policies & strategies	2.C.1	BRT development roadmap
8	2	Urban Transit	Policies & strategies	2.C.2	Paratransit restructuring roadmap
9	2	Urban Transit	Intelligence & capacities	2.E.1	Paratransit drivers training
10	3	NMT	Operational projects	3.A.1	Walking projects
11	3	NMT	Operational projects	3.A.2	Cycling projects
12	3	NMT	Policies & strategies	3.C.1	NMT development road map
13	3	NMT	Awareness & empowerment	3.F.1	walking & Cycling citizens
14	4	urban logistics	Operational projects	4.A.1	Urban logistics projects
15	4	urban logistics	Policies & strategies	4.C.1	Urban logistics roadmap
16	5	Integrated Mobility	Process & guidelines	5.A.1	Multimodal Hub
17	5	Integrated Mobility	Process & guidelines	5.B.1	SUMP Evaluation
18	5	Integrated Mobility	Governance & finance	5.D.1	Transport authority reinforcement
19	6	TOD	Policies & strategies	6.C.1	TOD development roadmap
20	7	Inclusivity	Awareness & empowerment	7.F.1	Inclusive, green and gender aware mobility

Breakdown of measures proposed in MYC SUMP



Identified investment needs from
MobiliseYourCity SUMP and NUMP



African SUMP prioritise $\frac{3}{4}$ of the action plans budget for public transport, similarly to other regions, but with a larger focus on infrastructure (73%)

Count of SUMP proposing public transport infrastructure by type



08

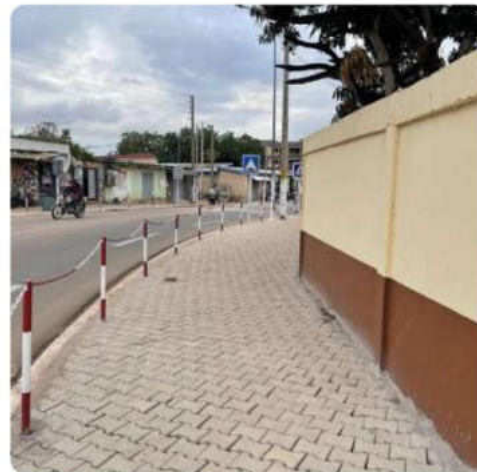


Define the actions and responsibilities



This involves defining *what* will be implemented,
how,
where, &
when during the implementation phase.

When specifying actions, it is necessary to determine exactly how the established targets will be achieved. Detailed descriptions provide the basis for implementation, help identify links between actions, and support decisions on the order in which they should be carried out.





1. Action reference
2. Description of the action
3. Objective(s)
4. Localisation (when relevant)
5. Timeline (implementation phasing) and prioritization
6. Costs and source of funding
7. Responsibles
8. Estimation of impact
9. Monitoring indicators

How to describe an *action*?



Action reference, description, and objective(s)

What is the measure designed to achieve, and how does it support the SUMP vision and objectives?

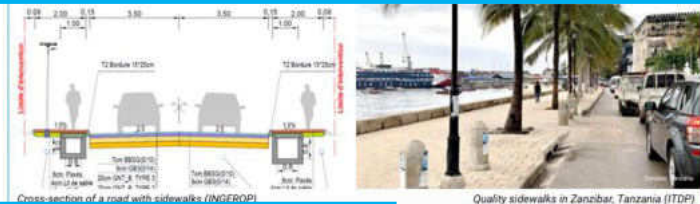
ACTION 1.1: DEVELOPMENT OF QUALITY SIDEWALKS NMT

Description

An extensive sidewalk development and renewal program will be carried out to provide quality infrastructure for pedestrians. This program will also provide drainage and street lighting infrastructure. When necessary, a re-asphalting of the carriageway is also included. It will cover 100km.

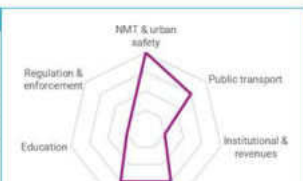
These sidewalks should be free of any encroachment, illicit parking, or other undesirable inconvenience. They should be clearly separated from the carriageway (curb, height difference, pavement difference). A minimum width of two meters (more in high pedestrian intensity areas) free of any furniture must be retained.

This program will also provide drainage infrastructure along each built or renewed sidewalk. The drainage infrastructure should be efficient enough to absorb rainy season stormwaters and prevent the street from flooding. The gutters should be covered by concrete slabs to avoid any tripping hazard. Lighting will also be included, by providing lighting poles and associated infrastructure along each built or renewed sidewalk. The lighting should emphasize on clear visibility for pedestrians for safety and security purposes.



Targeted objectives

This action aims to address unsafe conditions for pedestrians identified in the diagnosis, for example, high road accidents for pedestrians in the evening time. Positive effects of this measure are expected on sustainability (promoting NMT); traffic & parking; and general urban comfort and safety.



Kumasi (Ghana)

Mesure C1a – Contournement, tronçon autoroute de Douala – RN3 (T4)

■ caractéristiques principales ;

- à réaliser à court terme afin d'avoir une continuité avec la construction de l'autoroute de Douala qui débouche sur un axe principal en direction du centre de Yaoundé ;
- gabarit de 2*2 voies au minimum ;
- nombre d'intersections limité ;
- longueur : 10,3 km

■ objectifs principaux visés :

Améliorer les conditions de circulation

☒ **hiérarchiser** le réseau routier, notamment en évitant au trafic poids-lourds de traverser les zones urbaines et en offrant une voie de transit en dehors de la ville ;

☒ **gérer** le réseau routier ;

☐ **fluidifier** le trafic ;

Développer les différentes offres de transport

☐ **superviser** les acteurs offrant un service de déplacement ;

☐ **fiabiliser** les services de transports ;

☒ **assurer** une certaine équité dans l'accessibilité à la mobilité aussi bien spatialement qu'économiquement, principalement pour les nouveaux quartiers ;

Améliorer la qualité de vie en ville

☒ **accompagner** les développements urbains ;

☐ **sécuriser** les déplacements, notamment pour les modes doux et les personnes vulnérables ;

☐ **améliorer** la qualité de l'air en réduisant l'émission de particules fines et de gaz à effet de serre

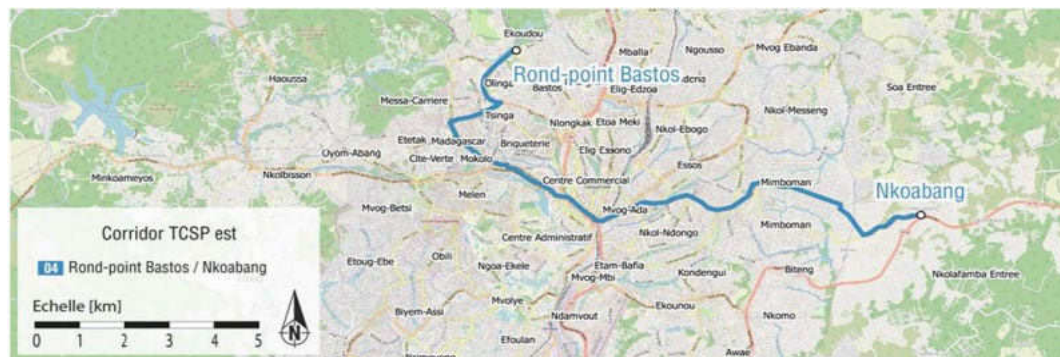
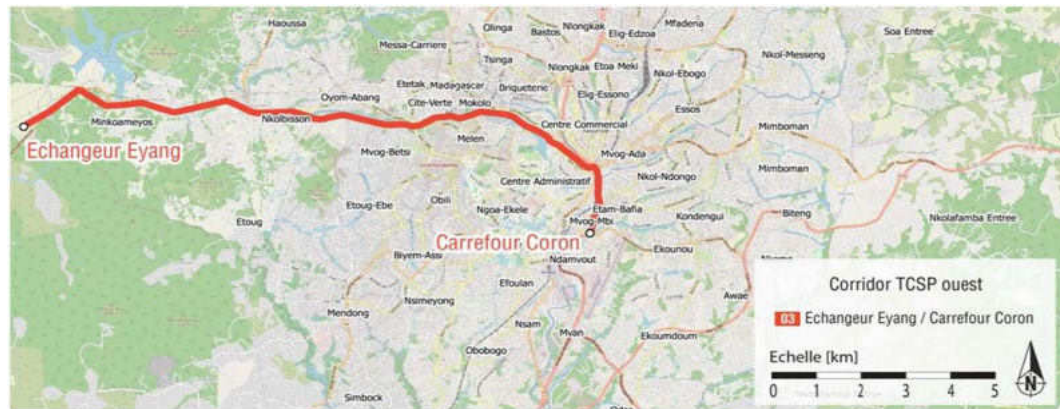
Yaoundé (Cameroon)

How to describe an *action*?

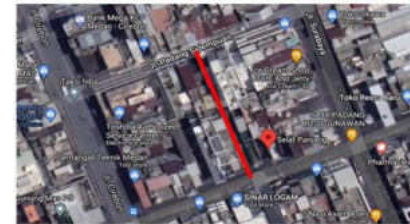


Localisation

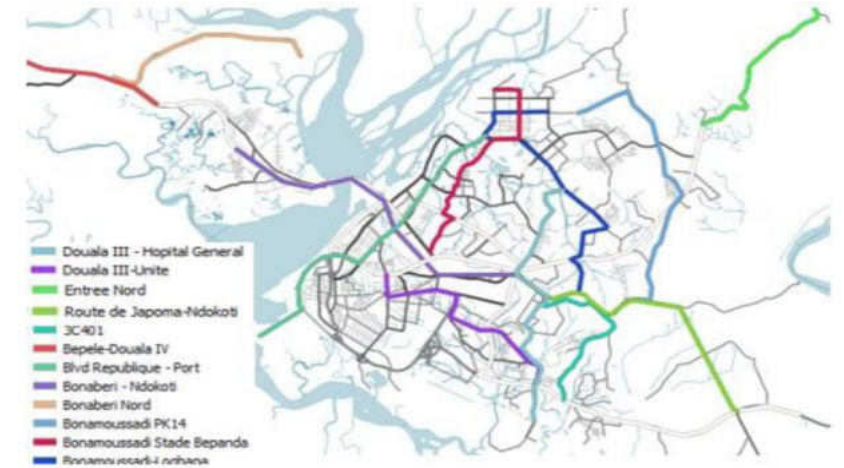
Where will the measure be implemented, and which areas or groups will it target?



High service bus line (TRANSYAOUNDE) corridors, **Yaoundé (Cameroon)**



Car free zones,
Medan (Indonesia)



Projected bus lines, **Douala (Cameroon)**

Route	Longueur (km)
Agoé 1	5,34
Agoé 2	4,86
Agoé sud 1	2,84
Agoé sud 2	2,63
Agoé sud 3	0,59
Agoé sud 4	2,42
Agoé sud 5	3,05
Agoé sud 6	2,84
Baguida 8	2,91
Bd gnassingbe eyadema	5,53
Bd malfakassa 1	0,35
Bd malfakassa 1 (2)	1,20
Bd malfakassa 2	1,32
Grand contournement nord (2)	0,45
Grand contournement nord (3)	0,20
Grand contournement nord (4)	6,38
Grand contournement nord (5)	7,39
Kagnikope to baguida 1	1,91
Kagnikope to baguida 2	1,52
Kagnikope to baguida 3	2,58
Rue kpime	4,27

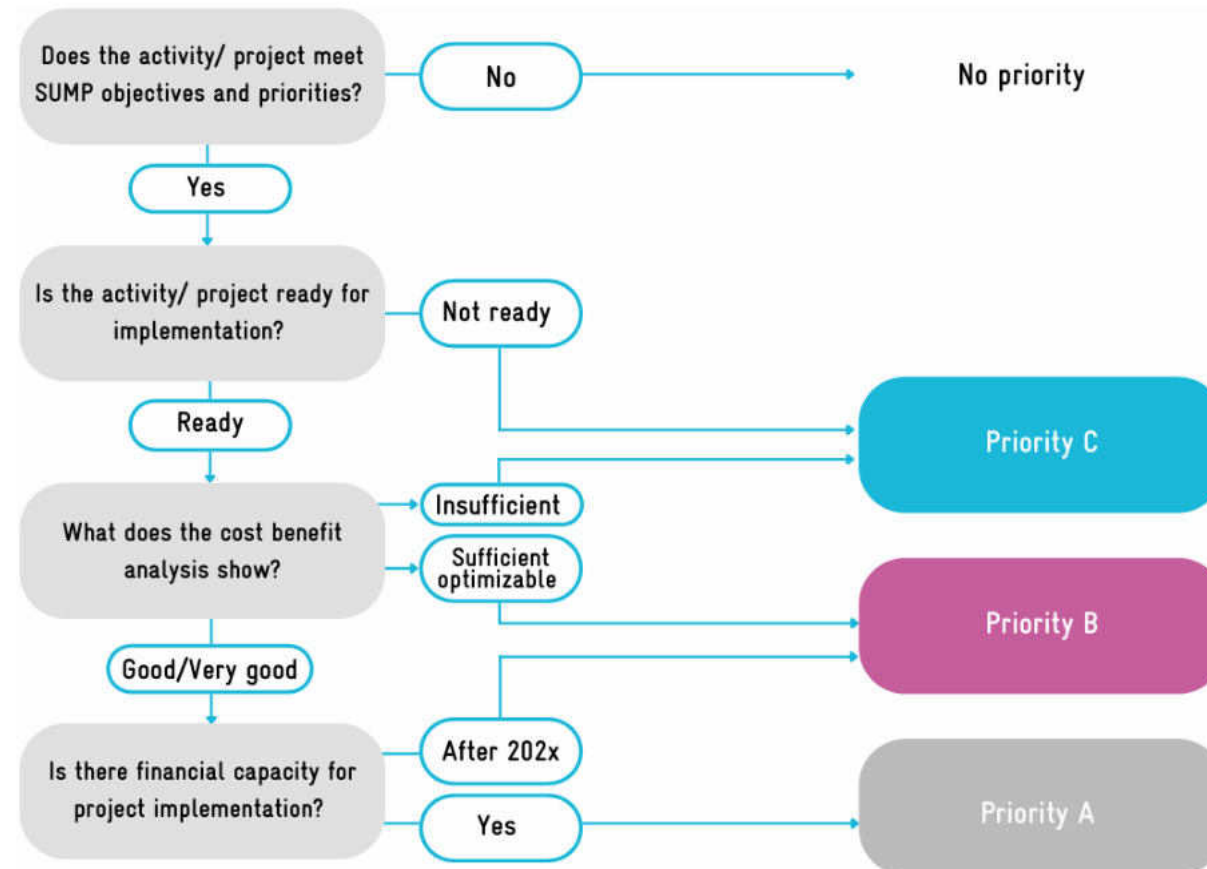


Urban transport projects, **Lomé (Togo)**



Timeline and prioritisation

When should the measure/action be implemented, and how should it be prioritised within the SUMP action plan?



Priority assessment chart – SUMPS guidelines

How to describe an *action*?



Timeline and prioritisation

Schedule



Medan (Indonesia)

#	OBL ID	OBJECTIVE	ACTION TYPE	ACTION ID	ACTION NAME	Preparation		Short-Term SUMP Program					Mid-Term SUMP Program					Long-Term SUMP Program											
						2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
1	1	Road Network	Operational projects	1.A.1	Main road projects																								
2	1	Road Network	Policies & strategies	1.C.1	Target road and crossroad network																								
3	1	Road Network	Policies & strategies	1.C.2	Circulation Plan																								
4	1	Road Network	Governance & finance	1.D.1	Traffic Management Unit																								
5	2	Urban Transit	Operational projects	2.A.1	BRT System Development																								
6	2	Urban Transit	Operational projects	2.A.2	Paratransit Upgrade																								
7	2	Urban Transit	Policies & strategies	2.C.1	BRT development roadmap																								
8	2	Urban Transit	Policies & strategies	2.C.2	Paratransit restructuring roadmap																								
9	2	Urban Transit	Intelligence & capacities	2.E.1	Capacity Building																								
10	3	NMT	Operational projects	3.A.1	NMT projects																								
11	3	NMT	Operational projects	3.A.2	Biking for Mwanza																								
12	3	NMT	Policies & strategies	3.C.1	NMT development road map																								
13	3	NMT	Awareness & empowerment	3.F.1	walking & Cycling citizens																								
14	4	urban logistics	Operational projects	4.A.1	Urban logistics projects																								
15	4	urban logistics	Policies & strategies	4.C.1	Urban logistics roadmap																								
16	5	Integrated Mobility	Process & guidelines	5.A.1	Multimodal Hub																								
17	5	Integrated Mobility	Process & guidelines	5.B.1	SUMP Evaluation																								
18	5	Integrated Mobility	Governance & finance	5.D.1	Transport authority reinforcement																								
19	6	TOD	Policies & strategies	6.C.1	TOD development roadmap																								
20	7	Inclusivity	Awareness & empowerment	7.F.1	Inclusive, green and gender aware mobility																								

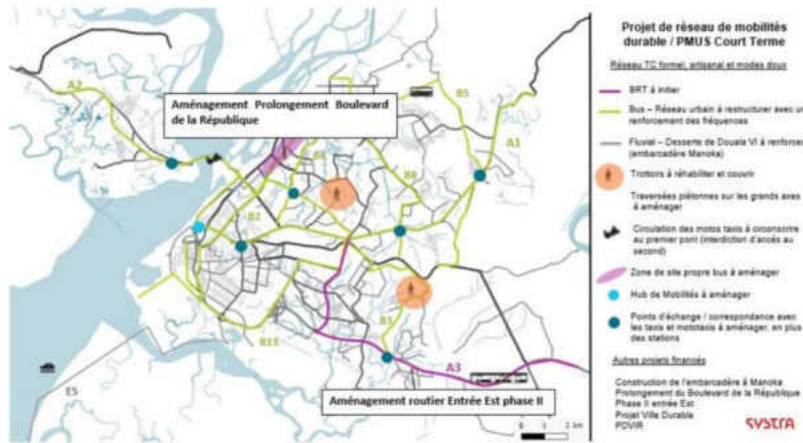
Mwanza (Tanzania)

How to describe an *action*?

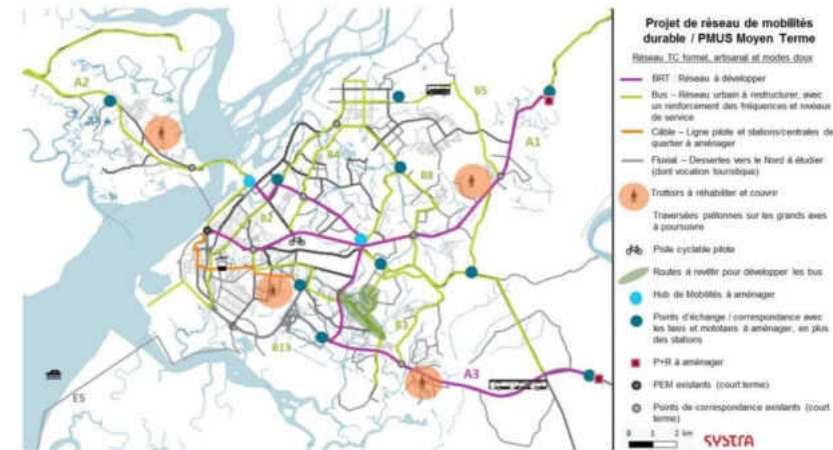


Timeline and prioritisation

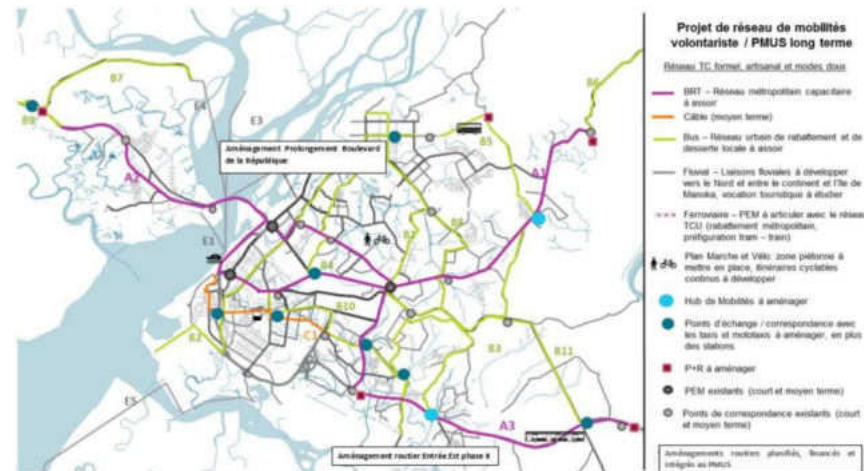
Douala (Cameroon)



Projet de réseau PMUS à court terme Source : Systra, 2019.



Projet de réseau PMUS à moyen terme Source : Systra, 2019.



Projet PMUS à long terme. Source : Systra, 2019

How to describe an *action*?



Expected impacts

What changes will the measure deliver, and what outcomes are expected?

3.3 ASEGURAR EL FINANCIAMIENTO DE UN SISTEMA DE MOVILIDAD SOSTENIBLE Y TRANSPARENTE
ACCIÓN 3.3.3 : DEFINIR UNA FISCALIZACIÓN VIRTUOSA EN TÉRMINOS DE IMPACTO MEDIOAMBIENTAL

ACCION 3.3.3

Contexto

- La Política Nacional de Cambio Climático (2016) conlleva instrumentos fiscales y regulatorios, en particular la creación de un impuesto aplicado al momento del registro o inscripción de los vehículos de motor, de acuerdo con su eficiencia energética.

Objetivos

- Incentivar un cambio modal hacia los transportes públicos, penalizando el uso del carro privado.
- Equilibrar el balance económico del sector de manera permanente.
- Devolver la deuda suscrita para la inversión inicial de los proyectos y contribuir al pago de los intereses de la deuda
- Generar recursos regulares para financiar medidas de política pública, sea social o medioambiental, tal como una tarificación social.
- Lograr a 2030 una reducción de un 2% del total de las emisiones de CO2eq.

Principio de acción

Santo Domingo

Actor responsable

- Ministerio de Medio Ambiente
- Ministerio de Energía y Minas

Socios

- INTRANT
- CNCCMDL
- Ministerio de Hacienda

Nivel de impacto

- Medioambiental
- Social
- Urbano

Nivel de impacto

Medioambiental

Social

Urbano

ACTION 2.1: URBAN SAFETY AND ENVIRONMENT IMPROVEMENT

TRAFFIC

Description

This action encompasses several scopes, aiming at improving urban safety (especially for pedestrians) and rebalancing the share of urban space:

- 2.1.A: Development of urban street design guidelines:** these guidelines (to be applied to all road projects) will be adapted to the metropolis' specific context and will cover a wide range of types of streets (high-traffic wide arterial roads, residential roads, local roads with intense commercial activity, etc.). These guidelines will propose minimum widths and principles to prepare the ground for the implementation of "complete streets", catering for all modes (non-motorised transport, commercial activities, public transport, freight, private cars parking).
- 2.1.B: Extensive road safety program:** this program consists of implementing traffic taming measures (speed tables, better signage of limited speed areas, road marks, etc.) around sensitive areas (schools, markets, places of worship, etc.).
- 2.1.C: Provision of regulated commercial spots:** this program will offer traders delineated spots on the roadsides to carry on their activities without encroaching on the sidewalks and impeding with pedestrian and vehicular traffic. These spots are only areas with road markings to show the exact allowed extent of the stall. Enforcement (action 6.1) will be key to success.



Safe pedestrian crossing on a speed table (ITDP)

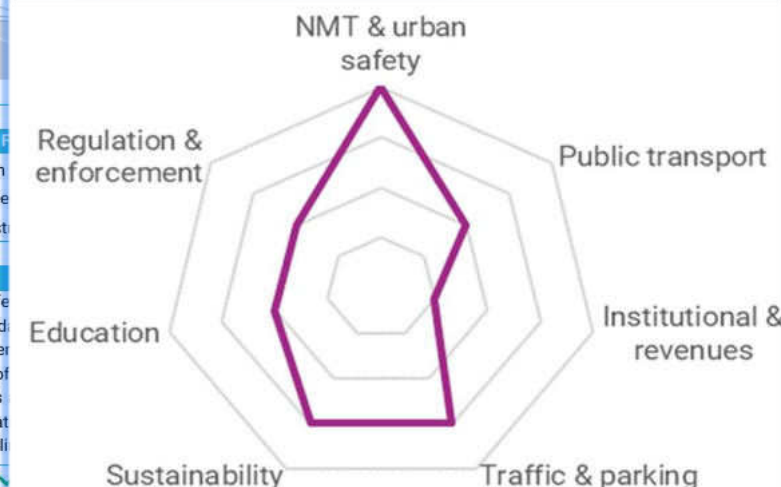


- Street design guidelines preparation
- Various traffic taming features: speed tables, signage, etc.
- Delineation of dedicated spots for street vendors

Targeted objectives

This action aims at improving urban safety for pedestrians, by imposing a more order of the streets, taming traffic around sensitive areas and reducing the high encroachment of activities on public spaces. It also aims at improving traffic conditions (with more segregated modes) and enforcement (with clear delineation of spots).

Level of priority



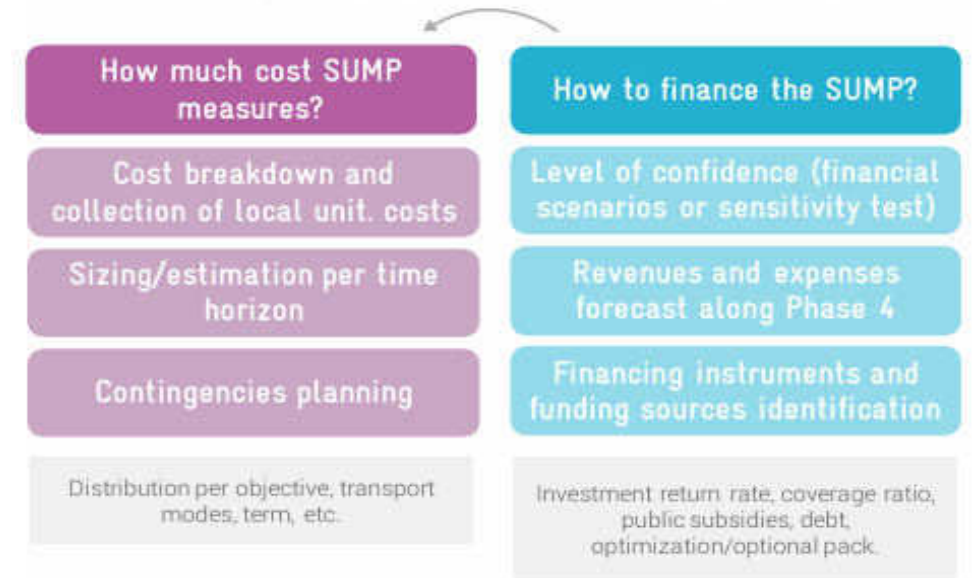


Costs and source of funding

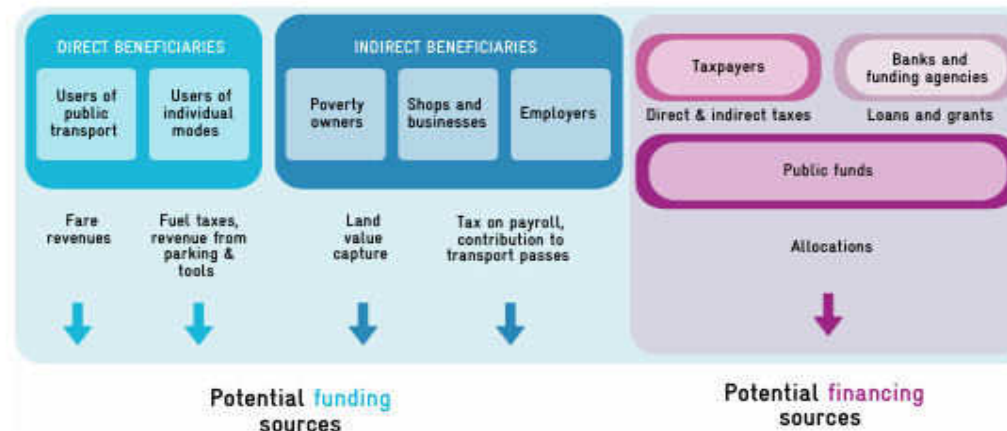
How will the measure be funded and what resources are required?

- **Available resources**, such as local budgets and taxes, national and international grants, and revenue streams from ticket sales, parking fees, and other sources;
- **Potential new financing mechanisms**, such as bonds, land value capture, development charges, and private sector contributions.

Do these measures fit with financial resources?



Are these measures financially sustainable?



How to describe an *action*?



Costs and source of funding

How will the measure be funded and what resources are required?

5.4.1 Funding sources and financing planning

Action or sub-action	Amount (MU\$)	Funding agency
1.1 Development of quality sidewalks	120	DUR or MMDAs
1.2 Shared bicycle system in KNUST (studies)	0.3	OfMA
2.1.A Development of urban streets guidelines	0.4	DUR
2.1.B Extensive road safety program	10	DUR or MMDAs
2.1.C Provision of regulated commercial spots	2	DUR or MMDAs
2.2 Traffic plan preparation	0.4	KMA
2.2 Improvement of 20 junctions (traffic lights)	4	DUR
2.3 Centralised traffic management centre	1	GoG
3.1 Inner ring road dualization	22	GoG
3.2 Development of critical link roads	93	GoG (donor loan)
4.1 Development of on-street parking	0.6	KMA, AskMA, AMMA
4.2 Development of a multi-storey car park (studies)	0.3	KMA
5.0 Restructuration of public transport (studies)	2.5	GKTA
5.0 Restructuration of public transport (monitoring tool)	1	GKTA
5.1 BRT (infrastructure, ITS)	362	GoG (donor loan)
5.1 BRT (rolling stock)	125	GoG (donor loan)
5.1 BRT (studies)	15	GoG (donor loan)
5.2 QBS (infrastructure, ITS)	52	GoG (donor loan)
5.2 QBS (rolling stock)	120	GoG or operator
5.2 QBS (studies)	2	GoG (donor loan)
5.3 QTS (scrapping bonus)	29	GKTA
5.3 QTS (basic infrastructure)	20	GoG (donor loan)

How to describe an *action*?



Responsibles

Who is responsible for implementing and managing the measure?

Aménagements d'espaces piétons

Numéro	MD1.1	MD1.2	MD1.3
Nom	Quartier pilote Centre Ville	Quartier pilote Cité Verte	Quartier pilote Nkolmessong
Horizon de réalisation	2019 - 2020	2019 - 2020	2019 - 2020
Coût	1.9 milliards FCFA	0.7 milliards FCFA	0.7 milliards FCFA
Partie prenante	MOA : MINHOU dans le cadre du PDVIR sur financement Banque Mondiale	MOA : MINHOU dans le cadre du PDVIR sur financement Banque Mondiale	MOA : MINHOU dans le cadre du PDVIR sur financement Banque Mondiale

Numéro	MD2	MD3
Nom	Aménagements à proximité des écoles	Aménagements de trottoirs et itinéraires piétons
Horizon de réalisation	dès 2020	dès 2020
Coût	0,7 milliards FCFA / an	0,7 milliards FCFA / an
Partie prenante	MOA : CUY	MOA : CUY

Yaoundé (Cameroon)

3.3 ASEGURAR EL FINANCIAMIENTO DE UN SISTEMA DE MOVILIDAD SOSTENIBLE Y TRANSPARENTE ACCIÓN 3.3.3 : DEFINIR UNA FISCALIZACIÓN VIRTUOSA EN TÉRMINOS DE IMPACTO MEDIOAMBIENTAL

Contexto

- La Política Nacional de Cambio Climático (2016) conlleva instrumentos fiscales y regulatorios, en particular la creación de un impuesto aplicado al momento del registro o inscripción de los vehículos de motor, de acuerdo con su eficiencia energética.

Objetivos

- Incentivar un cambio modal hacia los transportes públicos, penalizando el uso del carro privado.
- Equilibrar el balance económico del sector de manera permanente.
- Devolver la deuda suscrita para la inversión inicial de los proyectos y contribuir al pago de los intereses de la deuda
- Generar recursos regulares para financiar medidas de política pública, sea social o medioambiental, tal como una tarificación social.
- Lograr a 2030 una reducción de un 2% del total de las emisiones de CO2eq.

Principio de acción

- Definir instrumentos para captar ingresos generados por los usuarios del carro privado:
 - ✓ Fondo para la inversión en los TP financiado por las multas, incluso multas por tema de estacionamiento
 - ✓ Tasa a la compra del vehículo (certificado de matriculación)
 - ✓ Tasa al uso del vehículo : tasa al carburante para compensar costes externos de contaminación o impuesto de circulación (marbete)

Modalidades

- El cuadro abajo detalla las potencialidades representadas por fuente.

Fuentes	Potencial de Ingresos anuales
Beneficiarios indirectos Usuarios de auto	Entre 5 y 18 MUSD

Plazo final	Perímetro	Tipo de acción
2021 2023 2025 2030	GSD	Organización y financiación

ACCION 3.3.3

Actor responsable

- Ministerio de Medio Ambiente
- Ministerio de Energía y minas

Socios

- INTRANT
- CNCCMDL
- Ministerio de Hacienda

Nivel de impacto

- Medioambiental
- Social
- Urbano

Indicadores

- Ratio ingresos sobre cargas global y por cada operador

Santo Domingo (Dominican Republic)

How to describe an *action*?



Responsibles

Figure 96. Recap of leading actors of the SUMP

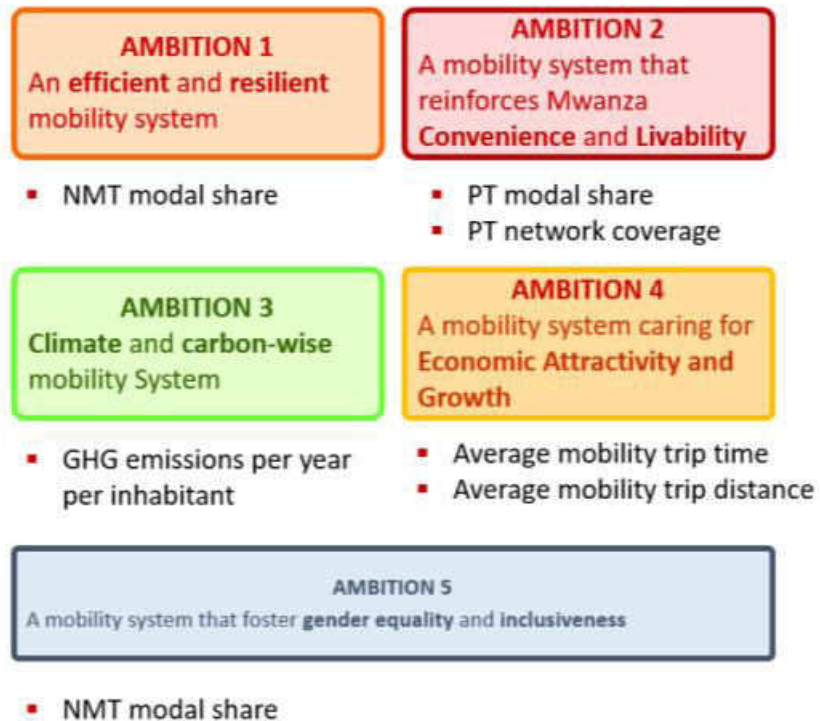
	Urban Planning & NMT	Road Network & Private Vehicles	Public Transport	Digitalization	Environment & air quality	SUMP Actions & Monitoring
Central Ministries	PUPR can support with guidelines.		MOT leads land & rail projects. (cf. BRT1)	Kominfo to share experience from Jakarta		
North Sumatra Province	The province leads by providing framework and monitoring.	The province leads for the monitoring of the maintenance of roads homogeneously throughout Mebidangro.	The province must lead as the main funding agent to gather external financing. The TA would assume this role.	MaaS and other measures without boundaries must be undertaken by province.	The province leads the implementation of environmental measures with more regulatory power and borderless considerations.	The province leads the execution of the SUMP Action Plan with constant monitoring (observatory on urban mobility).
Mebidangro Urban Transport Authority	Most urban measures are at small scale and require the lead of cities /regencies.	The TA would assume this role.		Cities /regencies must lead the digitalization of current angkots and buses.	The TA would assume this role.	
Mebidangro Cities & Regencies	The TA would assume this role.	Most measures fall within city and regency scopes.	Cities and regencies are responsible for necessary land acquisition.	The TA would assume this role.	Cities and regencies must support implementing measures.	

Medan (Indonesia)

How to describe an *action*?



Monitoring indicators



Mwanza

Impacts		Risks	Description	Level
Environmental	● ● ●	Environmental	-	None
Socio-economic	● ● ●	Social	Inhabitants reluctance	Low
Governance	● ● ●	Implementation	Public acceptance	Medium
Novelty	● ● ●	Operational	-	Low
		Political	Depends on regional leadership	Low
		Sovereignty	-	None




Possible locations: Street food center in Jl. Selat Panjane & Jl. Kolonel Sugiono

Entities involved (<u>lead</u> , participant)		Observatory indicators related
DISHUB PUPR BINA MARGA BAPPEDA CIPTA KARYA ATR/BPN DLH BPKAD DPPPA DISPERKUM SATLANTAS DISKOMINFO	OF NORTH SUMATRA MEDAN BINJAI DELI SERDANG KARO CENTRAL GOV.	05. Modal Split of PT and NMT 07. Comfort and Bliss of Mobility 10. Road Congestion and Delays 14. Quality and Livability of Public Space 19. Sidewalks and pedestrian facilities

Medan

How to describe an *action*?



Monitoring indicators

Indicator	Modes	Unit	Perimeter	Period	Baseline	BAU Scenario	SUMP Target
Vision and impact related indicators							
modal share of NMT	NMT	%	Mwanza Inhabitants	10 years	46%	30%	35%
modal share of public transports	BRT, restructured para-transit	%	Mwanza inhabitants	10 years	46%	51%	55%
GHG emissions per year per inhabitant	all	t GHG year per inhabitant	Mwanza	10 years	0.12	0.23	0.11
PT network coverage	PT	%	Mwanza Transport network	5 years	18%	23%	44%
average time of daily trips	all	minutes	Mwanza Inhabitants	10 years	13	11	8
average distance of daily trips	all	km	Mwanza Inhabitants	10 years	8.5	6.8	7
Women in transport sector	all	%	Transport institution and private operators	5 years	< 5%	< 10%	> 35%
Investment indicators							
km of classified roads	N/A	km	Mwanza Road network	Annual	235	433	415
km of primary roads	N/A	km	Mwanza Road network	Annual	42	65	97
km of secondary roads	N/A	km	Mwanza Road network	Annual	71	115	89
km of tertiary roads	N/A	km	Mwanza Road network	Annual	122	253	229
additional km of primary road	N/A	km	Mwanza Road network	Annual	-	23	55
additional km of secondary road	N/A	km	Mwanza Road network	Annual	-	44	18
additional km of tertiary road	N/A	km	Mwanza Road network	Annual	-	131	107
% of primary roads	N/A	%	Mwanza Road network	Annual	18%	15%	23%
% of secondary roads	N/A	%	Mwanza Road network	Annual	30%	27%	21%
% of tertiary roads	N/A	%	Mwanza Road network	Annual	52%	58%	55%
km BRT infrastructure	BRT	km	Mwanza PT network	Annual	-	-	52

Action sheets



ACTION 5.3: DEVELOPMENT OF QUALITY TROTRO SERVICES

PUBLIC TRANSPORT

Description

Quality Trotro Services (QTS) are the third level of hierarchy of the transport network and will consist of the far most of its routes. The development of these new services is based on the improvement of the existing system, by enhancing regulation from the public authorities and providing renewed rolling stock to improve safety and comfort conditions.

Quality Trotro Services encompasses several features, the main ones being:

- Enhancement of control and regulation from public authorities: more incentive to enter the legal system thus tackling the wawa issue, mandatory use of the monitoring tool (action 5.0)
- Ambitious vehicles renewal program with an easier access to loans from banks and donors (the Transport Authority engages loans with banks and the vehicle owners contract loans with the Transport Authority), with a scrapping bonus to encourage renewal (example of AFTU model in Dakar), thus encouraging operators to join the legal system
- Improvement of stations, formalisation of stops with basic infrastructure, development of two new terminals in KMA CBD (plus one terminal included in action 4.2)



Simple stop point in Dakar (CETUD)



Renewed "Tata" in Dakar (AFTU)

Features included

- Provision of approximately 5000 new minibuses
- Basic infrastructure: improvement works of existing stations, development of formalised stops
- Construction of two new terminals in KMA CBD
- Necessary studies, including the definition of the regulation and fleet renewal program framework and business model

Targeted objectives

This action aims to enhance the minibus operation in the metropolis, which will be the third and last level of hierarchy in the transport network. It will enhance regulation and enforcement of public transport operation, thus tackling the issue of "wawa" causing safety and congestion issues. It will also offer safer travel conditions to passengers with renewed vehicles and a better quality of service.

Level of priority



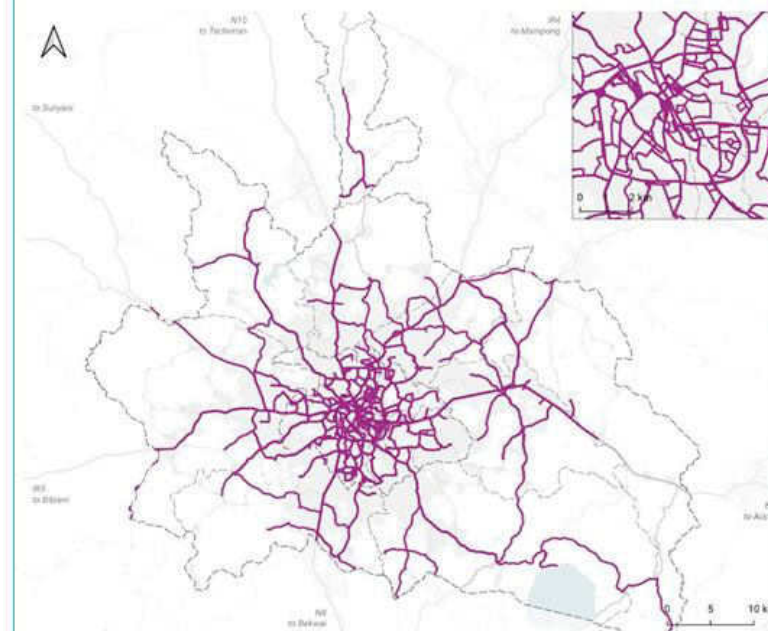
Action sheet, Kumasi (Ghana)

Investment cost		Funding																	
 <u>Costing includes:</u> Scrapping bonus for 5,000 vehicles: 175 M€ (29 M\$) Basic infrastructure: 120 M€ (20 M\$) 2 new terminals: 65 M€ (11 M\$) Necessary studies: 3 M€ (0.5 M\$) TOTAL: 360 M€ (60 M\$)	Transport Authority (from the GoG) Donor loan contracted with the GoG Donor loan contracted with the GoG Donor loan contracted with the GoG																		
Implementing agency																			
Transport Authority, in partnership with DUR, MMDAs, operators																			
Operation costs		Operating mode																	
 1 \$/veh.km, 15 Mveh.km/year → 1,050 M€ (175 M\$) per year	Regulated private operation, without subsidies (coverage of operation costs by passengers fares)																		
Feasibility constraints																			
Technical & environmental Need to find available suited land for terminals in KMA CBD 	Social Influence on the transport employment market 	Institutional Potentially difficult negotiations with operators 																	
Necessary previous actions		Necessary studies																	
Public transport network restructuring (action 5.0)		Feasibility studies and detailed design of the terminals Definition of the fleet renewal program conditions and funding mechanisms																	
Implementation phasing																			
 The objective is to implement Quality Trotro Services to all public transport routes (except BRT and QBS routes) by 2040. However, this program is likely to be phased through different waves of vehicle renewal considering its large extent. For example, in Dakar, around 1,600 vehicles were renewed between 2005 and 2016 during three phases. Considering the urgency of the action and the great benefits it can trigger, it should start as soon as possible once the public transport network restructuring study is finished.																			
Calendar	Quick		Short				Medium					Long				Continuous commissioning of vehicles during the implementation phases			
	Year	24	25	26	27	28	29	30	31	32	33	34	35	36	37		38	39	40
	Phase 1																		
	Phase 2																		
	Phase 3																		

Location and extent

Quality Trotro Services should cover the entire area by 2040 and all routes (except BRT and QBS corridors). It is estimated that around 5,000 vehicles should be renewed by 2040.

Priority should be given on renewal of vehicles for feeder services to BRT routes. QTS can also prefigure QBS and BRT routes in the short-term horizon, and then will be transferred to another route when QBS/BRT on this route is commissioned.



QUALITY TROTRO SERVICES DEVELOPMENT

— Quality trotro service route





Santo Domingo (Dominican Republic)

3.3 ASEGURAR EL FINANCIAMIENTO DE UN SISTEMA DE MOVILIDAD SOSTENIBLE Y TRANSPARENTE

ACCIÓN 3.3.3 : DEFINIR UNA FISCALIZACIÓN VIRTUOSA EN TÉRMINOS DE IMPACTO MEDIOAMBIENTAL

Contexto

- La Política Nacional de Cambio Climático (2016) conlleva instrumentos fiscales y regulatorios, en particular la creación de un impuesto aplicado al momento del registro o inscripción de los vehículos de motor, de acuerdo con su eficiencia energética.

Objetivos

- Incentivar un cambio modal hacia los transportes públicos, penalizando el uso del carro privado.
- Equilibrar el balance económico del sector de manera permanente.
- Devolver la deuda suscrita para la inversión inicial de los proyectos y contribuir al pago de los intereses de la deuda
- Generar recursos regulares para financiar medidas de política pública, sea social o medioambiental, tal como una tarificación social.
- Lograr a 2030 una reducción de un 2% del total de las emisiones de CO2eq.

Principio de acción

- Definir instrumentos para captar ingresos generados por los usuarios del carro privado:
 - ✓ Fondo para la inversión en los TP financiado por las multas, incluso multas por tema de estacionamiento
 - ✓ Tasa a la compra del vehículo (certificado de matriculación)
 - ✓ Tasa al uso del vehículo : tasa al carburante para compensar costes externos de contaminación o impuesto de circulación (marbete)

Modalidades

- El cuadro abajo detalla las potencialidades representadas por fuente.

Fuentes	Potencial de ingresos anuales
Beneficiarios indirectos Usuarios de auto	Entre 5 y 18 MUSD

Plazo final

- 2021
- 2023
- 2025
- 2030

Perímetro

- GSD

Tipo de acción

- Organización y financiación

ACCION

3.3.3

Actor responsable

- Ministerio de Medio Ambiente
- Ministerio de Energía y Minas

Socios

- INTRANT
- CNCCMDL
- Ministerio de Hacienda

Nivel de impacto

- Medioambiental

- Social

- Urbano

Indicadores

- Ratio ingresos sobre cargas global y por cada operador



SUSTAINABLE URBAN MOBILITY PLAN MEBIDANGRO

ACTION 01 B

CAR FREE ZONES (TEMPORARY/PERIODICAL CLOSURE)



Theme Urban Planning & Non-Motorized Transport

Goal

This measure aims to lower the volume of traffic passing through a certain road segment during a certain time period to increase the share of PT and NMT temporarily and lower the usage of private vehicle. The implementation of this measure is also expected to promote healthier lifestyle by encouraging active mobility.

Background

Traffic in Mebidangro is forecasted to reach $\pm 8,4$ million vehicles in 2035. This will directly affect the traffic situation with increased congestion and associated pollution. It was observed that the peak hour range from 07:30-08:30 in the morning and 17:00-18:00 in the evening is counting for $\pm 10\%$ of the daily traffic. An intervention is needed to ease the traffic during peak hours.

Strategy

Since travel patterns are different on weekdays and weekends, different strategies are proposed:

- **Weekday:** selected location that can induce mode shift to public transport and the closed segment need to be served by existing public transport route
- **During weekend:** selected locations are necessary to be nearby any public transport route and have sufficient open area for the inhabitant to do sports and other activities, and be near attraction zones.

Expected Output and Outcomes

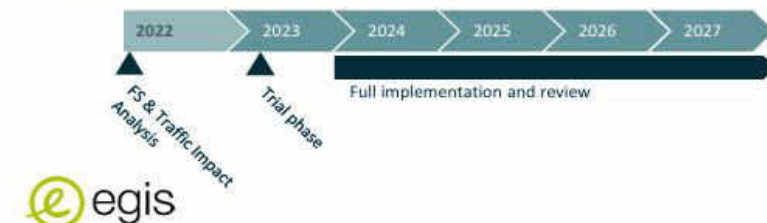
Reduce GHG and pollutants emissions and increase livability of section, potential to increase economic activities, develop NMT and pedestrian modes. Measurable impacts are marginal. The main benefit being the awareness raising of the possibility to travel without private vehicles.

Cost estimation and funding

An estimated IDR 1,0-1,5 billion is needed to conduct studies (impact) and implement new traffic management. Operation costs are estimated at IDR ± 800 million per year (assuming 30 personnel needed to manage the traffic). Source of funding: APBD (Municipal Budgets)

Schedule

The timeline is quite short as the action only requires a traffic study to confirm the positive effect on road traffic.



Impacts

Environmental	●	●	●
Socio-economic	●	●	●
Governance	●	●	●
Novelty	●	●	●

Risks

Description	Level
Environmental	None
Social	Inhabitants reluctance
Implementation	Public acceptance
Operational	Low
Political	Depends on regional leadership
Sovereignty	None



Possible locations: Street food center in Jl. Selat Panjang & Jl Kolonel Sugiono

Entities involved (lead, participant)

Entities involved (lead, participant)	OF	North Sumatra
DISHUB		MEDAN
PUPR		BINJAI
BINA MARGA		DELI SERDANG
BAPPEDA		KARO
CIPTA KARYA		CENTRAL GOV.
ATR/BPN		
DLH		
BPKAD		
DPPPA		
DISPERKIM		
SATLANTAS		
PERWAKILAN		

Observatory indicators related

- 05. Modal Split of PT and NMT
- 07. Comfort and Bliss of Mobility
- 10. Road Congestion and Delays
- 14. Quality and Livability of Public Space
- 19. Sidewalks and pedestrian facilities



1. Prioritise feasibility, not only ambition — Assess measures against feasibility, institutional capacity, financing and acceptability.

2. Build integrated packages, not isolated projects — Measures should reinforce each other and align with wider urban-planning objectives.

3. Define implementation conditions at the planning stage — Responsibilities, financing, timelines and monitoring should be identified before adoption.

4. Use the SUMP as a learning cycle — Monitoring and evaluation should feed future adjustments and SUMP updates.



1. Which measures should be selected for the action plan?

2. How do measures interact with one another?

3. How will measures be implemented, financed, and monitored?

4. Who will do what, when, and with what priority?



The **action plan** concretely proposes a list of projects that will be implemented in the next 15 years.

Implementation can start with **quick wins**, while preparing more complex mid- and long-term projects.



Thank you!