

Traffic Management in Sub-Saharan African Cities The Way Forward



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Interlinking of Road Safety and Traffic Management

- Road safety and traffic management are interlinked
- The safety of Africa's cities is shaped by the **safety of pedestrians**
- Need for a high-quality **pedestrian-friendly urban** realm facilitated through traffic management measures
- Participants will learn how to shift the focus from motorised modes through traffic management measures **for pedestrians** in a people-centric approach



Focus on Safety, Pedestrians and “Bottom-Up” Measures

FOCUS ON SAFETY

- because road safety is very poor and there are too many crashes
- because there are too many casualties, especially pedestrians

FOCUS ON PEDESTRIANS

- because pedestrians are neglected in design and planning
- because more than 50% of trips are walking in African cities and everyone is a pedestrian at some stage in their journey

FOCUS on combining **BOTTOM-UP** and **TOP-down** measures

- because these “bottom-up” measures can be implemented easily & quickly and showcase quick successes



Traffic Management Priorities

1. **ENABLE** stronger institutions

2. **AVOID** inappropriate land use and develop a Functional Road Hierarchy

3. **SHIFT** from motorised modes to non-motorised modes including walking by providing people-centric facilities and managing parking

4. **IMPROVE** safety and efficiency through Intelligent Transport Systems

1. ENABLE stronger institutions

Mainly medium & long term actions BUT two short term actions can start now:

- Knowledge transfer
 - Placements for local staff in international institutions
 - Higher level educational opportunities at universities & colleges
 - Learn about importance of walking and facilities for pedestrians
 - Link between safety and traffic management
- Innovative data collection
 - Freetown Sierra Leone data collection through anonymized mobile phone data → traffic management solutions → institutional development

2. AVOID inappropriate land use and develop a Functional Road Hierarchy

Mainly MT actions BUT one ST action can start now

- Implementing TM measures in a pilot area to reinforce the predominant function(s) of selected roads
 - Road functions not just for moving traffic but also for pedestrians and walking
 - FRH can make roads and their environs safer
 - Road surface upgrade and traffic management interventions
 - Cross-sections and speed limits should enable a “natural” enforcement of the desired function by good design

AVOIDING Inappropriate Land Use

Functional Road Hierarchy

Examples of FRH in action:

- Functional Road Hierarchy enables Prioritization for Road Upgrading in Ouagadougou, Burkina Faso



AVOIDING Inappropriate Land Use

Functional Road Hierarchy

Examples of FRH in action:

- Physical segregation for two-wheeled vehicles in Ouagadougou, Burkina Faso
- Predominant function is for two-wheeled vehicles



AVOIDING Inappropriate Land Use

Functional Road Hierarchy

Examples of FRH in action:

- Home Zones (Woonerven), The Netherlands
- Predominant function is walking
- Shared space
- Traffic calmed
- Landscaped



AVOIDING Inappropriate Land Use

Functional Road Hierarchy

Examples of FRH in action:

- Public Transport routes in Stockholm, Sweden
- Predominant function is for PT and for passenger access
- Motor vehicle speeds restricted by speed limits and enforcement and education



3. SHIFT to greener modes by providing people-centric facilities

Mainly Medium Term Actions

- Build on experience from Kigali, Mombasa, Addis Ababa, and Tshwane.
- Identify barriers to walking
- Identify different types of walking, different walk trips for different purposes disaggregated by gender
- Traffic calming for safety
- Implement “bottom up” local pedestrian schemes

SHIFTING to Greener Modes

People-Centric Facilities

Examples of people-centric facilities:

- Wide sidewalks
- Pedestrian friendly infrastructure in Kigali, Rwanda



SHIFTING to Greener Modes

People-Centric Facilities

Examples of people-centric facilities:

- Physical segregation for safety
- Lebu-Jemo Cycling Corridor in Addis Ababa, Ethiopia



SHIFTING to Greener Modes

People-Centric Facilities

Examples of people-centric facilities:

- Traffic-calmed road table for pedestrian crossing in Cape Town, South Africa



SHIFTING to Greener Modes

People-Centric Facilities

Examples of people-centric facilities:

- Innovative and low-cost colored surfacing to demarcate pedestrian refuge areas in Coimbatore, India



SHIFTING to Greener Modes

Managing Parking

3. SHIFT to greener modes by managing parking

Mainly Medium Term Actions

- Free and unregulated parking has a high cost for pedestrians in terms of access and safety
- Establish a zonal parking system with a differentiated and hierarchical charging system
- Develop a Smart Parking System
- Parking is a business and a service
- Civilianize enforcement

4. IMPROVE safety and efficiency through Intelligent Transport Systems

Mainly Short Term Actions

- ITS caters to all road users and can be deployed to favour pedestrians
- Capitalize on “latecomer advantages”
- Deploy the benefits of user-centric, data-driven and “bottom up” innovations
- Utilize the benefits of Big Data, especially crowd-sourced data from individual smartphones
- Install “bottom up” ITS focusing on traffic signals, Area Traffic Control (ATC), and crowd-sourced apps for Mobility as a Service
- Lay the foundations of a fibre-optic or wireless communication network

IMPROVING Safety & Efficiency through ITS

Traffic Signals and ATC



4. IMPROVE safety and efficiency through ITS – Traffic Signals and ATC

Mainly Short Term Actions

- Traffic signals and ATC can be deployed to favour pedestrians and improve safety
- Start off with sets of isolated traffic signals at selected junctions
- Complement these traffic signals with the “Three Es” and install “green man” pedestrian phases
- Coordinate isolated signals and expand to an Area Traffic Control (ATC) system
- Develop a Traffic Command Centre (TCC) and expand the functions of ATC to include traffic monitoring cameras and electronic police enforcement cameras

IMPROVING Safety & Efficiency through ITS

Traffic Signals and ATC

Examples of Intelligent Transport Systems:

- Traffic Command Centre, Seoul, South Korea



IMPROVING Safety & Efficiency through ITS

Junction Channelisation and the Three “Es”

Example of ITS and the Three “Es”:

- Sao Paulo, Brazil
- Engineering – Junction Channelization
- Education – Campaign
- Enforcement – Police presence/cameras



IMPROVING Safety & Efficiency through ITS Junction Channelisation and the Three “Es”

Example of ITS and junction channelization:

- Addis Ababa, Ethiopia



CONCLUSIONS

- From the myths of TM to the reality
- Need to combine “bottom-up” and “top-down” approaches
- Pedestrians and safety are at the centre of good TM



CONCLUSIONS

- **From the myths of TM to the reality**
- **Need to combine “bottom-up” and “top-down” approaches**
- **Pedestrians and safety are at the centre of good TM**

Changing the Face
**OF TRANSPORT
IN AFRICA**



**REGIONAL
INTEGRATION**



**URBAN
MOBILITY**



**ROAD
SAFETY**

