# Sustainable Urban Mobility Principles and Planning

GIZ: Transformative Urban Mobility Initiative (TUMI) and Mobilize Your City (MYC)



Holger Dalkmann

Abuja, Nigeria SSATP – 02.07.2018

# Agenda

- Introduction Sustainable Urban Transport: Current Challenges and Internationally Acknowledged Examples (Holger Dalkmann (on behalf of GIZ))

Initiatives on Urban Mobility:

- Transport Technology Research Innovation for International Development (T-TRIID)., Bernard Obika (IMC)
- Presentation on Mobilize Your City (MYC) and Transformative Urban Mobility Initiative (TUMI)
- Questions and Answers

- National Urban Mobility Planning and Policy (Holger Dalkmann)
- Plenary Discussion

# Discussion

How to scale urban mobility in African countries through national mobility policy?

How to spread innovative solutions for urban mobility in African cities?

What new collaborations and partnerships are needed to scale up sustainable urban mobility in Africa?

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# Urban Transport: Current Challenges and Internationally Acknowledged Examples


SUTP. 15 years serving the sustainable urban mobility community

Mobilise Your City

Transformative Urban Mobility INITIATIVE

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# *The adverse impacts of growth in motorization*

**- in economic, environmental and social terms - are ruining the quality of life in our cities and our global climate.**

Imagine China, 2010

Carlos Pardo, 2008

# Challenges in cities around the world

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In most cities, mobility is still dominated by personal motorized transport.

Many people choose cars to move around…



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# Challenges in developing cities

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Road transport is a major contributor to air pollution and climate change.

Transport contributes to approx. 25% of energy-related $CO_2$ emissions and is still growing!

# Challenges in cities around the world

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Worldwide, 1.3 Million road deaths and up to 50 Million people injured per year

# Challenges around the world



…where is the space for people?
the silent pedestrian, the invisible cyclist must be seen


# Failures in Urban and Transport Planning

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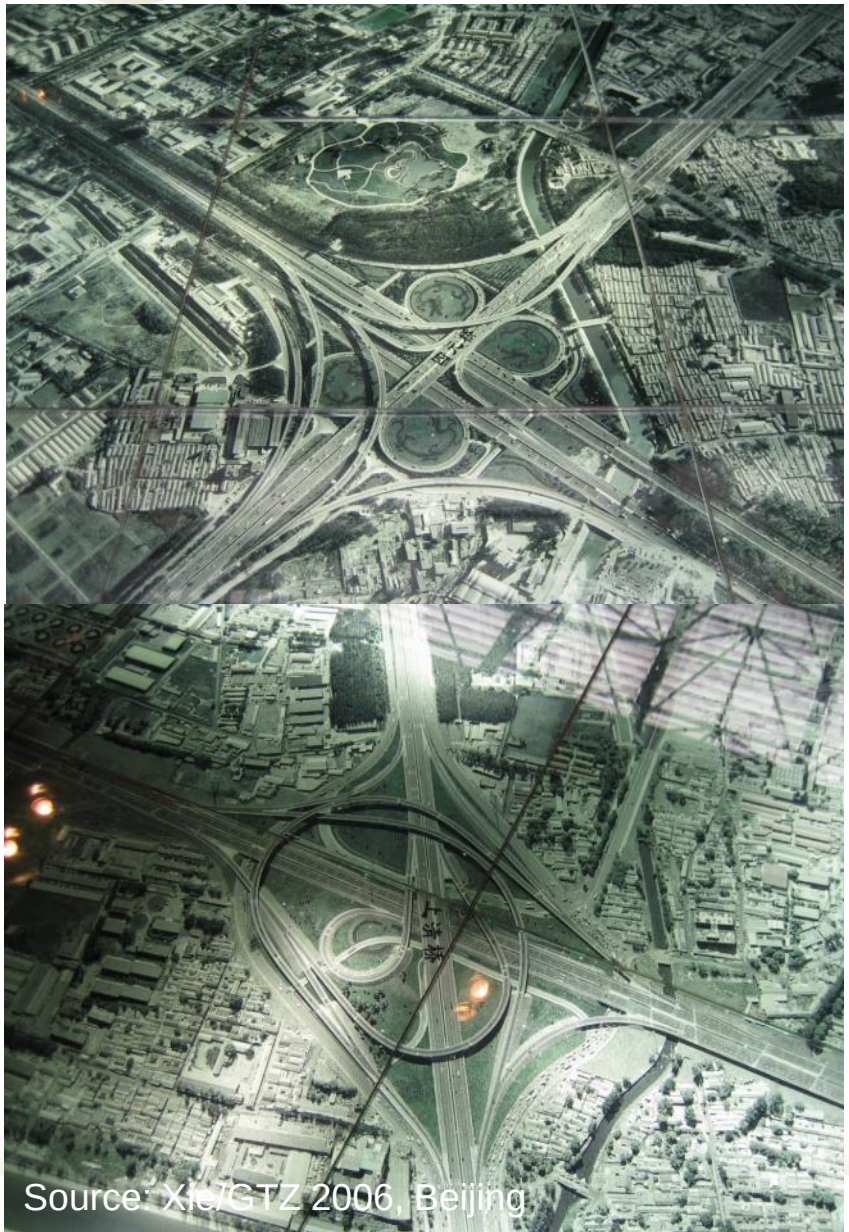
**Trends in cities**

- Rapidly increasing car ownership and use
- Declining mode share of public transport, walking, and cycling
- Declining city centres; rapid decentralisation into car-oriented suburban sprawl

**Focus was given to road design:**

- More infrastructure for cars
- More space for motorized vehicles, which let to less density and often to sprawl
- Unsustainable focus



Source: Xie/GTZ 2006, Beijing

# Possible approaches…

**Alternative 1:**

**Traditional Approach**

**Automobile centered Approach**

Known as

**Alternative 2:**

**Sustainable Approach**

**Contemporary Approach, planning to improve access , planning for people, *moving people not cars***

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# How does this translate into revised planning approaches and policies leading to more livable cities?

# Solution: What are the options for making cities more liveable?

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**Paradigm shift**

Achieving greater sustainability in transport means...

... investing in schemes and initiatives that improve **accessibility** and developing more liveable cities based on non-motorized transport and public transport (and its integration).

Transmilenio, 2005

Carlos Pardo, 2008

Claudio Varano, 2004

# AVOID/Reduce

*Reducing the need to travel*

# SHIFT

*Changing mode choice or at least keep the mode share of NMT*

# IMPROVE

*Increasing the energy efficiency of vehicles, fuels and transport operations*

# 9 Principles for Sustainable Urban Mobility

1. Strong political will and longer term goals
2. **Create strong and powerful Metropolitan Planning Authorities (covering the greater Metropolitan Area)**
3. **Urban development and integrated urban transport and urban land use plans**
4. Public (Service) Transport Reform
5. **Enhance and maintain safe Non Motorized Transport Infrastructure**
6. Integrate all means of Public Transport (incl. Informal Transport) with NMT and shared Mobility Offers
7. Transport Demand Management
8. Financing Sustainable Urban Transport
9. Sustainable Urban Mobility Plans

# Principle 2

## Create strong and powerful Metropolitain Planning Authorities (covering the greater Metropolitan Area)

# Overall Challenges in Dev. Cities

## Lack of a single lead Authority

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- Under-resourced institutions, lacking in overall capacity to plan, execute, maintain and deliver affordable sustainable urban transport.
- Fragmented policy formulation and implementation with lack of co-operation among multiple ministries and transport agencies. In many cities between 15 and 40 different institutions involved in UT planning and management.
- Lack of finances for transport infrastructure and public transport services resulting in extensive institutional and governmental support, concessions and subsidies.
- Insufficient financial procedures and accounting/audit systems.
- Procedural constraints that impede the delivery of urban transport infrastructure and services.
- Inadequate legal and enforcement frameworks and capacities needed for urban transport and land-use developments.
- Absence of comprehensive information systems and public participation.

*There is an urgent requirement for all metropolitan areas to develop integrated urban transport planning authorities (such as UMTAs), with the target to overcome fragmented and often unfocused planning by the previous multilevel horizontal and vertical Authorities*

Examples:

- LTA, Singapore
- TfL, London
- Other European Cities
- Curitiba
- Nairobi

# Nairobi

- Establishment of the Nairobi Metropolitan Area Transport Authority, (NaMATA), was recommended by the integrated transport policy in 2012, to address the transport challenges in the Nairobi Metropolitan Area, (NMA).
- The establishment is an Institutional and regulatory reform, aimed at the establisment of an integrated, effective, safe and sustainable public transport system within the NMA.

# Nairobi

## (1) Timing

- The establishment was timely because the economic loss was increasing due to the increased congestion as a result of the growth of the City.
- The establishment was supported by both the Kenya Government and development partners who realized the need of an institution mandated to address the transport matters that were being dealt with by different government institutions

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# Nairobi

## (2) Framing the Issues

- The establishment was done through a Consultative process cutting across both levels of government, i.e. the National Government and the five Counties that constitute the NMA, namely:- Machakos, Kajiado, Kiambu, Muranga and the Nairobi City County.
- Communication was key in order to get the Counties support
- The benefits and goals of NaMATA were presented to different groups in the same way.
- Their views were then captured and incorporated in the bill establishing NaMATA
- The economic, organizational, environmental, healthy, and social impacts were all explained to the groups

# Principle 3

## Urban development and integrated urban transport and urban land use plans

# The principles of the sustainable approach

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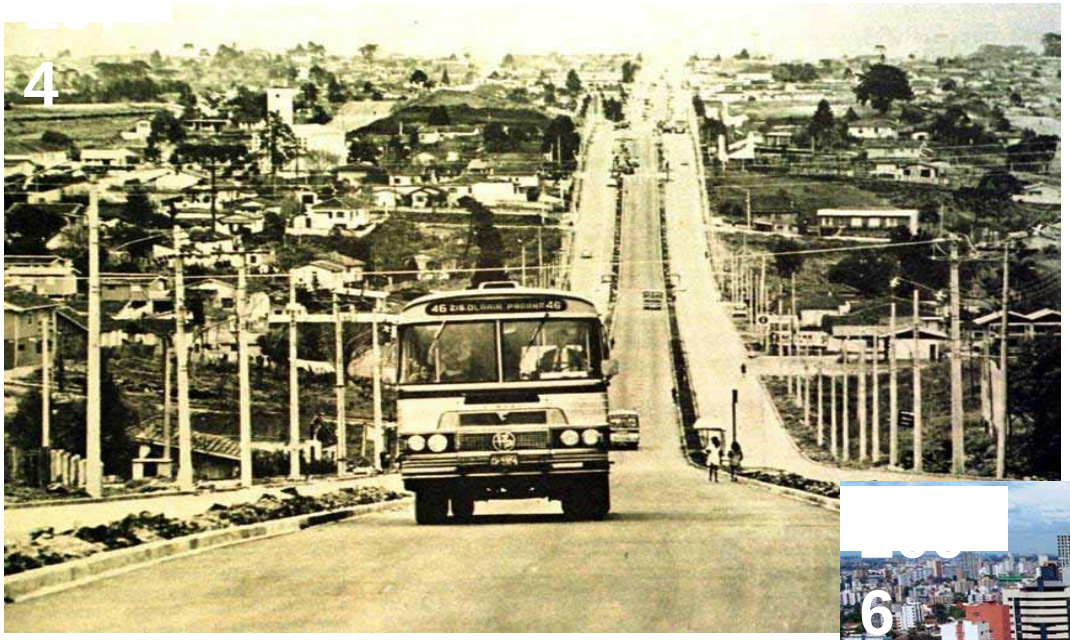
High density, compact development

Mixed land uses

Transit oriented development

Pedestrian / NMT scale of development

# TOD Case: Curitiba, Brazil




# The case of Curitiba: land use and transport

# … case of Curitiba

## TOD effects mode shift …

- 28% of Curitiba's BRT riders previously travelled by car.
- Curitiba's BRT has caused a reduction of about 27 million auto trips per year, saving about 27 million litres of fuel annually.
- Compared to eight other Brazilian cities of its size, Curitiba uses about 30% less fuel per capita, resulting in one of the lowest rates of ambient air pollution levels in Brazil.
- Today about 1,100 buses make 12,500 trips every day, serving more than 1.3 million passengers—50 times the number from 20 years ago.

Source: http://www.urbanhabitat.org/node/344

## Principle 4

# Public (Service) Transport Reform

# Status Quo in most Developing Cities

- Insufficient physical integration of various modes (Rail, Metro, Bus, informal PT) and between PT and NMT
- No integrated and transparent time schedules
- Insufficient cooperation between PT operators
- Signage, customer information systems on PT options, arrival times , connecting services , and fares not appropriate ,and therefore discouraging PT use
- Each change of mode normally requires the purchase of another ticket
- No uniform service level standards among modes and operators

# Unattractive public transport systems

- Insufficient physical integration of various public transport modes and between public transport, walking, cycling and private car
- No integrated and transparent time schedules
- Signage, customer information on timetables (Metro Rio), connecting services and fares not appropriate

→ **Discouraging the use of public transport**



# What do citizens want?

- ✓ Convenience
- ✓ Easy Access
- ✓ Comfort
- ✓ Frequent Service
- ✓ Rapid journey
- ✓ Safety & Security
- ✓ Customer Service
- ✓ Affordability
- ✓ Have a network

**Public Transport should be designed around the customer and not around a technology**

# The innovative and successful approach

**Step 1. Design a system from customer's perspective**

Rapid travel time

Few transfers

Frequent service

Short walk to station from home / office

Full network of destinations

Low fare cost

Safe vehicle operation

Secure environment

Comfortable and clean system

Friendly and helpful staff

**Step 2. Evaluate customer-driven options from municipality perspective**

Low infrastructure costs

Traffic reduction benefits

Environmental benefits

Economic / employment benefits

Social equity benefits

City image

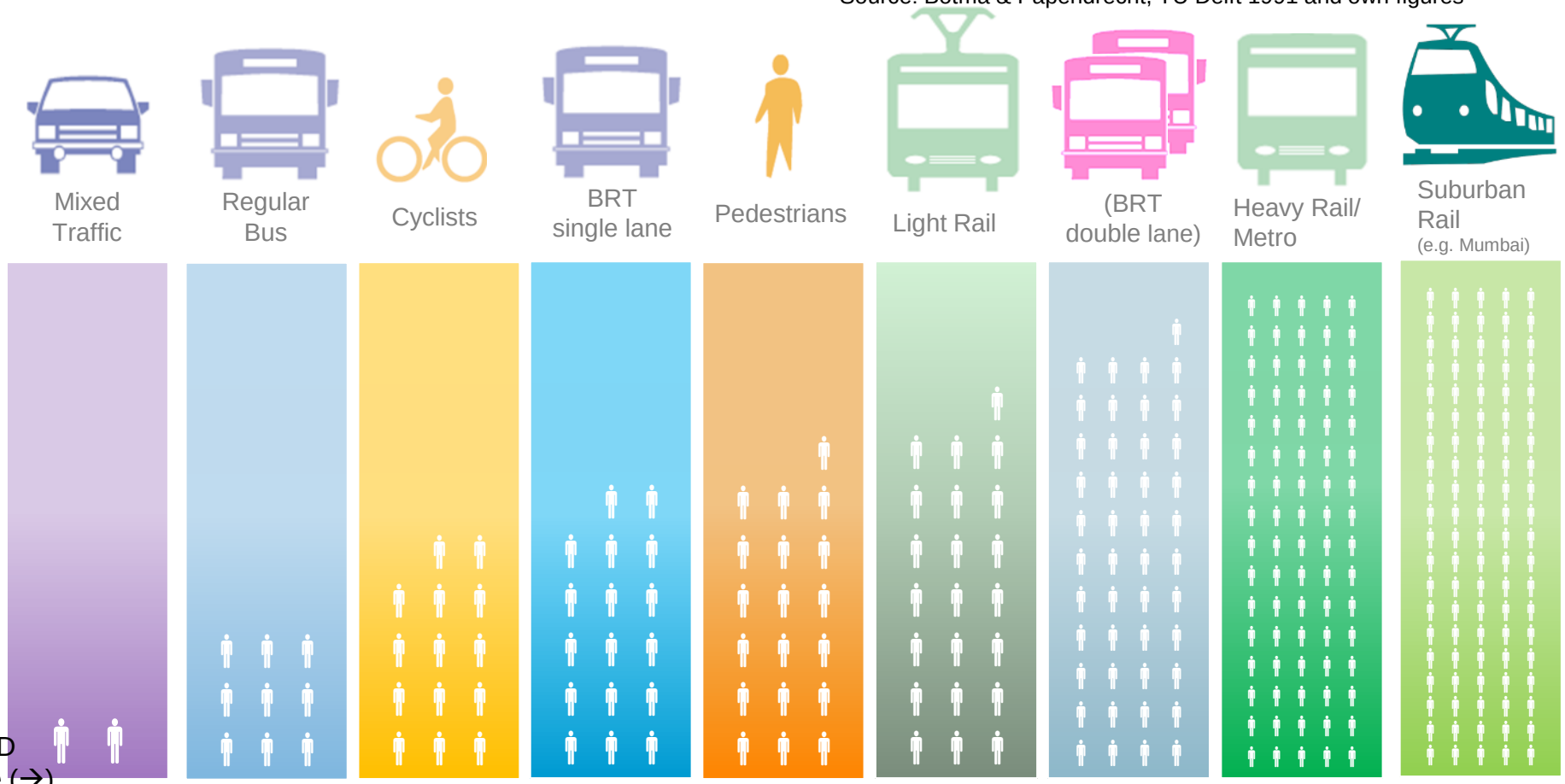
**Step 3. Decision**

**Technology decision based on customer needs and municipality requirements**

# Why Public transport Priority? Corridor Capacity

(people per hour on 3.5 m wide lane in the city – PPHPD [PAX/hour/direction])

Source: Botma & Papendrecht, TU Delft 1991 and own figures




| | Mixed Traffic | Regular Bus | Cyclists | BRT single lane | Pedestrians | Light Rail | (BRT double lane) | Heavy Rail/ Metro | Suburban Rail (e.g. Mumbai) |
|---|---|---|---|---|---|---|---|---|---|
| PPHPD Range (→) | 1500-2000 | 5000 | 14000 | 9000 | 19000 | 18000 – 20000 | | 40000 – 60000 | 60000 – 90000 |
| Maximum PPHPD achieved& where (→) | 2000 | 8000 | 14000 | 16000, Curitiba | 19000 | 20000 | 43000, Bogota | 80000, HKK | >100000, Mumbai |

Equivalency road width: In order to carry 20,000 automobile commuters PHPD, a highway must be at least 18 lanes wide. (assumption 1.2 passengers per automobile)

# Comparing the costs

**BRT**
**US$ 0.5 – 15 millon / km**

**Tram**
**US$ 10 – 25 millon / km**

**Light Rail Transit (LRT)**
**US$ 15 – 40 millon / km**

**Urban commuter rail**
**US$ 25 – 60 millon / km**

**Elevated rail**
**US$ 50 - 125 millon / km**

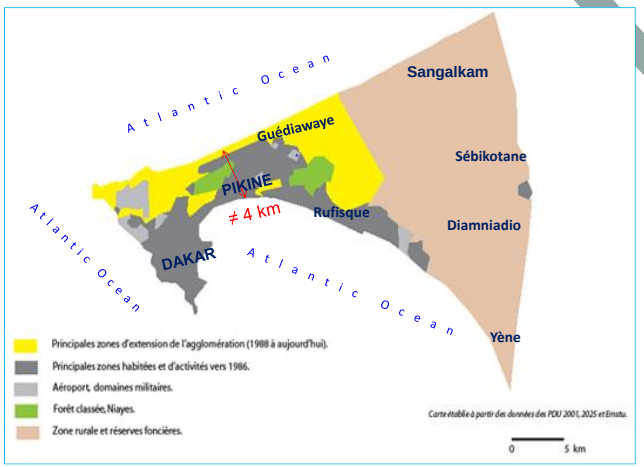
**Metro**
**US$ 60 millon – 320 millon / km**

Image source: Manfred Breithaupt

Lloyd Wright

# Vue d'ensemble

- **Croissance démographique et contraintes de la mobilité**
  1. Dakar : 550 km², 0.3% du territoire national 3,5 M d'hbts en 2017 – 5 M en 2030 ;
  2. 7,2M de déplacements par jour, congestion automobile avec 72% du parc national (croissance de +10% par an), part des TC dominante dans les déplacements motorisés (80%).
- **Composante 1 : Infrastructure et Equipements**
  1. Plateforme BRT y/c stations, pôles d'échanges et parcs relais
  2. 2 voies centrales exclusivement réservées aux bus sur un linéaire de 19 km entre le centre et la périphérie
  3. Rétablissement des voies pour la circulation générale et le stationnement
  4. Trottoirs et aménagements paysagers de façade à façade
- **Composante 2 : exploitation et systèmes**
  1. Matériel roulant
  2. Systèmes d'aide à l'Exploitation (SAE)
  3. Systèmes d'information voyageurs (SIV)




# Principle 5

Enhance and maintain safe Non Motorized Transport Infrastructure

# SPACE: Priority


Question:

Where is the footpath?

# SPACE : Enjoyable

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It is a footpath, not a stair case

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# SPACE: Comfort

Pedestrian overpasses uncomfortable
and people seldom use them.

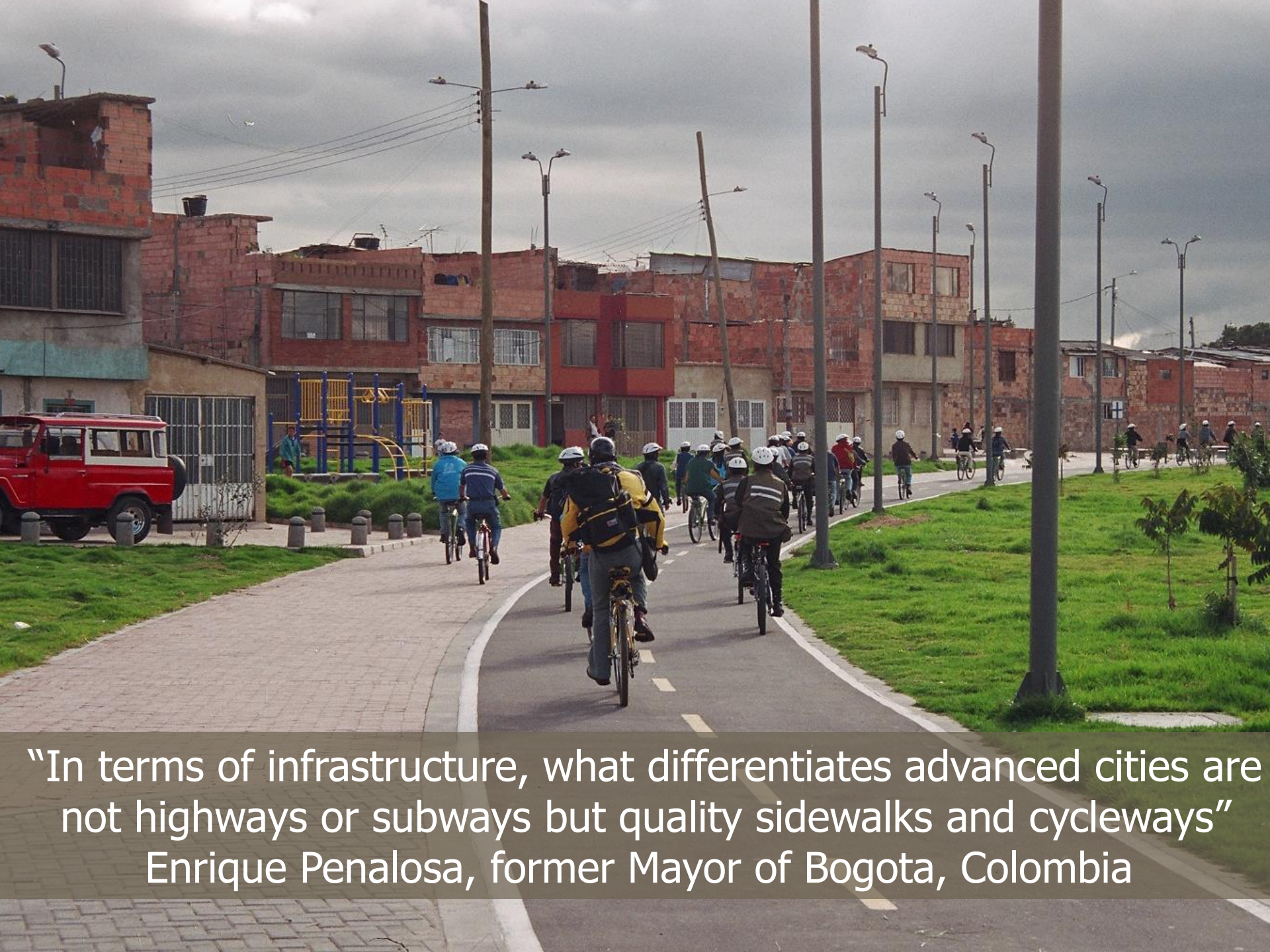
Manfred Breithaupt, 2006


Judiza Zahir, 2008


Manfred Breithaupt, 2006

Li Shanshan and Liu Shaokun, 2010


Armin Wagner, 2006



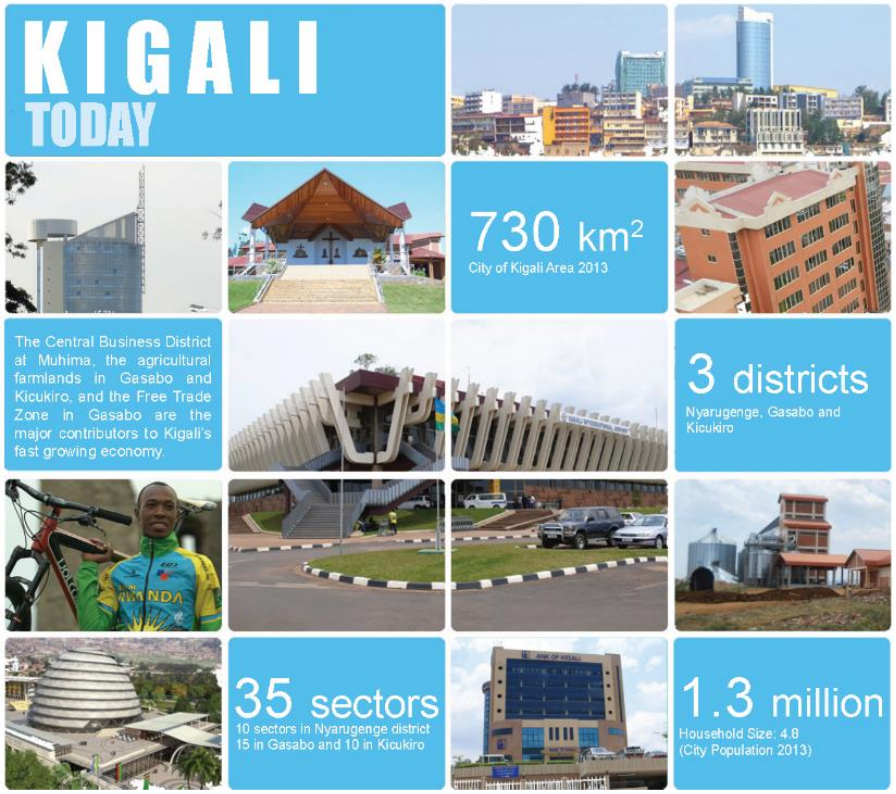
"In terms of infrastructure, what differentiates advanced cities are not highways or subways but quality sidewalks and cycleways"
Enrique Penalosa, former Mayor of Bogota, Colombia

# Kigali – Non Motorized Transport

## Overview

- In August,2015, the first pedestrian corridor was introduced in the busiest vehicular traffic road in the CBD of Kigali City. The Corridor has 450m of length and is surrounded by commercial activities such as banks and shops and City of Kigali's office (City Hall). The corridor aims at becoming the main vibrant, diversified, social and inclusive public space of the city where people from different backgrounds come together free from car traffic.

- Innovation: Decongesting the CBD: pulling people out of their cars - people oriented city



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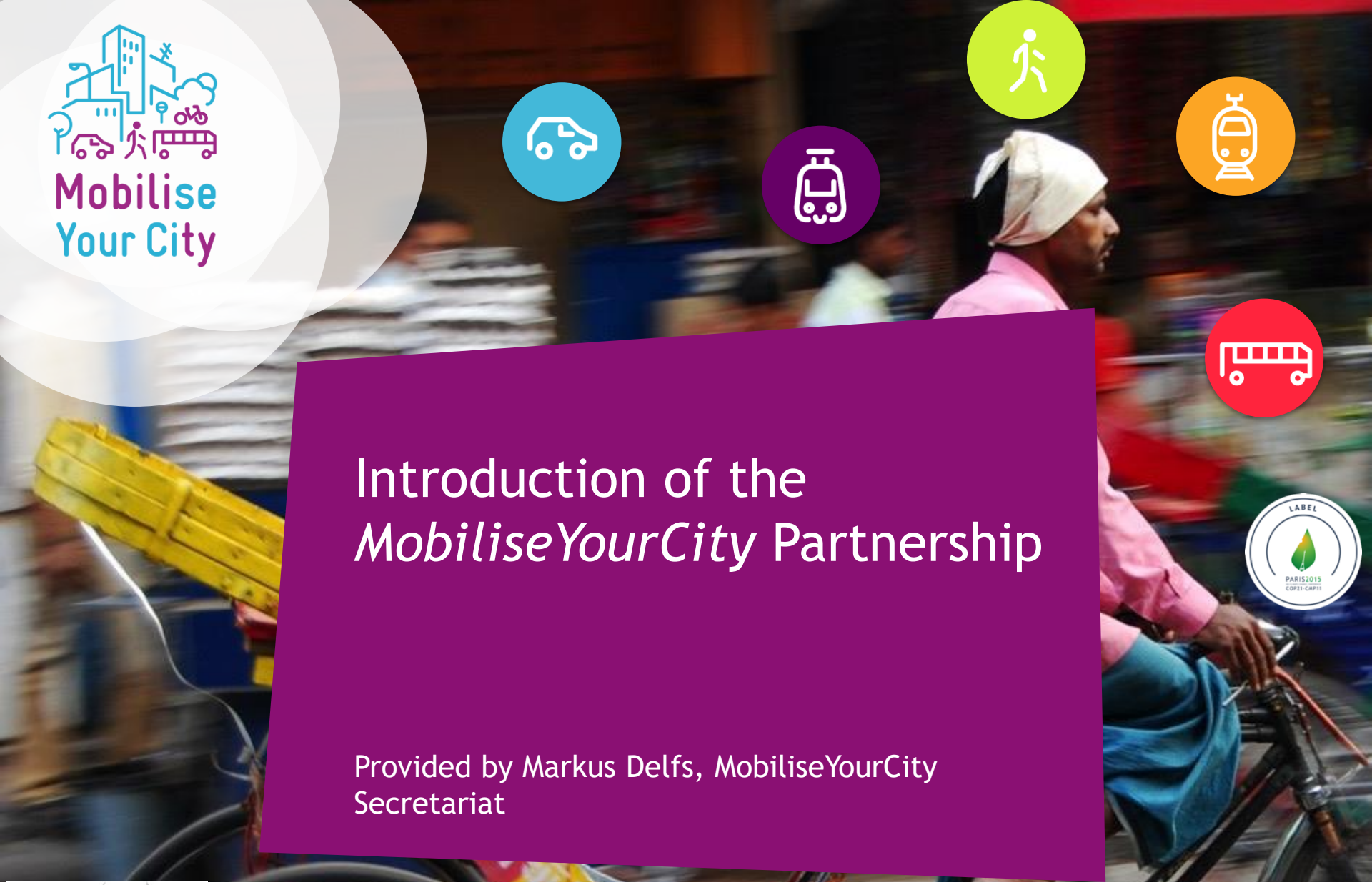


Mobilise Your City

# Introduction of the *MobiliseYourCity* Partnership

Provided by Markus Delfs, MobiliseYourCity Secretariat

European Commission
Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE L'ENVIRONNEMENT, DE L'ÉNERGIE ET DE LA MER
FFEM
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
of the Federal Republic of Germany
ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie
AFD
Cerema
CODATU
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

# MobiliseYourCity: Objectives and Goals

**MobiliseYourCity focusses on Sustainable Urban Mobility Planning.** It supports cities and national governments in emerging and developing countries to plan sustainable urban mobility.

**MobiliseYourCity is a global partnership** launched at COP21. It is one of 17 international transport initiatives under the **UNSG/UNFCCC action agenda** (GCAA). It assists beneficiaries in achieving their National Determined Contributions (**NDCs**).

**MobiliseYourCity contributes** to the **New Urban Agenda** and **UN's 2030 Agenda**, specifically Sustainable Development Goal (SDG) 11: Make cities inclusive, safe, resilient and sustainable.

## Quantitative goals:

- **≥ 100 cities** acknowledged MobiliseYourCity and the need to implement ***Sustainable Urban Mobility Plans (SUMPs)*** targeting >50% CO2 until 2050
- **≥ 20 national governments** acknowledged MobiliseYourCity and the need to implement **National Urban Mobility Policies & Investment Programs (NUMPs)**

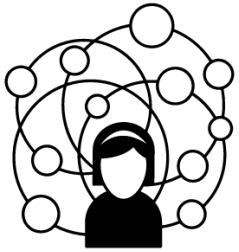
# MYC Partners

## Contributing Partners

are either direct donors (providing funds or technical assistance) or implementing agencies managing delegated funds;

## Beneficiary Partners

are local authorities or national government from emerging or developing countries, benefiting from funding or technical assistance under the Initiative;



## Knowledge and Networking Partners

support the initiative in various ways.

# MobiliseYourCity Contributing Partners

## Undertaken with support from:

European Commission

FFEM

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE ET SOLIDAIRE

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
of the Federal Republic of Germany


## Implementing Partners:

AFD

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ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

Cerema

CODATU

## Endorsed by:

PARIS2015
COP21·CMP11

Partnership on Sustainable Low Carbon Transport

## Knowledge and Network Partners:

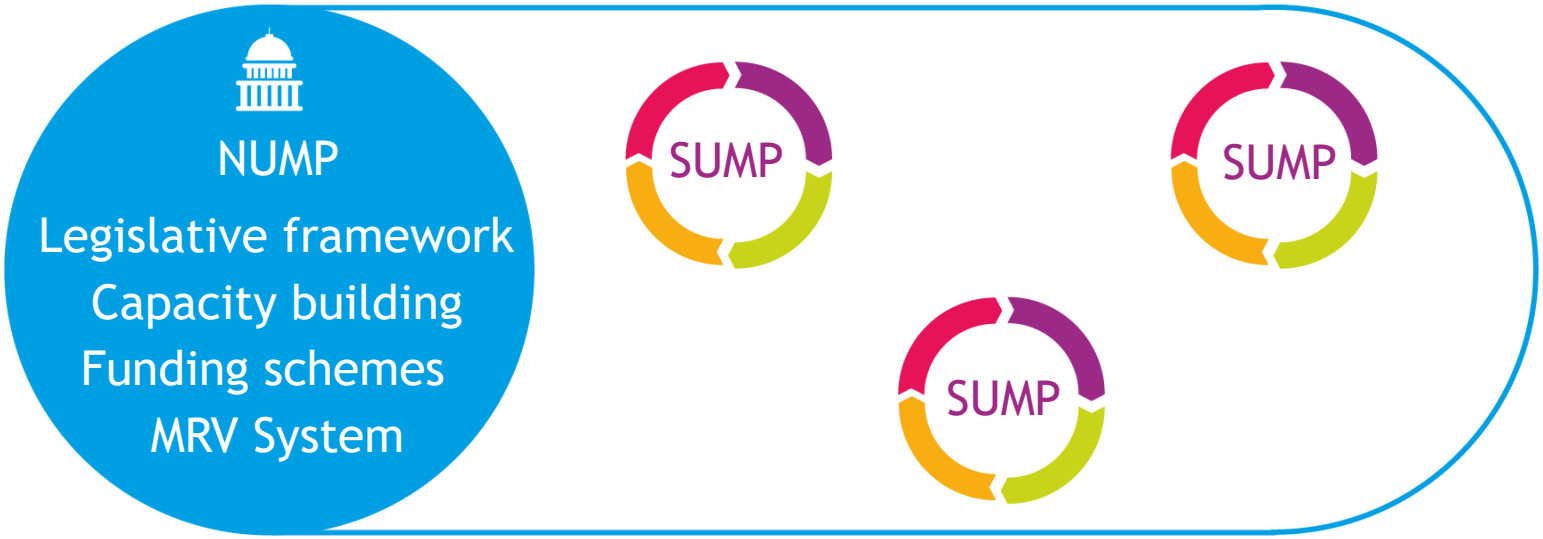
UN HABITAT
FOR A BETTER URBAN FUTURE

UCLG
United Cities and Local Governments

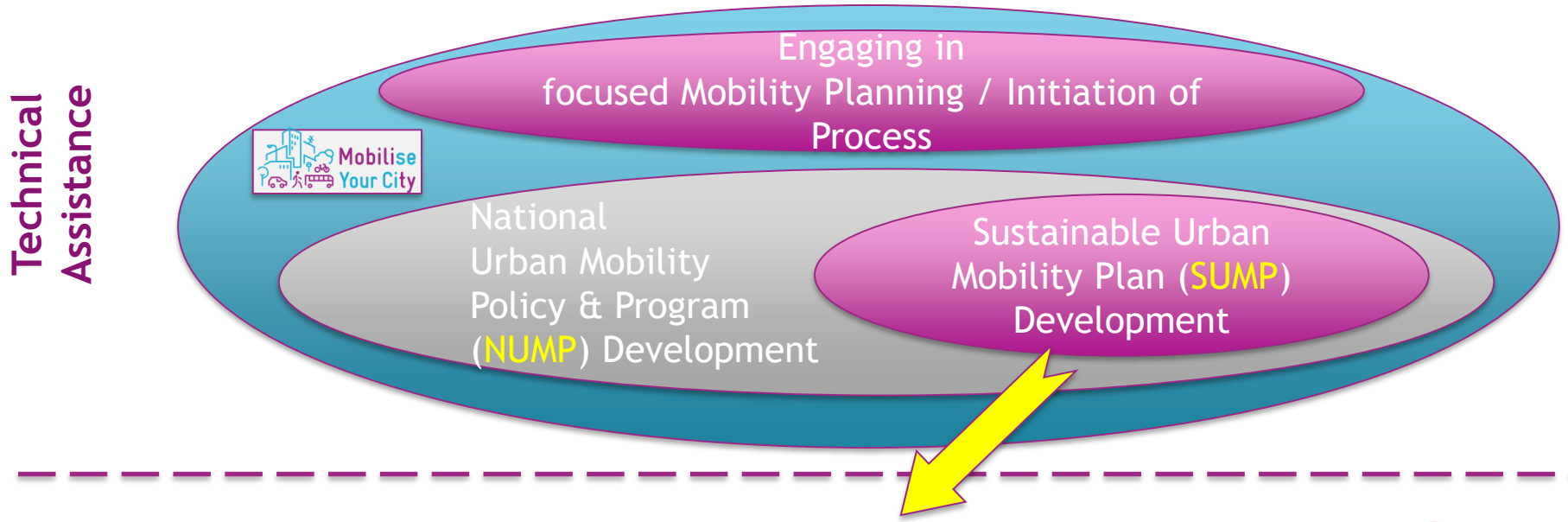
EUR MED
TRANSPORT PROJECT

# NUMPs:
# National Urban Mobility Policies & Investment Programs

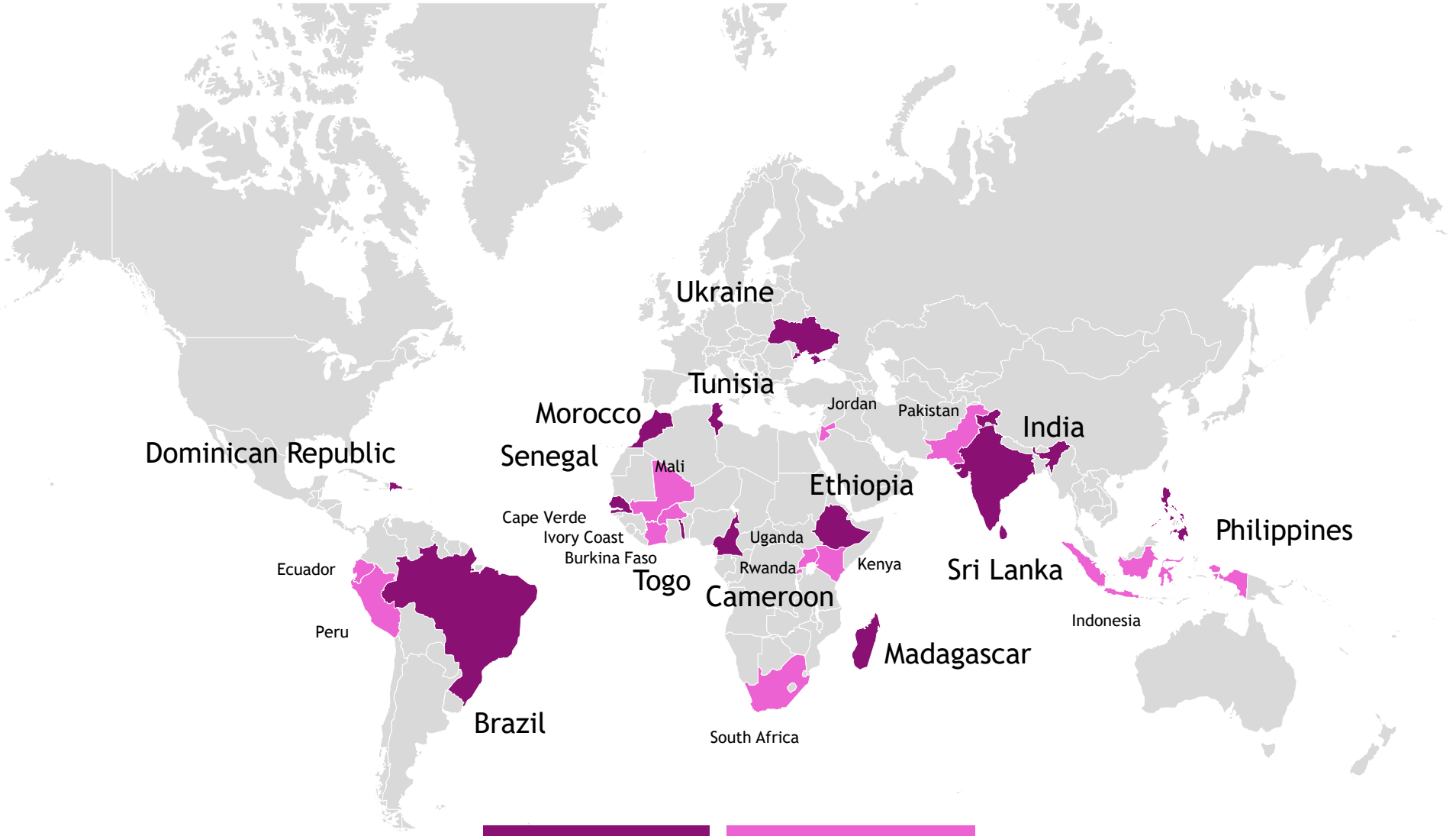
Frameworks for supporting SUMP elaboration at the local level



# Interfacing with Financial Assistance



# Beneficiary Partner Cities and Countries



Mobilise Your City

www.MobiliseYourCity.net

*Visit us along the COP23 in Bonn!*


Contact: Contact@MobiliseYourCity.net

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Follow us on Twitter:

- **@mobiliseCity**
- **#mobiliseyourcity**

# Transformative Urban Mobility Initiative (TUMI)

## Launch at Habitat III in Quito together with 11 Partners

# A 3D Approach to Urban Mobility

Transformative Urban Mobility INITIATIVE

## Pilot Projects

- Supporting innovative pilot projects with measurable impacts
- Scalable and replicable solutions for sustainable urban mobility

## 1500 Urban Leaders

- Ambitious training initiative
- Supporting leaders in transformation processes
- Learning, networking, reflecting
- Promoting partnerships

## Financing

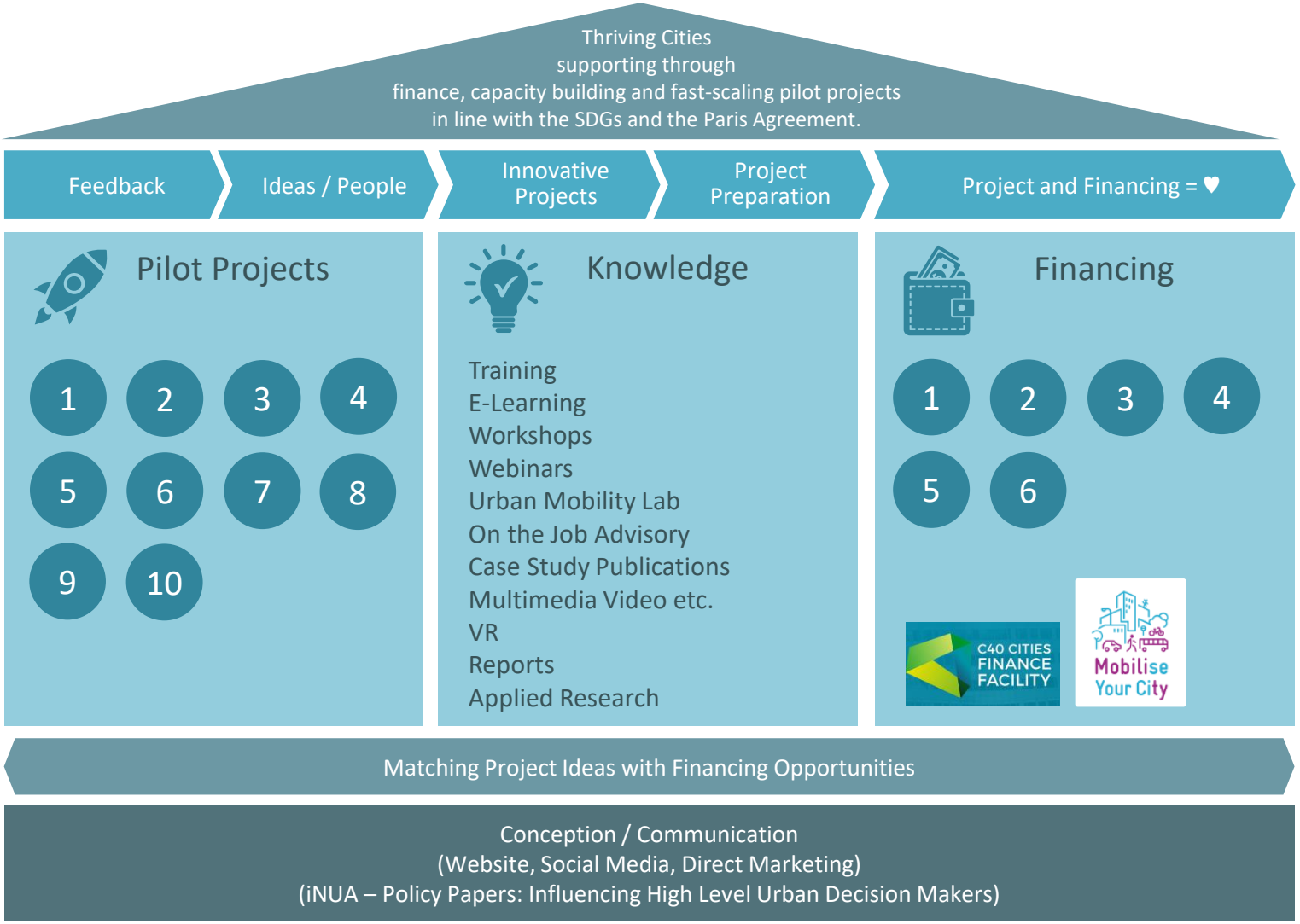
- Mobilization of a total of EUR 1 billion by KfW in cooperation with other donors

All 3 pillars are closely linked and support each other.

# Work Programme

## Phase II till 05/2019

Transformative Urban Mobility INITIATIVE



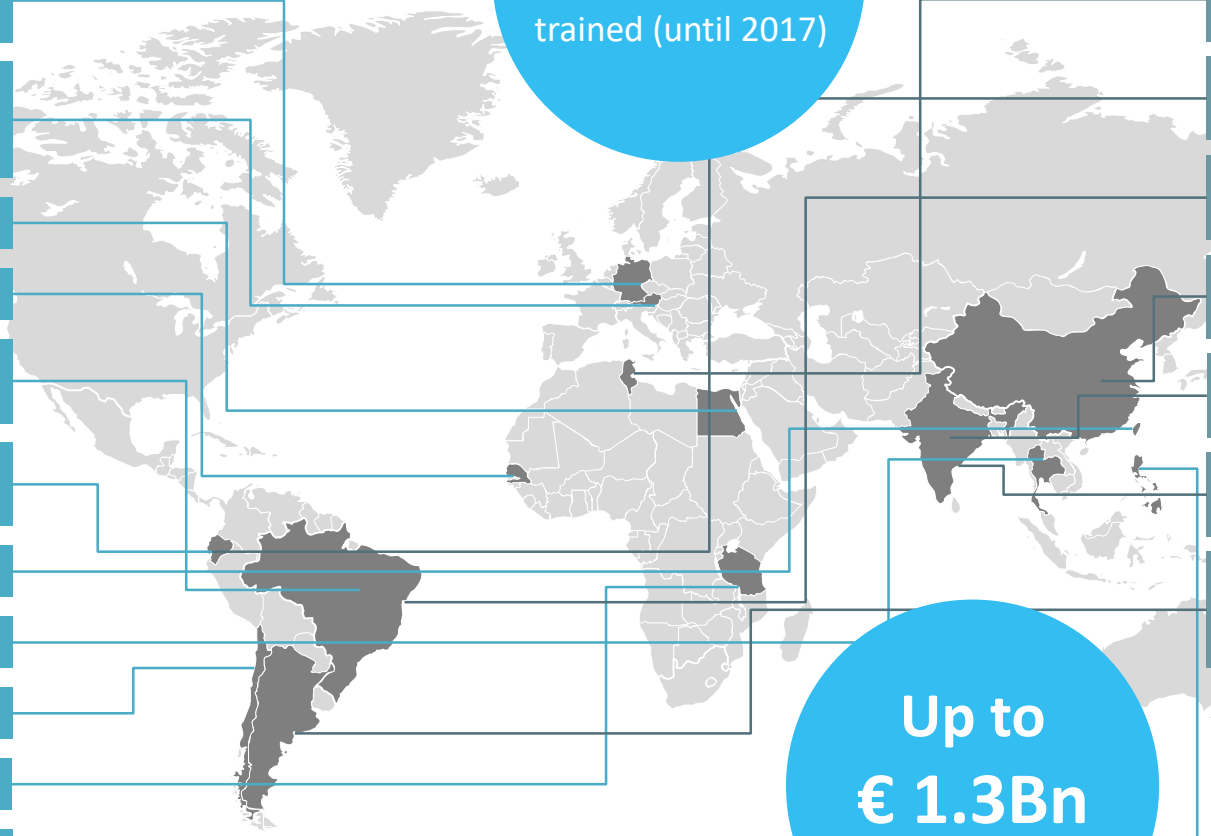
# Executive Summary

Transformative Urban Mobility INITIATIVE

## Capacity Building

- Germany ITF +80 Leaders
- Austria – Academy of Urban Mobility +30 Leaders
- Egypt +60 Leaders
- Senegal +50 Leaders
- Brazil EMDS –180 Leaders
- Ecuador Habitat III –30 Leaders
- Taiwan –30 Leaders
- Thailand –70 Leaders
- Chile –50 Leaders
- Tanzania –10 Leaders
- Phillipines –60 Leaders

**+940 Urban Leaders** trained (until 2017)



## Financing

- S Train; Tunis, Tunisia (KfW)
- Metro Line; Quito Ecuador (CAF)
- BRT; Niteroi, Brazil (CAF)
- IST, Huiainan, China (KfW)
- Urban Transport Kochi, India (KfW)
- MRT; Coimbatore, India (KfW)
- Light Rail: Buenos Aires, Argentina (CAF)

**Up to € 1.3Bn** Committed (KfW)

# Architectured to Scale

Transformative Urban Mobility INITIATIVE

| | |
|---|---|
| **Commitment** | to support developing countries and emerging economies to develop sustainable mobility solutions. |
| **Alliance Building** | to cover the whole range of urban mobility topics and capabilities. |
| **Implementation** | of practical work on the ground with tangible results in cities. |
| **Global reach** | to change urban mobility for the better, through the work of eleven institutions. |
| **Continuous feedback** | to document and evaluate the initiatives‘ activities in an iterative process. |

# Transformative Urban Mobility INITIATIVE

## Global Urban Mobility Challenge 2018

ADB C40 CITIES CLIMATE LEADERSHIP GROUP CAF DEVELOPMENT BANK OF LATIN AMERICA Federal Ministry for Economic Cooperation and Development giz ICLEI Local Governments for Sustainability

ITDP Institute for Transportation & Development Policy KFW Partnership on Sustainable Low Carbon Transport UN HABITAT FOR A BETTER URBAN FUTURE WORLD RESOURCES INSTITUTE

# Overview
# Global Urban Mobility Challenge

Transformative Urban Mobility INITIATIVE

Scaleable, highly visible annual programme supporting cities and their low-carbon, people-centered pilot projects

- TUMI core element closely linked to substantial Capacity Building and Finance activities
- Supporting innovative pilot projects with measurable impacts
- Scalable and replicable solutions for sustainable urban mobility

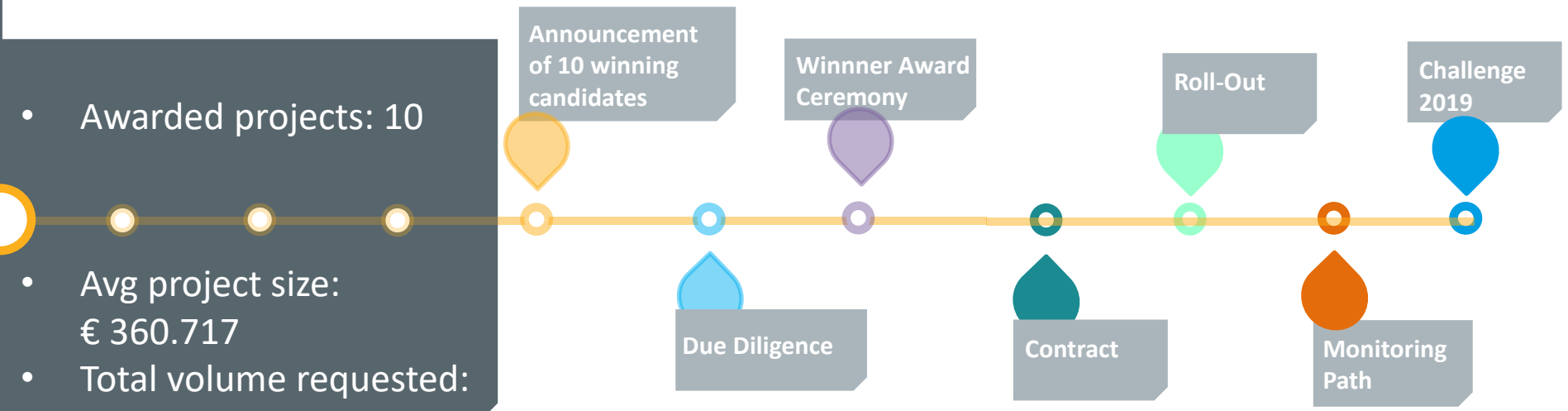
**Awards**
**up to € 200k**
per pilot project

**Annual Awards**
collaboration
With TUMI Partners

# Executive Summary
# Global Urban Mobility Challenge

Transformative Urban Mobility INITIATIVE

- Awarded projects: 10
- Avg project size: € 360.717
- Total volume requested: € 3,9M



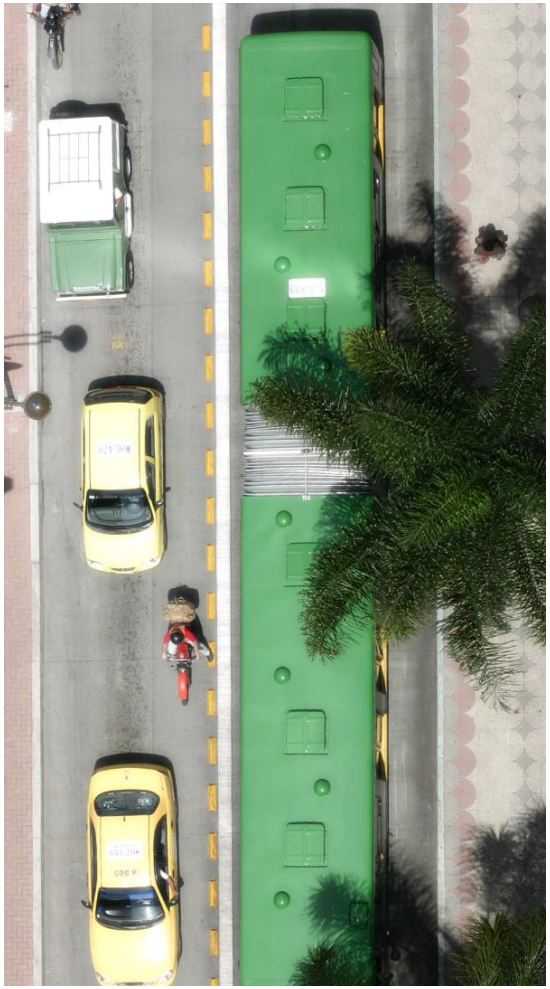
# Implementing the 10 Pilot Projects

Transformative Urban Mobility INITIATIVE

The Implementation of the 10 Pilot Projects will be accompanied by an extensive **Monitoring-Path**

**The Monitoring-Path includes and aims to:**

- Capacity Development for stakeholders involved
- Scaling & Dissemination of Knowledge
- Making Cities fit-for-finance



# The 10 Winning Candidates

Transformative Urban Mobility INITIATIVE

| Project Title | TUMI Partner | Country | City | Continent |
|---|---|---|---|---|
| **E-Rickshaws as Public Transport and Emergency Health Supporting Services in Singra** | ICLEI | Bangladesh | Singra | Asia |
| **Safetipin App for Bogotá** - Making Urban Public Space Safe for Girls and Women | CAF | Colombia | Bogotá | America |
| **Connecting the Last Mile in Addis Ababa** - Bicycle Sharing System Integrated with BRT and LRT | ITDP | Ethiopia | Addis Abeba | Africa |
| **Boosting Walkability in the City of Chennai** – through Inclusive Urban Street Improvement | C40 | India | Chennai | Asia |
| **Mobility Accelerator in Nairobi** – Facilitating Start-Up Incubation Working on Sustainable Urban Mobility | UN-Habitat | Kenya | Nairobi | Africa |
| **Shared Electric Transport for Better Local Supply-Chains** – through Electrycles with Solar-Cooling Systems in El Kelaa des Sraghna | SLoCaT | Maroc | El Kelaa des Sraghna | Africa |
| **The Lagos Sidewalk Challenge** – Improving Walkability, Safety, Accessibility and Attractiveness | SLoCaT | Nigeria | Lagos | Africa |
| **Open Streets: a Catalyst for Non Motorised Transport** – Creation of Temporary Networks of Car-Free Streets in Cape Town | UN-Habitat | South Africa | Cape Town | Africa |
| **Dar City Navigator** - Open Data portal for Multimodal Transport Providing Real-Time Information and Services to Commuters | ITDP | Tanzania | Dar Es Salaam | Africa |
| **Establishing Comprehensive Bicycle Plan and Free/low-cost Bicycle Sharing Program in Hoi An City** | WRI | Vietnam | Hoi An | Asia |

# Transformative Urban Mobility INITIATIVE

The leading global implementation initiative on sustainable urban mobility supporting urban decision makers to accelerate and scale their efforts through finance, capacity building and fast-scaling pilot projects.

**Contact**
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# National Urban Mobility Programs/Policies

Mobilise Your City

Transformative Urban Mobility INITIATIVE

# What are National Urban Mobility Policies & Investment Programs (NUMPs)

## **Policy** objective:

Agree on **targets**, establish a **framework** and **allocate authorities and means** to national institutions and/or city administrations to **regulate, plan, finance & implement** sustainable transport infrastructure and management projects in a **comprehensive and integrated** manner

## Policy components:

- A sector vision, strategy, targets
- Institutional organization (interministerial + national versus local level)
- A comprehensive set of laws & regulations, tech. guidelines etc.
- Budgeting & financing (medium and long term)

# What are National Urban Mobility Policies & Investment Programs (NUMPs)

## **Investment Program** objective:

Agree and establish **regulatory and financial framework programs**, which **lead to significant transformation effects** in sustainable urban mobility through **development of selected transport modes** by the public and/or private sector.

## Investment Program examples:

- National scrapping program of polluting vehicles
- Subsidy program to cities for construction of mass-rapid-transit systems
- Subsidy program to private sector to develop and maintain e-mobility infrastructure

# Further NUMP examples

**Policy component** examples:

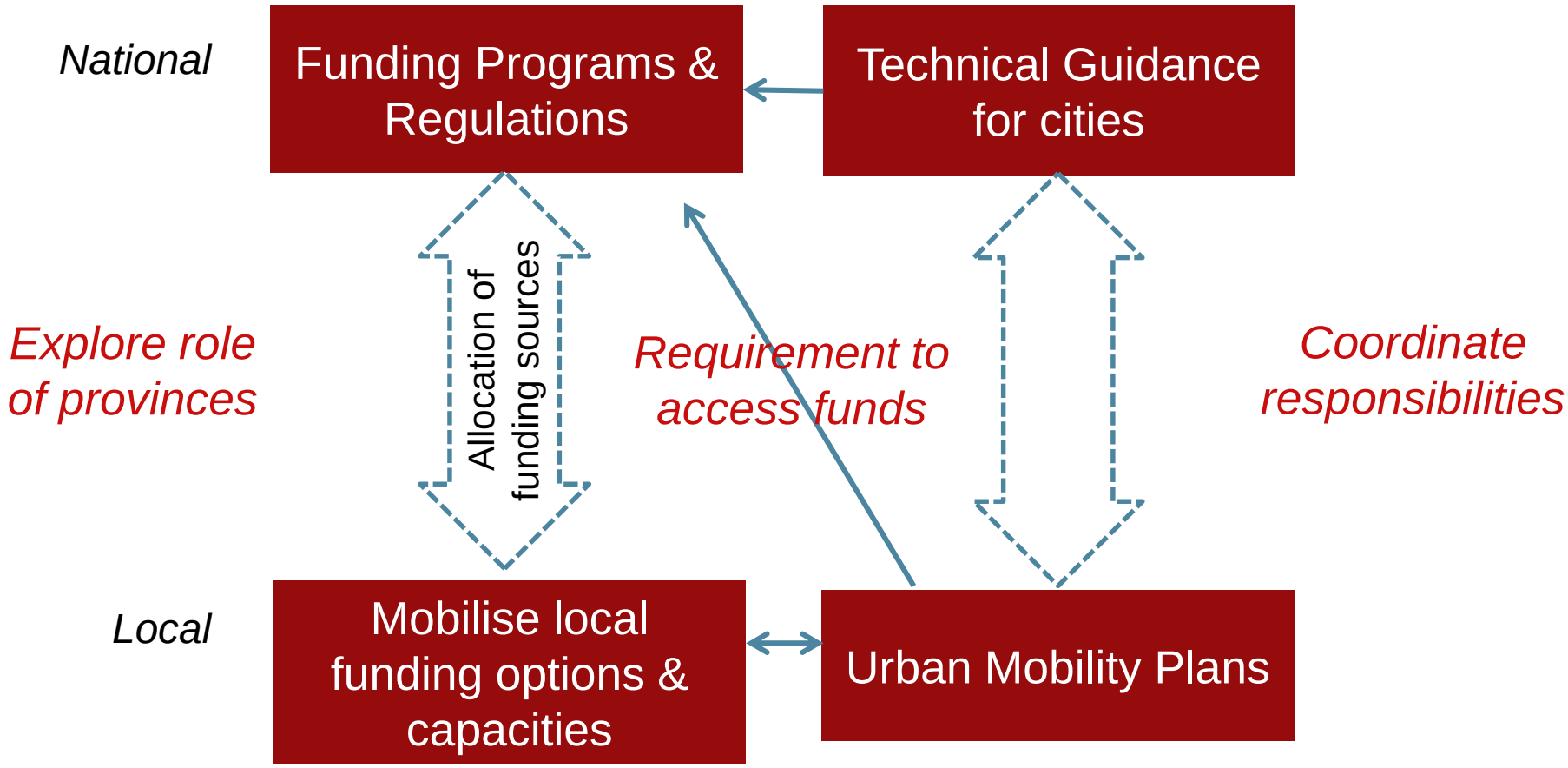
- Regulations and recommendations on urban mobility planning
- Regulations on road and street design (obligatory requirements / standards and/or facultative guidelines)
- Public transport regulations and service standards
- Parking management regulations
- General traffic rules
- Data management regulations
- Regulations on government borrowing
- Regulations on concessions and the role of the private sector

# Further NUMP examples

## **Investment Program** examples:

- Municipal Transport Sustainable Infrastructure Financing Programme (all modes)
- Cycling/NMT Infrastructure Investment Programme
- Road Safety Programme
- Access Enhancement Programme
- Traffic Management and ITS Programme
- Public Transport Service Subsidies
- Compensation Payments for discounted services for certain groups
- Capacity-Building Programmes
- Awareness-raising campaigns

# NUMPs Building Blocks



# What are National Urban Mobility Policies & Investment Programs (NUMPs)

**Why a NUMP?**

- **Agree** on vision & targets
- **Enable** relevant national and local institutions with knowledge, resources and required authorities to act and progress sector transformation
- **Ensure participation**, support and self-motivated follow-up by civil society and private sector
- **Connect** with technical and financial support at national and local level
- **Link** to international policies and targets (NDCs, New Urban Agenda etc.)

# What are National Urban Mobility Policies & Investment Programs (NUMPs) continued

## Key MYC Advisory Modules

- Initiation
- Status Quo Analysis
- Vision & Goal Setting
- Institutional Framework
- Budgeting & Finance
- Capacity Development
- Transport Technologies
- Monitoring & Reporting Coordination & Management

# Creation of NUMPs

- No single approach fits all contexts
- Different stakeholders, laws, regulations, preferences
- International organizations, consultants, academia, provide a key role in catalyzing transformations
- A local champion and capable institutions are instrumental
- Policy guidance, capacity building, financing mechanisms are core elements of NUMPs

# Example of NUMP Process - México

- 2008 Interest by the Ministry of Finance for supporting mass transit using national road concessions surplus
- 2009 inclusion of mass transit as eligible destination of funding from the National Infrastructure Fund managed by Banobras (second floor national development bank)
- 2010 funding framework defined, up to 50% funding national – 50% state and local – additional funding made available for lending to states and cities and for the private operators
- Cities started applying to the funds – Pipeline 43 cities, 11 projects in operation

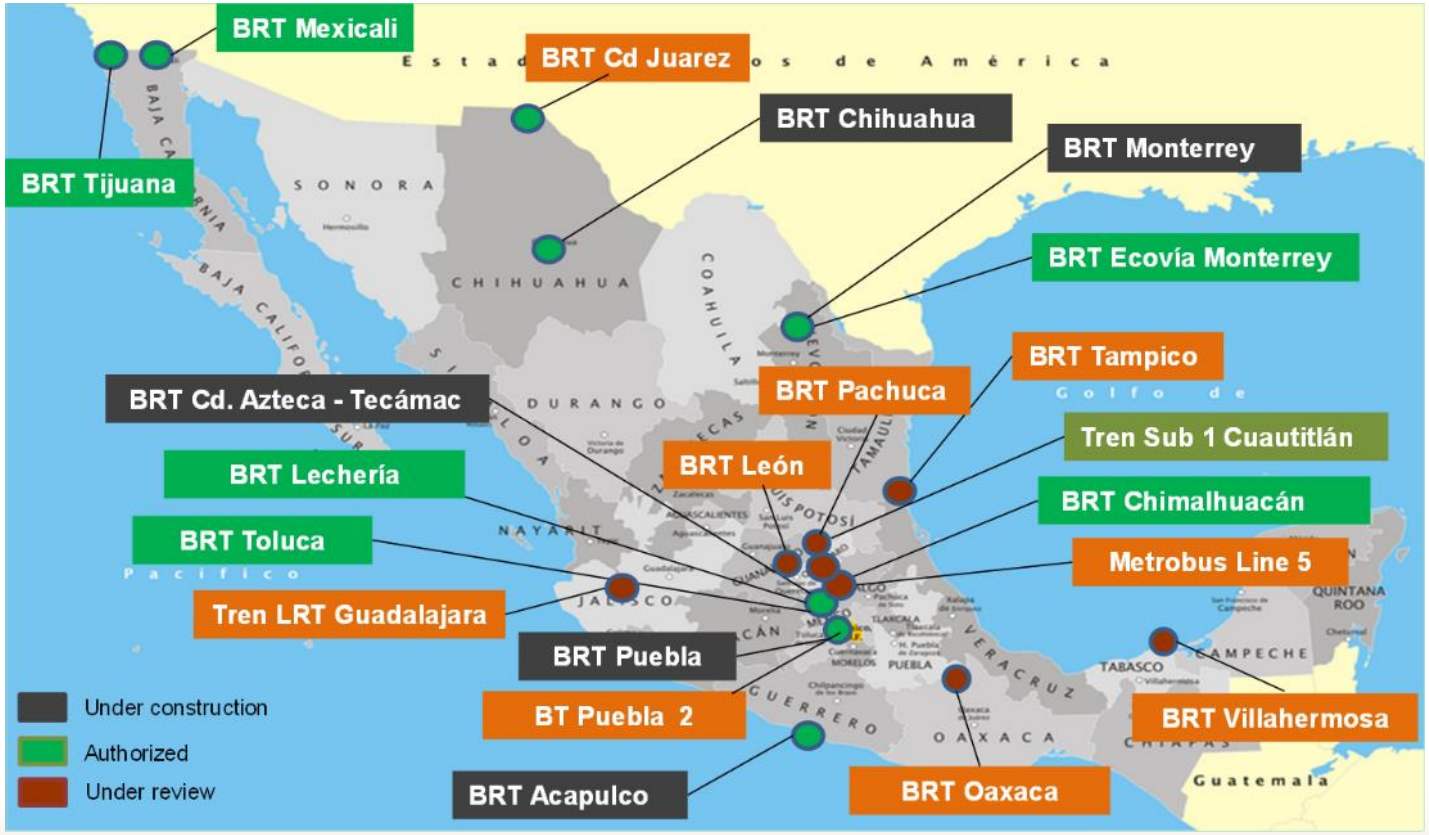
# Example: México

- Mass transit program (PROTRAM)  USD 2.4 billion
- 50% of project capital cost for Rail and BRT
- 5 Cities in operation/final construction; 34 cities identified
- Requires private participation

Fig. 13: *Suburban Train Mexico City financed by PROTRAM.*
©EMBARQ, Mexico

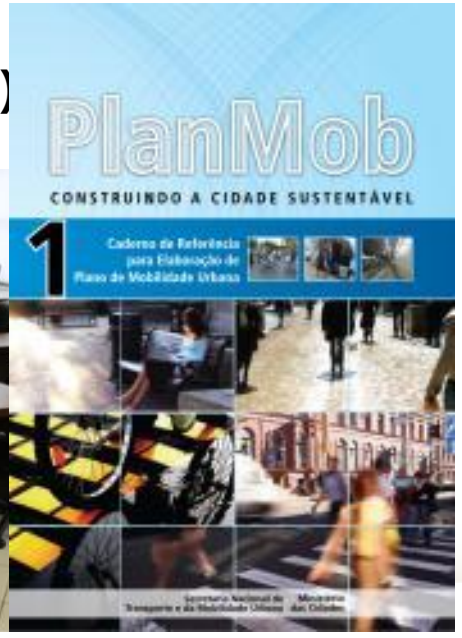
# Example: México

- Strategic guidance: urban mobility plan and Project Evaluation



# BRAZIL – Planos de Mobilidade Urbana

- **New National Policy on Urban Mobility (2012), PlanMob guidelines have been recently updated**
- **Massive investment in urban transport (~ USD 55 billion till 2020, recently pace slowed down due to crises)**
- **New approaches for stakeholder involvement**
- **Capacity development Strategy of MoC (Min. of Cities)**

# Example: Brazil

- National Urban Policy
- Comprehensive Mobility Plan (1,600 cities 20,000+)
- Growth Acceleration Program (PAC) USD 9.5 billion for BRT, LRT, Metro Infrastructure – co-funding from state and local levels
- Up to 50% national grants
- Additional loans for vehicles and rolling stock BNDES


Fig. 5: *Bus of the Rio de Janetro BRT System.*
©Mariana Gil, Rio de Janeiro/Brazil

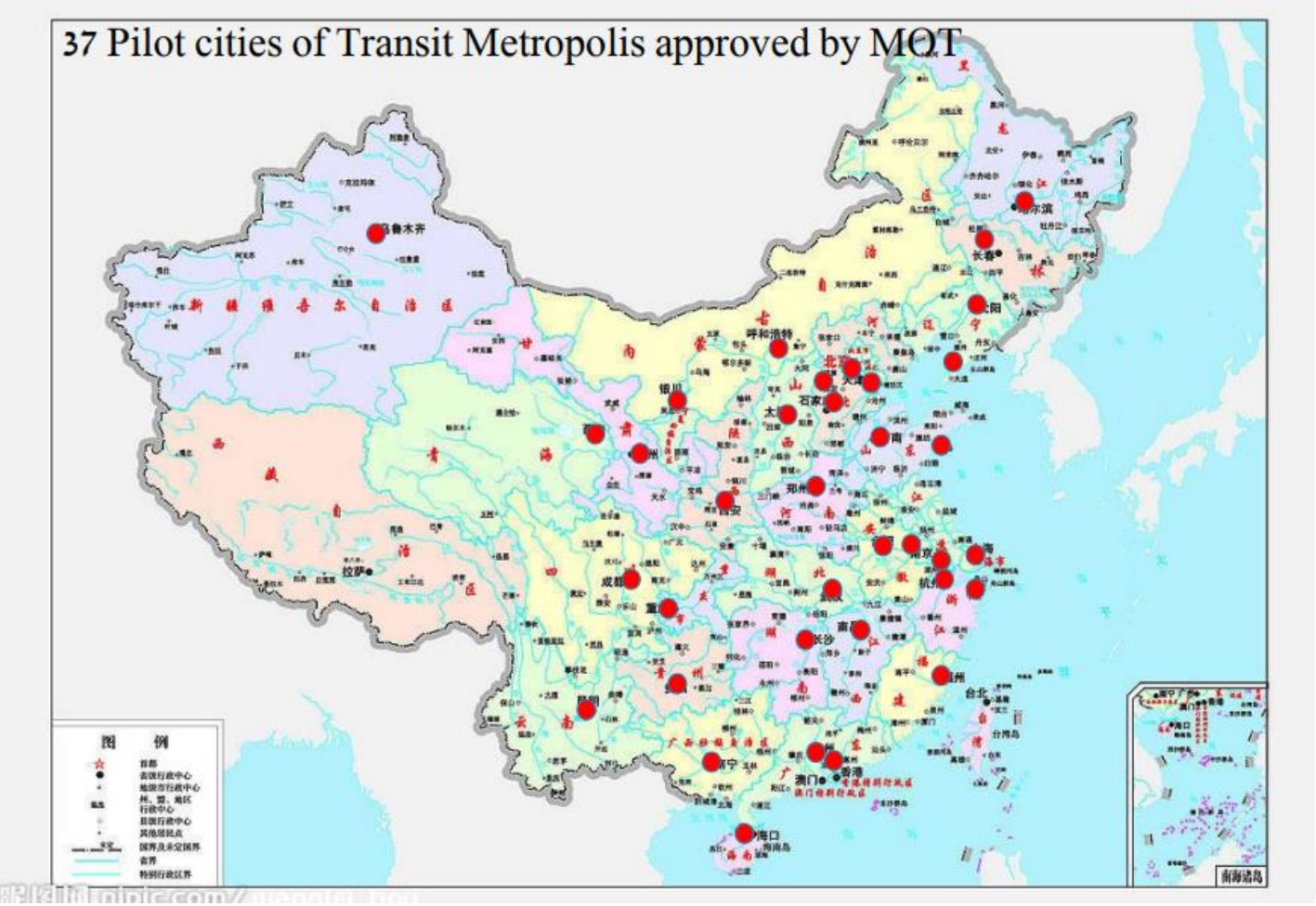
# Example: Brazil

- Strategic guidance: requirement of comprehensive mobility plans to seek national funding

# Example: China

- “Transit City” project 30 cities
- Requires co-finance of provincial governments
- In 2012 Beijing Metro reached 16-lines 442km - 1,050km expected by 2020
- Other 16 Chinese cities expanding Metro; 18 cities with Metro and LRT systems under construction; 22 cities with construction planned.
- 15 cities with BRT; 11 under construction or planning

# Example: China



# Example: China

Lessons learned and results

- From priority of public transport to Transit Metropolis
- From transport sector to multi-sector, city government
- Indicators in 5-year plan
- Motorized mode share in public transport (more than 60%)
- Coverage of public transport station in central areas
- (100%)
- Bus operation speed in peak time (more than 18 km per h)
- Green bus percentage (more than 50%)
- Mortality rate (less than 0.04/million vehicle km)

# Example of NUMP Process - India

- Amendment of the constitution, transferring responsibilities to the Urban Local Bodies (including transport)
- Jawaharlal Nehru National Urban Renewal Mission (JnNURM) massive city-modernisation scheme launched by the Government of India
- Guidance developed for reform and investment – National Urban Transport Policy NUTP
  - Cities required to advance urban mobility plans – moving people not cars
  - Co-funding up to 50% urban transport projects
  - Foster public private partnerships
  - Create Special Purpose Vehicle SPV for Project development

# Example: India

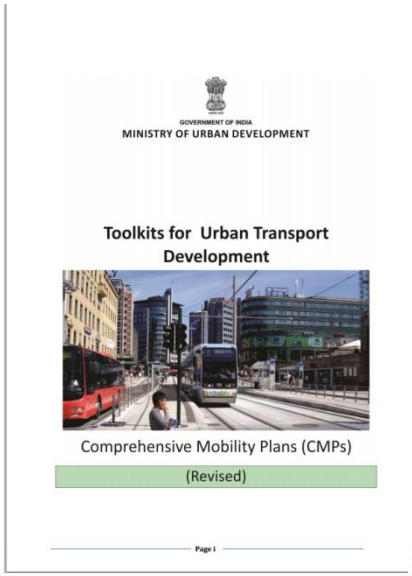
- National Renewal Mission JnNURM  USD 20 billion
- Requires comprehensive mobility plan and co-funding from the state and local levels
- Resulted in implementation of Metro in 6 cities and BRT in 7 cities
- Encourgaes private participation

Bhopal BRTS Mybus
http://sustainablecitiescollective.com/sites/sustainablecitiescollective.com/files/Picture3.jpg

# INDIA – Comprehensive Mobility Plans

***"A CMP presents a long-term vision of desirable mobility patterns (people and goods) for a city and provides strategy and policy measures to achieve this vision. It follows the guidelines set forth by National Urban transport Plan which emphasizes on NMT measures, PT systems and sustainable systems"***

- **National Urban Transport Policy from 2005: Comprehensive process description, funding program + national guidance**
- **Toolkits (Guidelines) revised in 2014**




Source: CMP Preparation Toolkit - Guidelines and Toolkits for Urban Transport Development in Medium Sized Cities in India – MoUD/ADB

# Example: India

- Strategic Gudiance: National Urban Transport Policy NUTP
  - Urban Mobility Plan
  - Creation of Unified Metropolitna Transit Authority UMTA
  - Constitution of Special Purpose Vehicle SPV
- Bus financing

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# INDIA – Lessons learned

**Lessons learned:**

- **Lack of local capacity and investment in operation and human ressources**
- **Often a lack of 'ownership', understanding and feasibility of CMPs**
    - **Reason: plans were mstly developed by consultancy firms without wider stakeholder involvement**
    - **Consequence: A lack of political priority-setting;**
- **"real challenges" like e.g. the lack of pavements and cycling infrastructure not properly addressed in most CMPs;**
- **a lack of proper monitoring and evaluation after project implementation makes it hard to assess whether or not goals are achieved.**
- **Those bottlenecks have been identified and are now tried to be internalized.**

# Key Lessons learned from NUMP processes

- No national support = very little progress in sustainable urban mobility
- Not just money: capacity building, institutional development – need to go beyond “compliance in paper”
- Relatively easy to fund infrastructure – very difficult to advance operations reform
- Clear procedures and decision making processes: guidelines and evaluation criteria for project funding
- Co-funding mobilizes local financial effort, increases commitment and selection of more cost-effective processes
- Continuous process of adaptation, improvement, revision

# Key lessons learned: Institutional strengthening

- **National level authorities shape urban transport** by policy/planning frameworks, funding schemes and guidance
- Planning and implementation of urban mobility interventions or plans requires **sufficient local capacities** and **access to funding** options
- **Critical to evaluate and update policies** and planning frameworks on a regular base → Exchange between national and local levels

# Key lessons learned: Institutional strengthening

- **Establish a supportive legal and regulatory framework**, particularly for public transport, demand management, NMT, emissions and safety
- **Improve institutional coordination and cooperation**, horizontally between policies and vertically between tiers of government
- **Decentralise responsibilities where possible and centralise them where necessary**
- **Support local or regional authorities to develop capacities**

# Key lessons learned: finance

- **Establish a national funding program to access international funding, enable and set incentives for cities**
- **Link infrastructure and vehicle investment with support for local capacity**
- **Link finance with overarching local transport plan (and ensure quality of plans)**

Political System


Financing

Instituonal Set-Up

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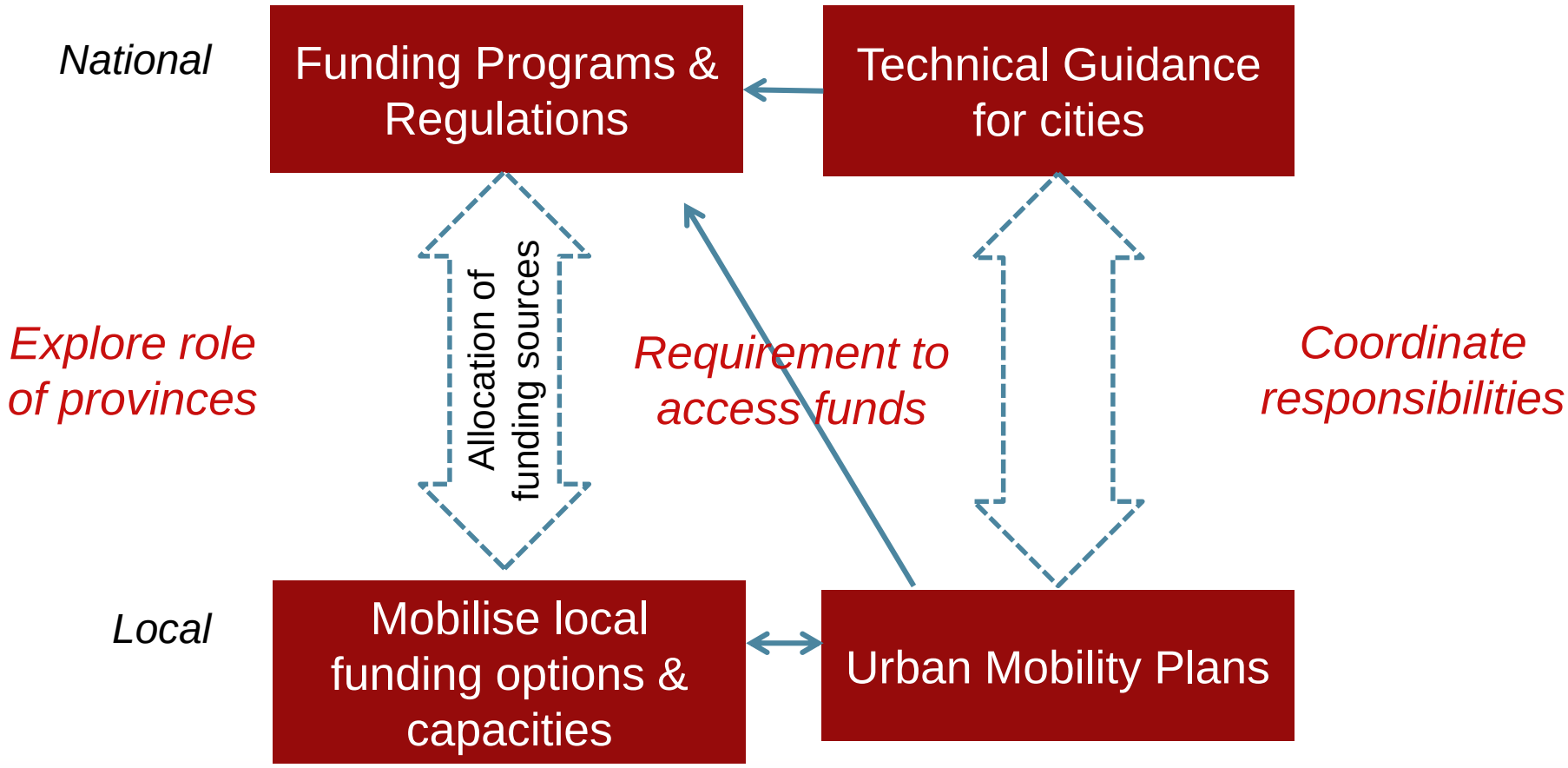
# Sustainable Urban Mobility Plans (SUMP)

Mobilise Your City

Transformative Urban Mobility INITIATIVE

# NUMPs Building Blocks



# Status Quo

- **Master plans are more often visions and wish lists and not achievable and realistic plans**
- **Outdated road building norms favour ease and speed of motorized transport**
- **no guidance for safe and convenient walkways, cycling and public transport integration**
- **Mostly only infrastructure development oriented , not suffiently dealing with institutional aspects**
- **Uncoordinated funding mechanisms due to incoherent national urban transport policies**
- **Public dialogue and consultation neglected**


**Moscow, Russia © Ilya Varlamov**

# From Transport to Sustainable Urban Mobility Planning

| Traditional Transport Planning | ⇔ | Sustainable Urban Mobility Planning |
|---|---|---|
| Focus on traffic | ⇔ | Focus on people |
| Primary objective:<br>Traffic flow capacity and speed | ⇔ | Primary objectives:<br>Accessibility and quality of life |
| Political mandates and planning by experts | ⇔ | Important stakeholders are actively involved |
| Domain of traffic engineers | ⇔ | Interdisciplinary planning |
| Infrastructure as the main topic | ⇔ | Combination of infrastructure, market, services, information, and promotion |
| Investment-guided planning | ⇔ | Cost efficient achievement of goals |
| Focus on large and costly projects | ⇔ | Gradual efficiency increase and optimisation |
| Limited impact assessment | ⇔ | Intensive evaluation of impacts and shaping of a learning process |

***„If you plan for cars and traffic, you get cars and traffic.“***

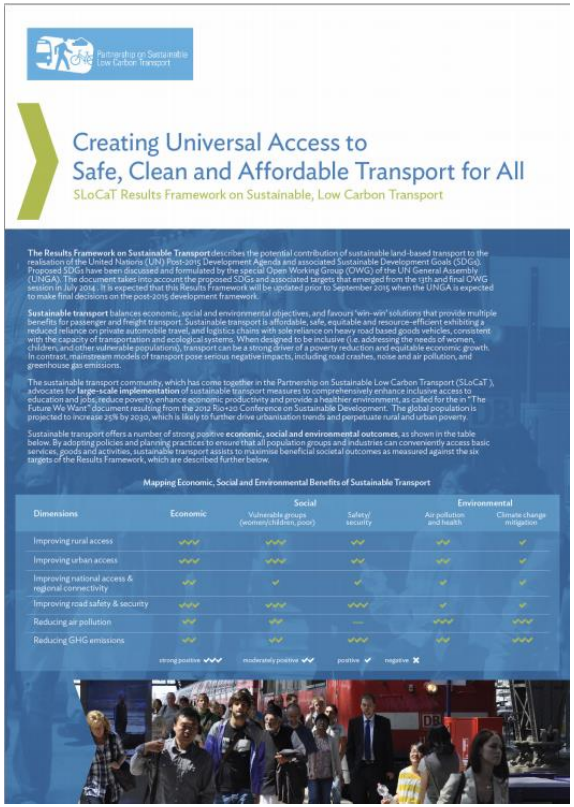
***„If you plan for people and places, you get people and places.“***

Source: Rupprecht Consult, quotations by Fred Kent, President of „Project for Public Space“: www.pps.org

## Urban Mobility Plans helps to align the development of transport systems with overarching-policy targets

# → Sustainable Development Goals

- **Economic & social development:** reliable, safe and affordable mobility services essential for sustainable development.
- **Environmental & urban development**: transport activities put stress on on the global environment and urban areas through required space, road accidents, air pollution etc.
- **Social equity & inclusiveness:** focussing on the mobility needs of all people (not only car-drivers) – can reduce social inequalities and allow to make full use of a country‘s human potential for economic and social development.



# SUMP Policy Elements in the EU

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## SUMP as an instrument to meet European policy targets and to solve local transport problems


**EU Recommendation** to all Member States to develop national legal framework for SUMP and support cities

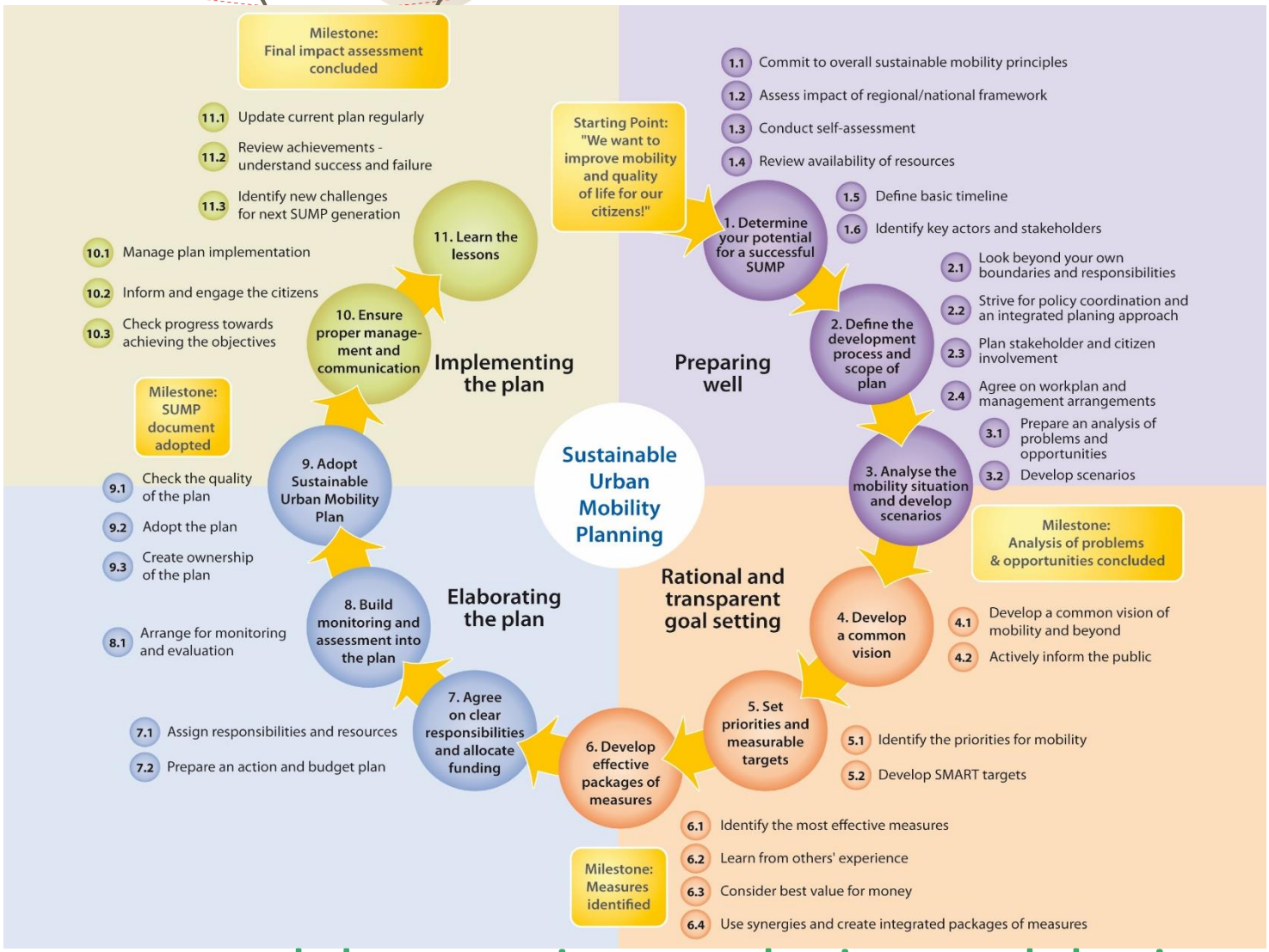
**EU facilitates** Europe-wide coordination and funds **research** and **innovation activities**

EU and national **support for SUMP preparation is taking off**

Quality SUMPs are increasingly a **pre-condition** to attract (major) urban transport funding from EU (incl. Structural and Investment Funds)

**SUMP is becoming mainstream!**

# The Planning Cycle for a Sustainable Urban Mobility Plan (SUMP) …




**… helps structuring a complex, integrated planning process.**

Source: Rupprecht Consult, 2014

# Example: Brazil

- Strategic guidance: requirement of comprehensive mobility plans to seek national funding

# Key Challenges for Sustainable Urban Mobility Planning in Europe

- **Participation:**

Actively involving local stakeholders and citizens in mobility planning processes

- **Institutional cooperation:**

Improving geographic, political, administrative and interdepartmental cooperation

objectives

- **Measure selection:**

Identifying the most appropriate package of measures to meet a city's policy objectives

- **Monitoring and evaluation**

Assessing the impact of measures and evaluating the mobility planning process

# Institutional Cooperation in SUMP development

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| | Barriers | Promising Approaches |
|---|---|---|
| Cooperation | • Initiating authority has limited planning **competences**<br>• Unclear or overlapping **responsibilities** between agencies<br>• Lack of partnerships/ **silo thinking**<br>• Complexity of **policy integration**<br>• Complexity of **managing interests** of large stakeholders groups | • Build focused **thematic local partnerships** between all relevant institutions<br>• Adapt institutional arrangements or **build new institutions**, if required<br>• Use tools to **assign responsibilities** throughout entire delivery process<br>• Innovative partnerships between **private and public sector** |

# Measure Selection in SUMP development

Measure Selection

## Barriers

- Over-reliance on **preconceived ideas**
- Limited knowledge of **good practices** and their transferability
- Focus on supply-side measures (such as infrastructure) rather than **demand-side measures** (such as regulation and pricing)
- Limited evidence on **measures' impact** to achieve intended policy goals, especially in specific city contexts

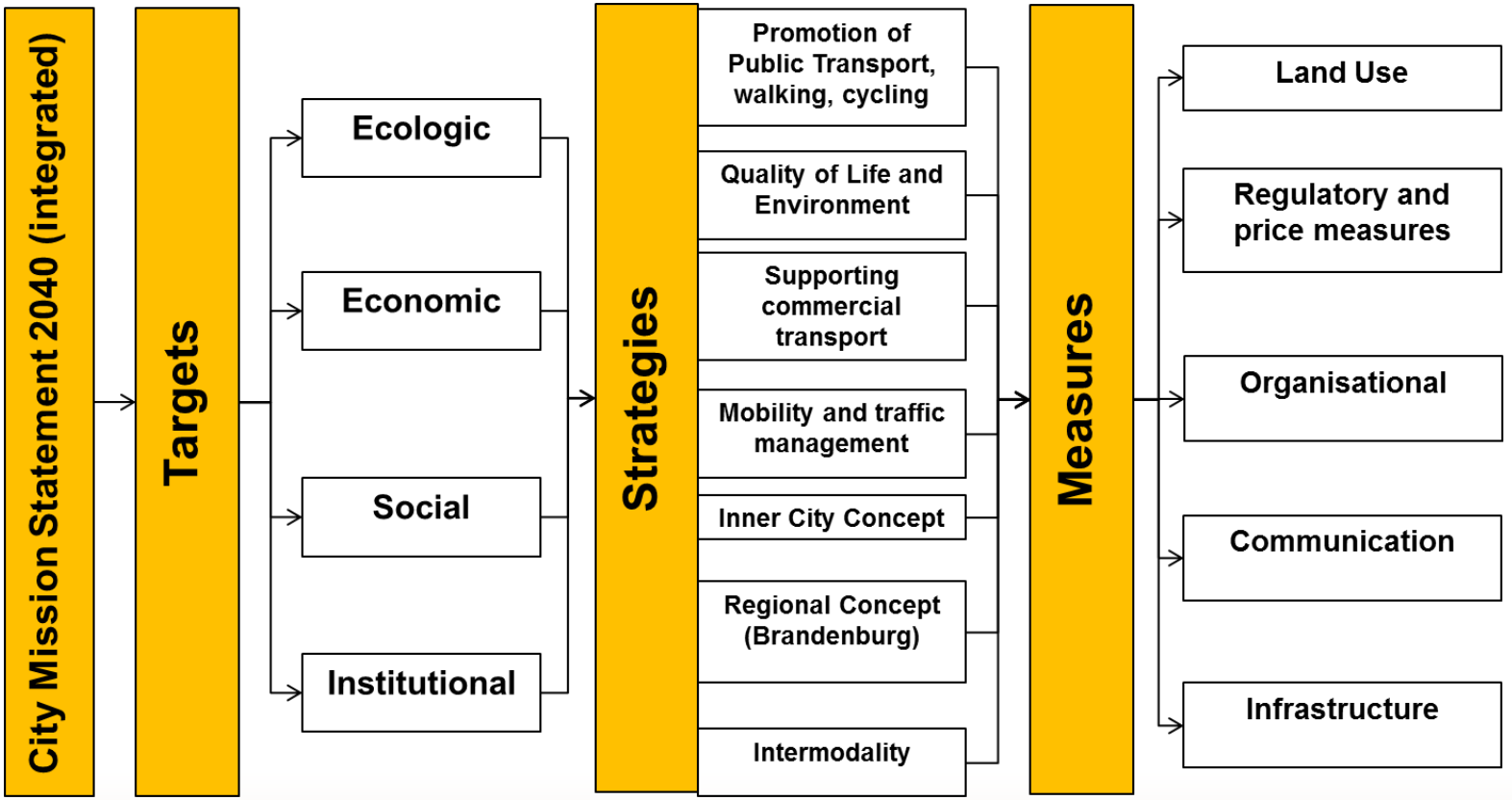
## Promising Approaches

- Avoid temptation of "good measures" – follow a **systematic analytical process**; identify strategic goals and measures to meet those effectively
- No one policy measure will be sufficient alone – develop **measure packages**
- Ensure that each policy measure **reinforces the others**
- "Restrictive" measures can be **"sold" to the public**, if planned and communicated well
- **Depoliticisation** of measures selection

# The Power of (Sustainable) Urban Mobility Plans

## Example: Integrated Mobility Planning in Berlin

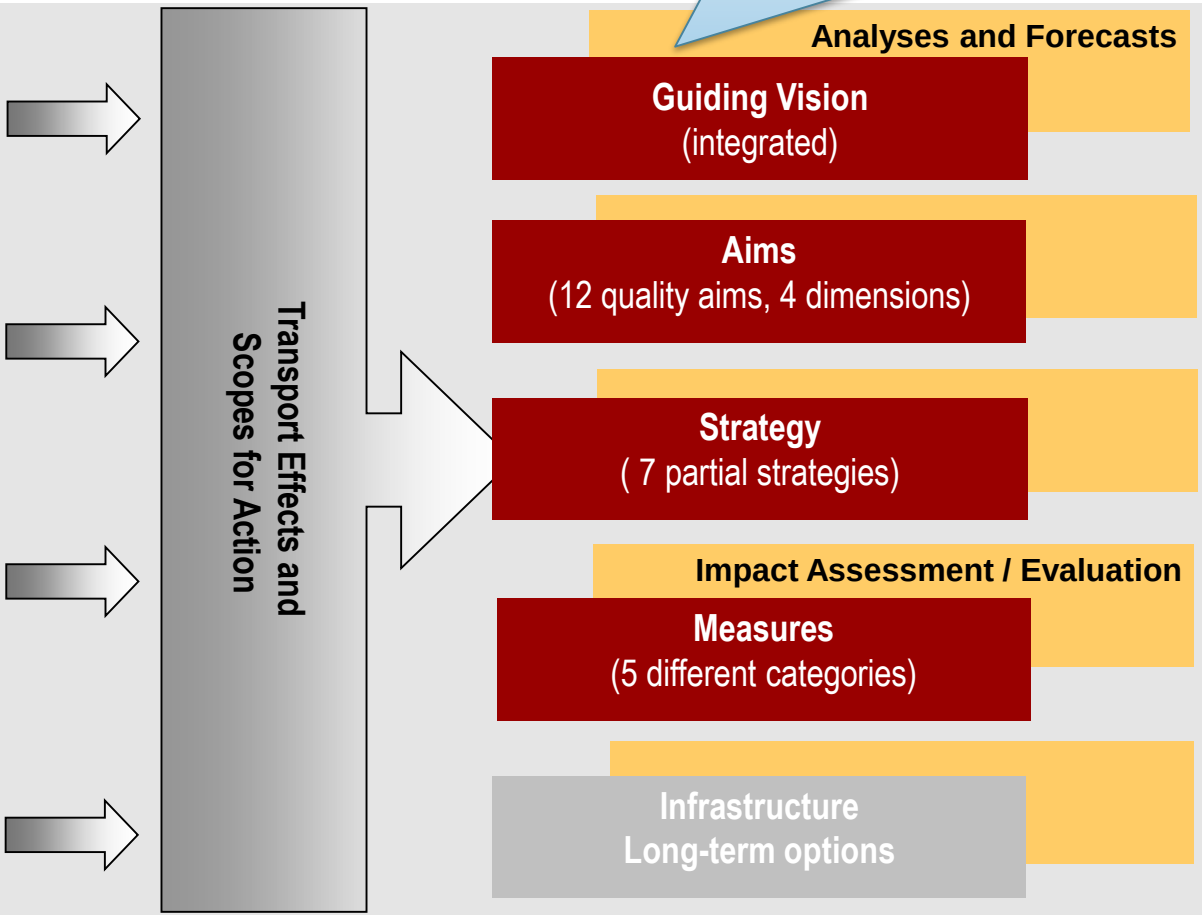
be Berlin Verkehr



# Structure and Contents

- Results and experiences of previous strategy
- Long-term overarching objectives, e.g.
  - Energy
  - Climate Protection
  - Safeguarding Mobility
- Guidelines of related policy field
  - Urban Development
  - Environment
  - Economy
- Framework Conditions
  - Population
  - Spatial Structure
  - Finances

Example: Integrated Mobility Planning in Berlin




**Complex Structure:**

**Approaching different aspects individually**
**Combining measures in integrated strategic packages**
**Integrated impact assessment to identify missing topics**

# Monitoring and Evaluation in SUMP development

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## Monitoring and Evaluation

### Barriers

- **Limited experience** on how monitoring and evaluation should be managed and who should do it
- Differing definitions for the **indicators** to be monitored
- Low **availability of data** that relates to the SUMP and its objectives
- Lack of knowledge how to monitor and evaluate the SUMP **development process**

### Promising Approaches

- Follow systematic process to set up a **local knowledge base** of impacts (with tested indicators)
- Apply innovative (cost-effective) **data collection**
- Adapt method to **city size**
- Adapt method to **measure**: small measures ➔ qualitative; big measures ➔ quantitative
- Develop **"process awareness"**

# The Power of (Sustainable) Urban Mobility Plans

(S)UMPS are a powerful tool align urban transport systems with policy targets!


**Sustainable Development Goals**

- ✓ Economic & social development
- ✓ Environmental & urban development
- ✓ Social equity & inclusiveness

Complementary Plans

Harmonization with Urban development plans, air quality plans, land use plans, noise reduction plans, climate action plans, etc.

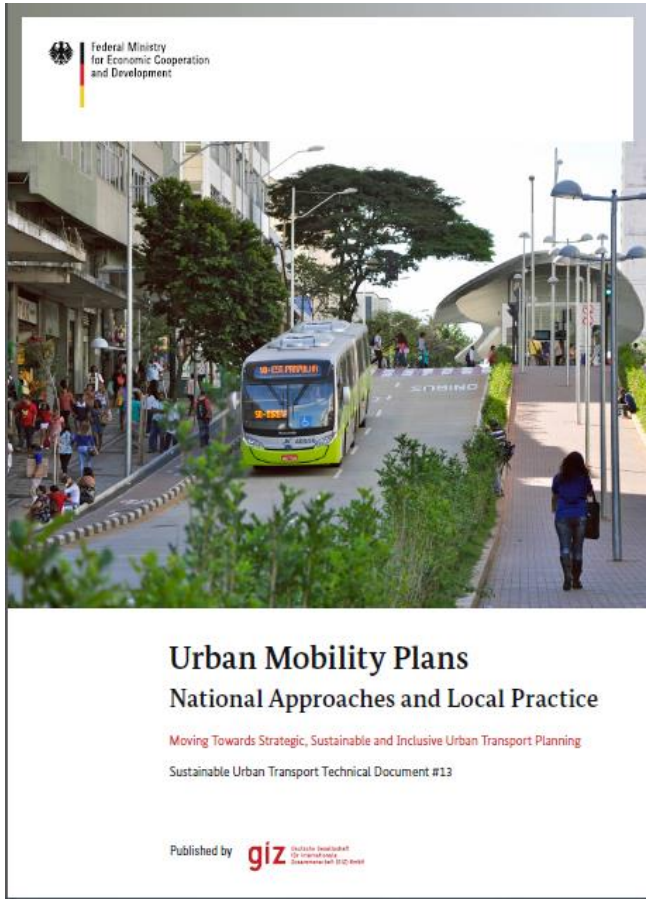
# New publication from SUTP:

# Urban Mobility Plans:

## National Approaches and Local Practice

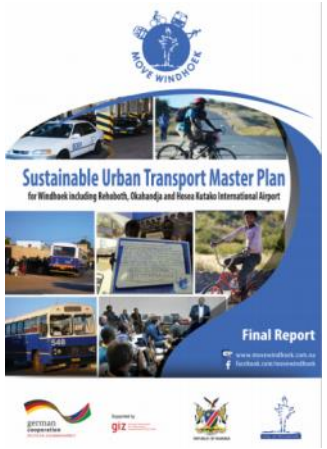
- **In cooperation with**

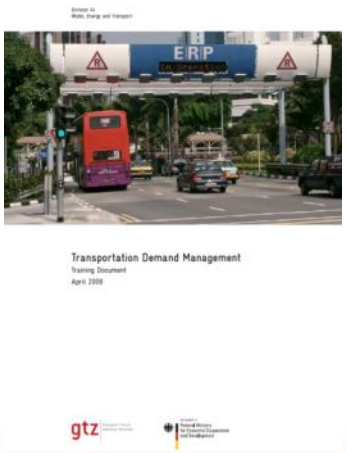
- **Now available at [www.sutp.org](http://www.sutp.org) in English, Portuguese , Indonesian and Spanish language**



# Recommended Reading

- SUTP Sourcebook: Land Use Planning and Urban Transport
- SUTP Sourcebook: Transportation Demand Management
- The Sustainable Urban Transport Master Plan for Windhoek/Namibia: MOVE WINDHOEK




# Further Sources

- SUMP Guidelines + Examples Data base:
  - www.mobilityplans.eu


- The SUMP Ch4llenge Project:
  - www.sump-challenges.eu


- EPOMM - ENDURANCE – European SUMP Network (country information, case studies, access to experts, news): http://www.epomm.eu/endurance/index.php