Sustainable urban design
We need to change the patterns of urban development in African cities.
Induced and Latent Demand

Congestion

Source: Jeffrey Tumlin, Nelson\Mygaard
INCLUSIVE TOD: Linking land use policies to transport investments to improve access to jobs, schools, & recreation
Just being adjacent to transit doesn’t mean it’s “transit-oriented”
URBAN FORM

TRANSPORT MODE CHOICES
COMPACT
TRANSIT
CYCLE
WALK
CONNECT
MIX OF USES
SHIFT
DENSIFY
Transit
Using road space efficiently

3-lane carriageway

Passenger capacity:

- 3,000 passengers per hour per direction

2 lanes + elevated road

- 4,700

Dedicated lanes for bus rapid transit

- 12,000-45,000+
What is BRT?

- Enclosed and secure stations
- New, clean, high-capacity buses
- Pre-board payment with smart cards
- Dedicated bus lanes
- Rapid boarding
- Pedestrian and cycle access

Dar es Salaam
Bus Rapid Transit:
• High quality
• High capacity
• High speed
• Customer oriented
Not an old bus running in a bus lane!
Thika Rd: Proposed
Walk
Physically permeable & visually active frontage

Windows overlooking walkways

Multiple shop & building entrances at ground level

Guangzhou
Connect
Network design

❌ Car-oriented

✅ People-oriented

Dense network of direct short paths to improve accessibility
5 min walking radius around BRT stations

Pimpri Chinchwad

400m buffer around BRT stations
Actual area people can reach in 5 min

Actual extents of 400m walk around transit stations

Pimpri Chinchwad
Prioritised connectivity for NMT users

Road network for all modes

Pedestrians and cyclists

Pedestrian-only

Maximum block size for pedestrians: 100 m
Prioritised connectivity

Walking and cycling routes are shorter than motor-vehicle routes
Mix
Mix of incomes near public transport
Upgrading informal settlements
Access to public parks is important for environmental and mental health.
Densify
Compact development along transit lines

- **R-AH Zone**
  - FAR 2.7

- **CBD**
  - FAR 5.4

- **MRT corridors**
  - FAR 4.0

- **High-density zone**
  - FAR 4.0

(Graphics prepared by ENVIRONMENTAL PLANNING COLLABORATIVE)
Nairobi zoning

No relation between BRT network & land use intensity
Highest intensity of uses around quality mass rapid transit
Liveable density
Compact
Compact growth at the metropolitan level
Ahmedabad: Change in strategy

Development Plan (2002)
Focus on low-density, outward expansion

Development Plan (2021)
Compact development along rapid transit corridors
Orderly expansion where growth does occur

800-1,000 m.

Source: UN-Habitat
Create clear parking & no-parking zones
Performance pricing

- Increase fees in areas with high demand

Grosvenor Square in London

No meters  Meter price: £  Meter price: ££££
Performance pricing

Budapest parking zones

KES 155 / hr
KES 93 / hr
KES 62 / hr
High demand ➔ High use fee
(Not more supply!)
Excessive parking provision in new projects

Britam tower

• 35,000 sq m of commercial space
• 1,000 parking spaces
  – 2.9 spaces per 100 sq m
• 700 m from a future BRT station
Swiss Re building, London

- 48,000 sq m of commercial space
- 5 parking spaces, all for disabled
1 parking space (23 - 28 sq m) (with associated driveway)

= Dining space for 15 people

= Office space for 4 people

= 1 affordable housing unit
The 8 principles

- Connect
- Compact
- Transit
- Densify
- Mix
- Shift
- Cycle
- Walk
Build roads
Add traffic jams
Add pollution
Add road deaths

Cities for cars
Cities for people

Add transit
Add density
Cut parking
Better quality of life!
More information:
www.todstandard.org

africa.itdp.org
Twitter: @itdpafrica