



Transit-oriented development principles

Dec 2023





Inclusive transit-oriented development:

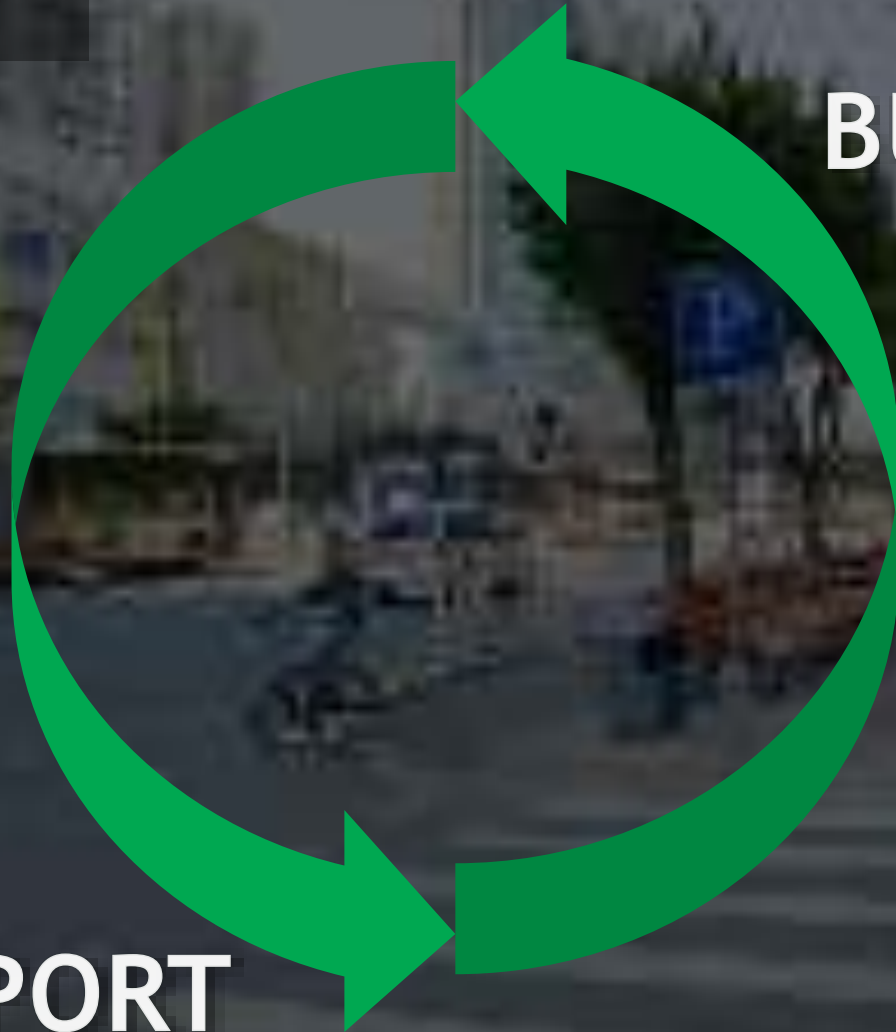
Linking land use policies to transport investments with aim of improving access to jobs, schools, & recreation



Moi Ave



**TRANSPORT
SYSTEM &
BUILT FORM**



**TRANSPORT
MODE CHOICES**



Just being adjacent to transit
doesn't mean it's "transit-oriented"



COMPACT

MIX OF USES

TRANSIT

CYCLE

WALK


CONNECT

SHIFT

DENSIFY



Transit



New, clean, high-capacity buses

Enclosed and secure stations

Rapid boarding

Pre-board payment with smart cards

Pedestrian and cycle access

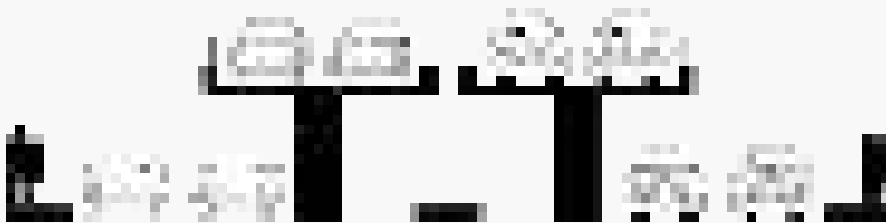
Dedicated bus lanes

Using road space efficiently

3-lane carriageway



2 lanes + elevated road



Dedicated lanes for bus rapid transit



Passenger capacity:



3,000 passengers per hour
per direction



4,700 passengers per hour
per direction



**12,000-
45,000+**

passengers per hour per direction



Footpath

Cycle track


Mixed traffic

BRT



Walk

Footpaths: The zone system



Frontage
zone

Pedestrian zone:
 ≥ 2 m

Furniture
zone



Safe crossings





Permeable Frontages along high-capacity rapid transit



Curitiba





Visually active frontage

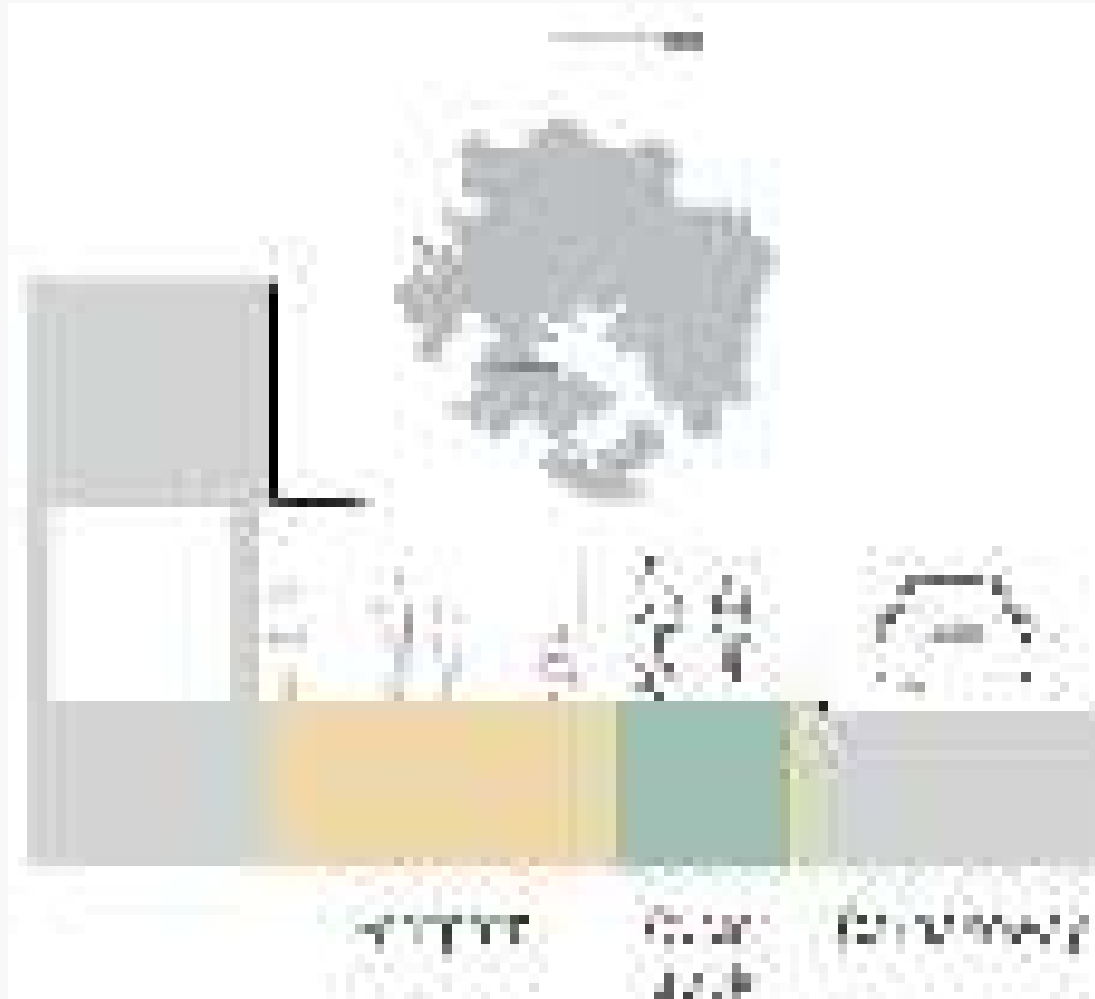


Multiple shop & building entrances at ground level



Cycling

Cycle track between footpath and carriageway



CYCLE: Cycle track standards



Physically separated from mixed traffic

Minimum clear width of 2 m

Wide adjacent footpath (4 m)

Smooth surface material



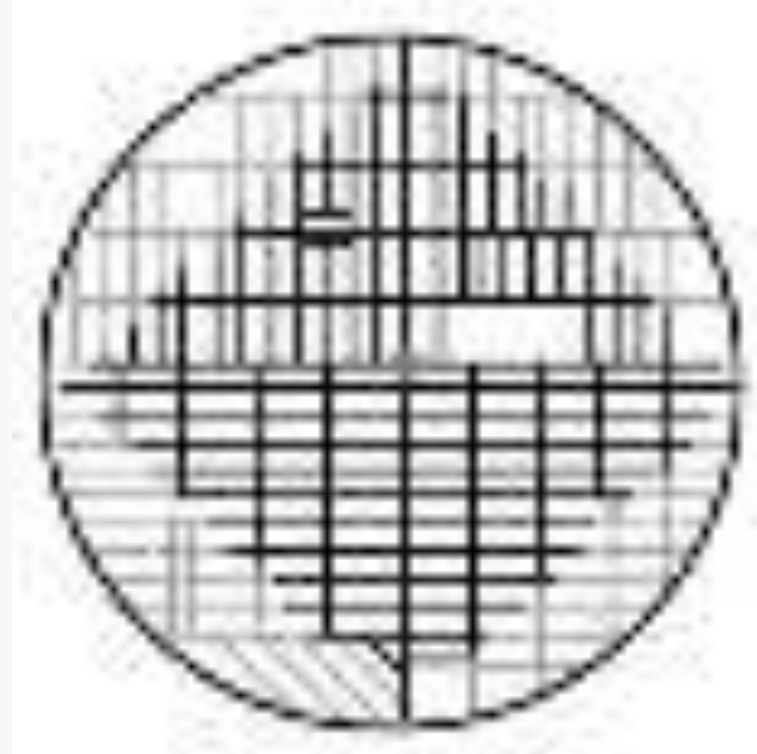




Connect



**✘ Car-oriented/
Unplanned**



**✓ People-oriented/
Planned**

Dense network of direct short paths to improve accessibility



Prioritized connectivity



Singapore





Connect: Dense networks of streets and paths



Road network for all modes

Pedestrians and cyclists

Pedestrian-only

Maximum block size for pedestrians: 100 m

Mix of uses



Mix of uses within the same development





Mix of incomes near public transport



Density



- Highest intensity zoning near BRT lines
- Areas within 75 m of BRT corridors get 30% higher FAR if at least 15% of dwelling units are affordable



Highest intensity of uses around
quality mass rapid transit

An aerial photograph of a city, identified as Curitiba, showing a dense urban landscape with numerous high-rise buildings. A yellow dashed line traces a path through the city, representing a BRT corridor. A black rectangular box with yellow text is placed over the line, identifying it as the "BRT corridor".

BRT corridor

Curitiba



Some areas have high density but walkways, cycle tracks, open space are missing



Nairobi



Some areas have high dense low-rise developments



Kigali



Compact



Compact development at the metropolitan scale



Promotes more roads

- Increases traffic jams
- Increases pollution
- Poor land-use utilization



Promotes transit

- Promotes density
- Promotes Mixed-Use/Mixed-Income
- Promotes better quality of life
- Maximization of land uses and development
- Increases ridership



New residential developments far from job opportunities



Addis Ababa



Orderly expansion where growth does occur



800-1,000 m.

Lima

Source: UN-Habitat



Compact development along transit lines



R-AH Zone
FAR 2.7

CBD
FAR 5.4

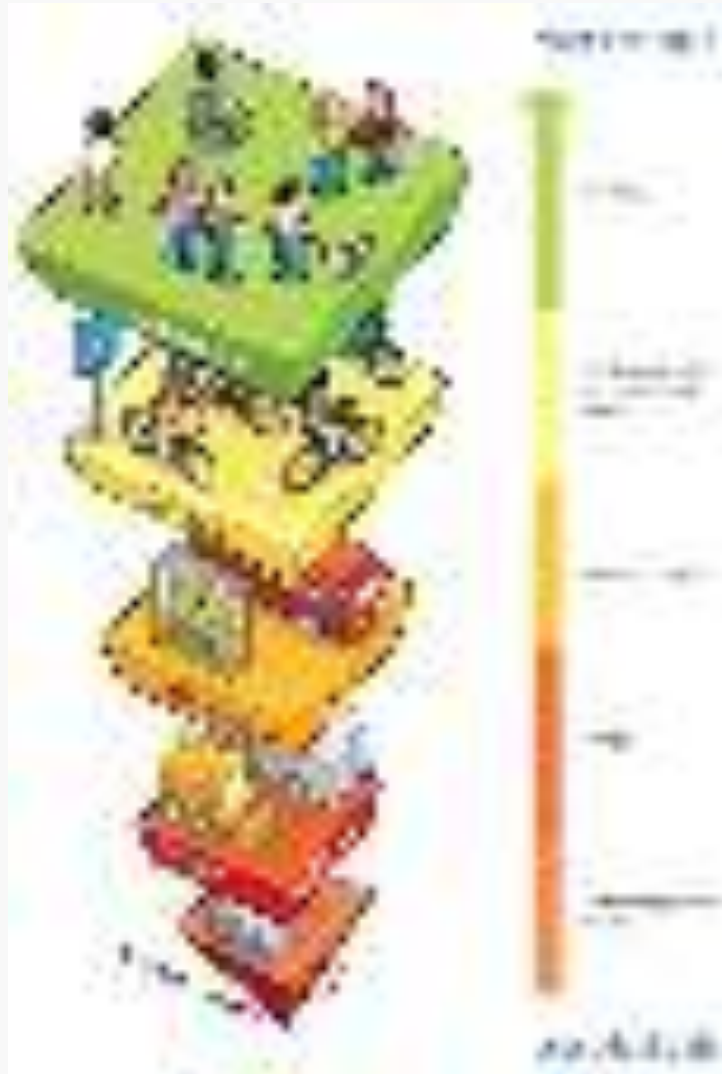
MRT corridors
FAR 4.0

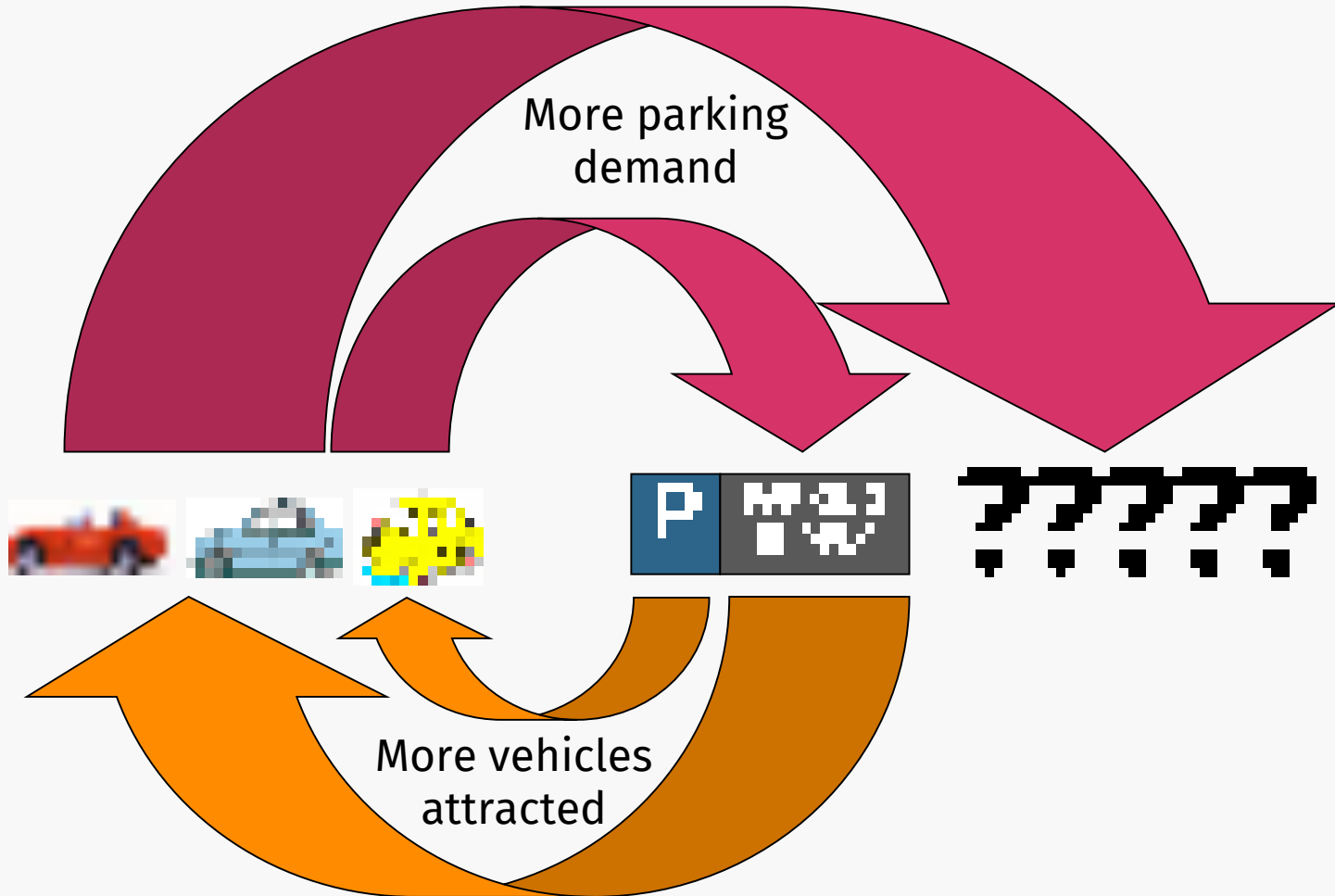
High-density
zone
FAR 4.0



Shift

Pedestrian Oriented Design





- Increase fees in areas with high demand

Grosvenor Square in London



No meters



Meter price: £



Meter price: ££££

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

Opportunity cost of parking



= Dining space for 15 people

= Office space for 4 people

= 1 affordable housing unit

1 parking space (23-28 sq m)
(with associated driveway)



Build roads

Add traffic jams

Add pollution

Add road deaths



Cities for people



Add transit

Add density

Cut parking

Better quality of life!

Thank you

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