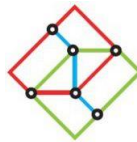


Sustainable urban design



Chris Kost

November 2019



Transformative
Urban Mobility
INITIATIVE



ITDP
Institute for Transportation
& Development Policy

We need to change the patterns of urban development in African cities



Thika Rd

Induced and Latent Demand

Congestion



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"



Johannesburg

URBAN FORM

TRANSPORT MODE CHOICES



COMPACT

MIX OF USES

TRANSIT

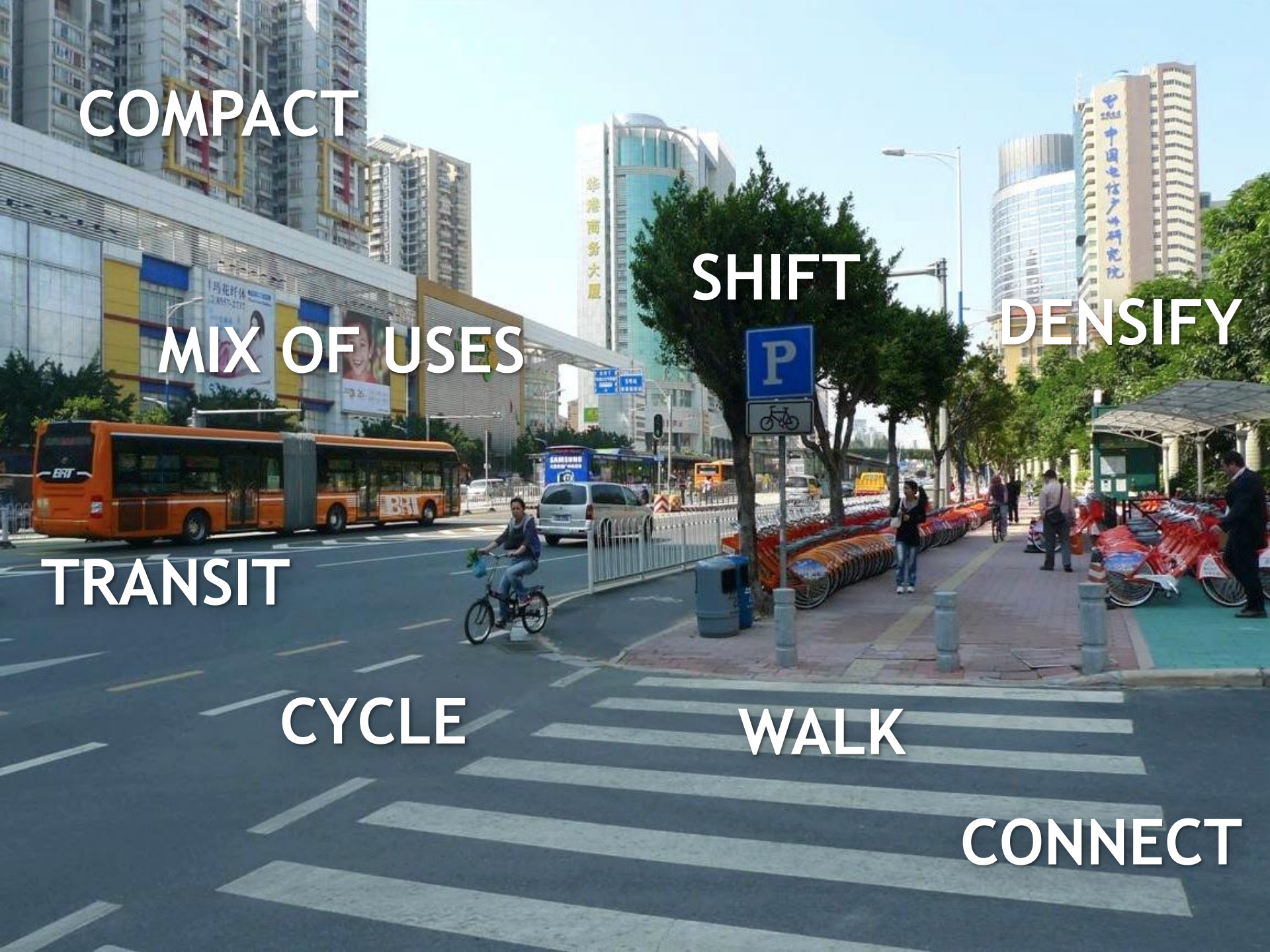
CYCLE

SHIFT

DENSIFY

WALK

CONNECT



Transit





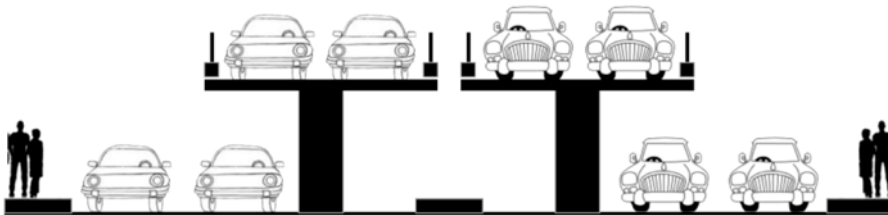
Dar es Salaam

Using road space efficiently

3-lane carriageway



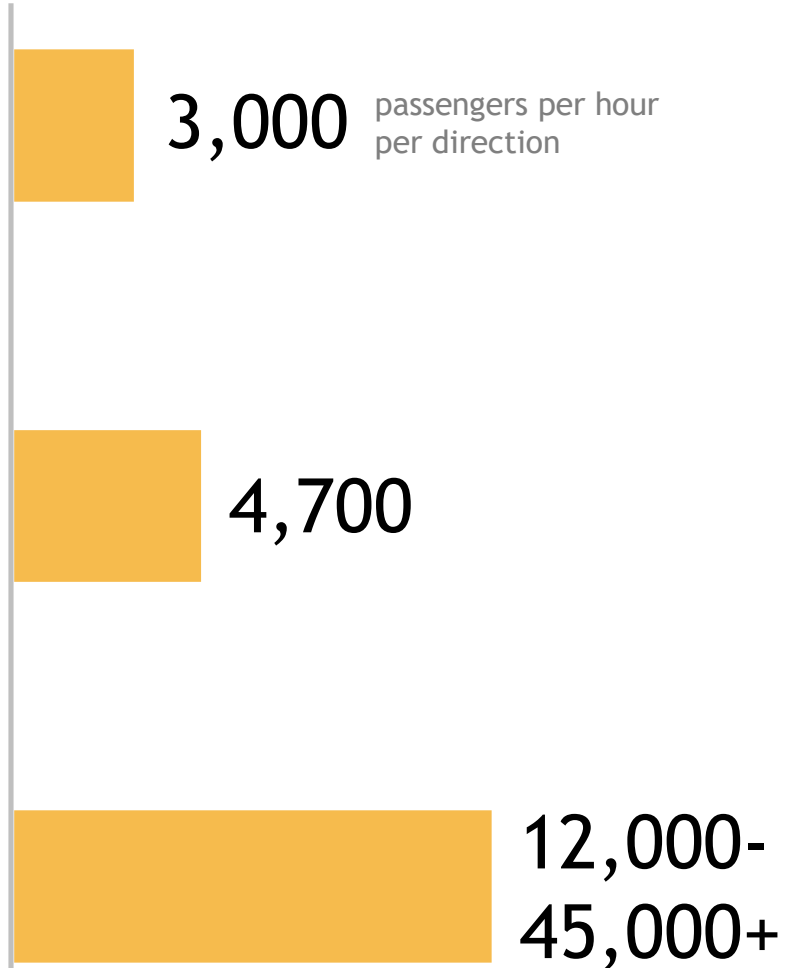
2 lanes + elevated road



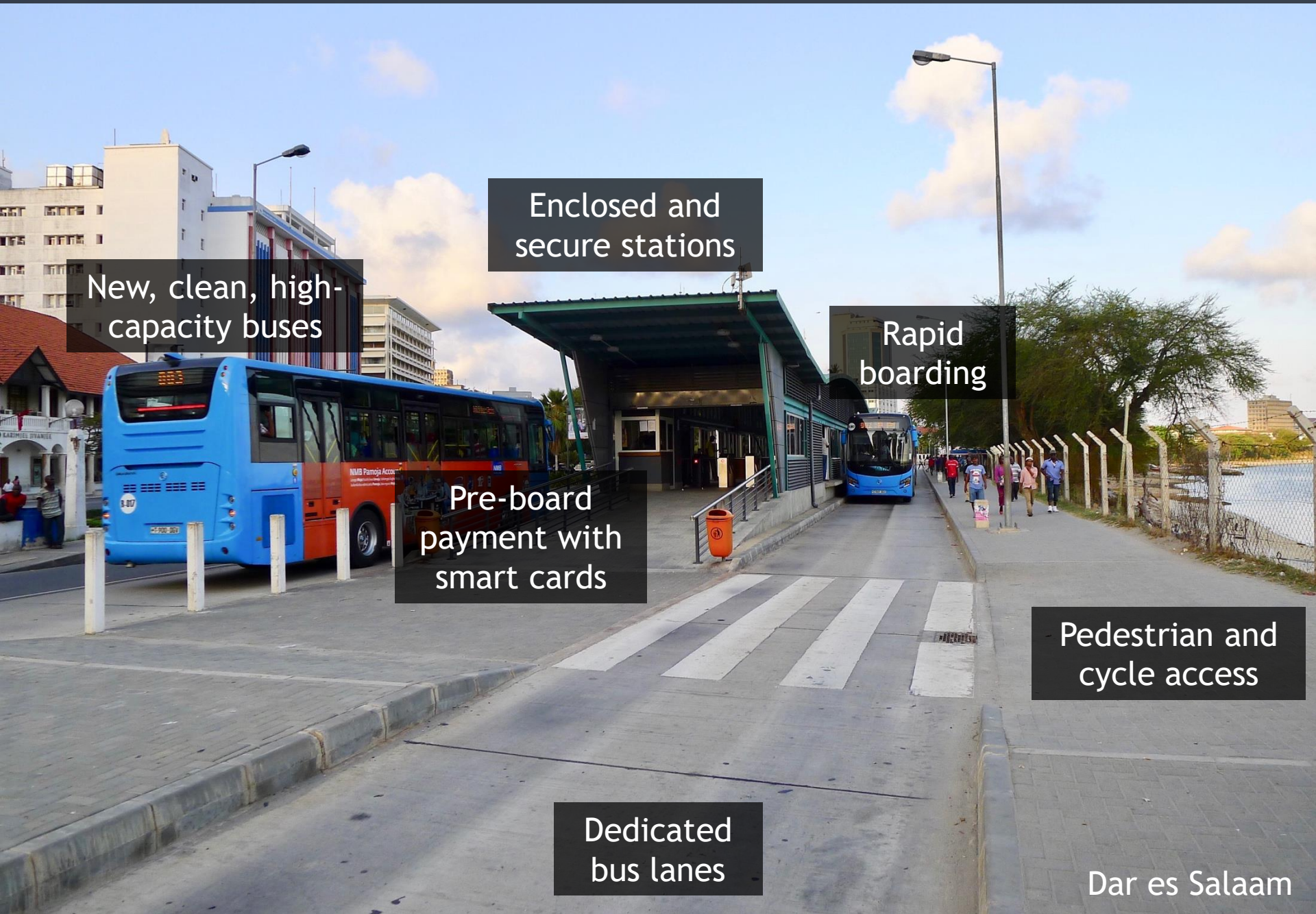
Dedicated lanes for bus rapid transit



Passenger capacity:



What is BRT?



Enclosed and
secure stations

New, clean, high-
capacity buses

Rapid
boarding

Pre-board
payment with
smart cards

Pedestrian and
cycle access

Dedicated
bus lanes

Dar es Salaam

Morogoro Rd, Dar es Salaam - Before



Dar es Salaam

Morogoro Rd, Dar es Salaam - After



Bus Rapid Transit:

- High quality
- High capacity
- High speed
- Customer oriented

Not an old bus running in a bus lane!

Thika Rd: Existing



Thika Rd: Proposed



Walk





Mombasa







Physically permeable & visually active frontage

Windows overlooking walkways

Multiple shop & building entrances at ground level

Guangzhou



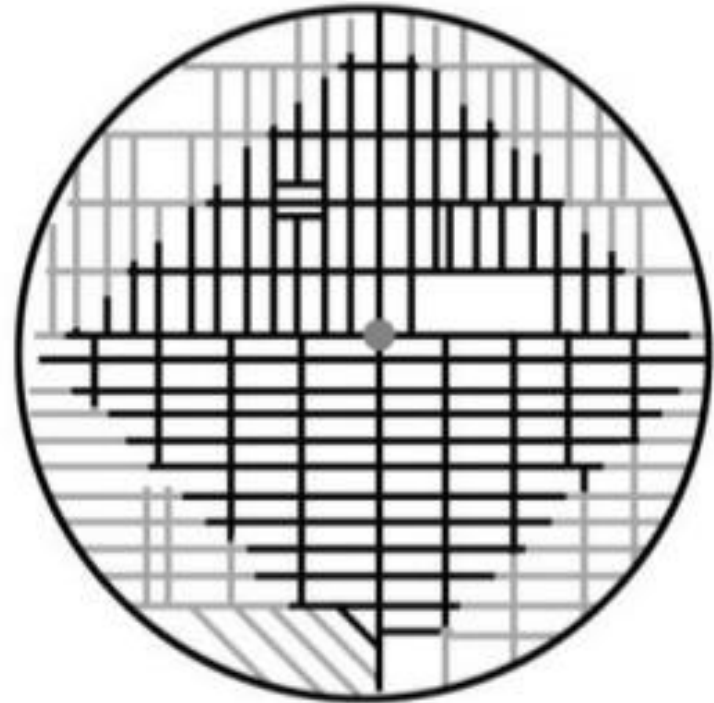
Connect



Network design



✗ Car-oriented



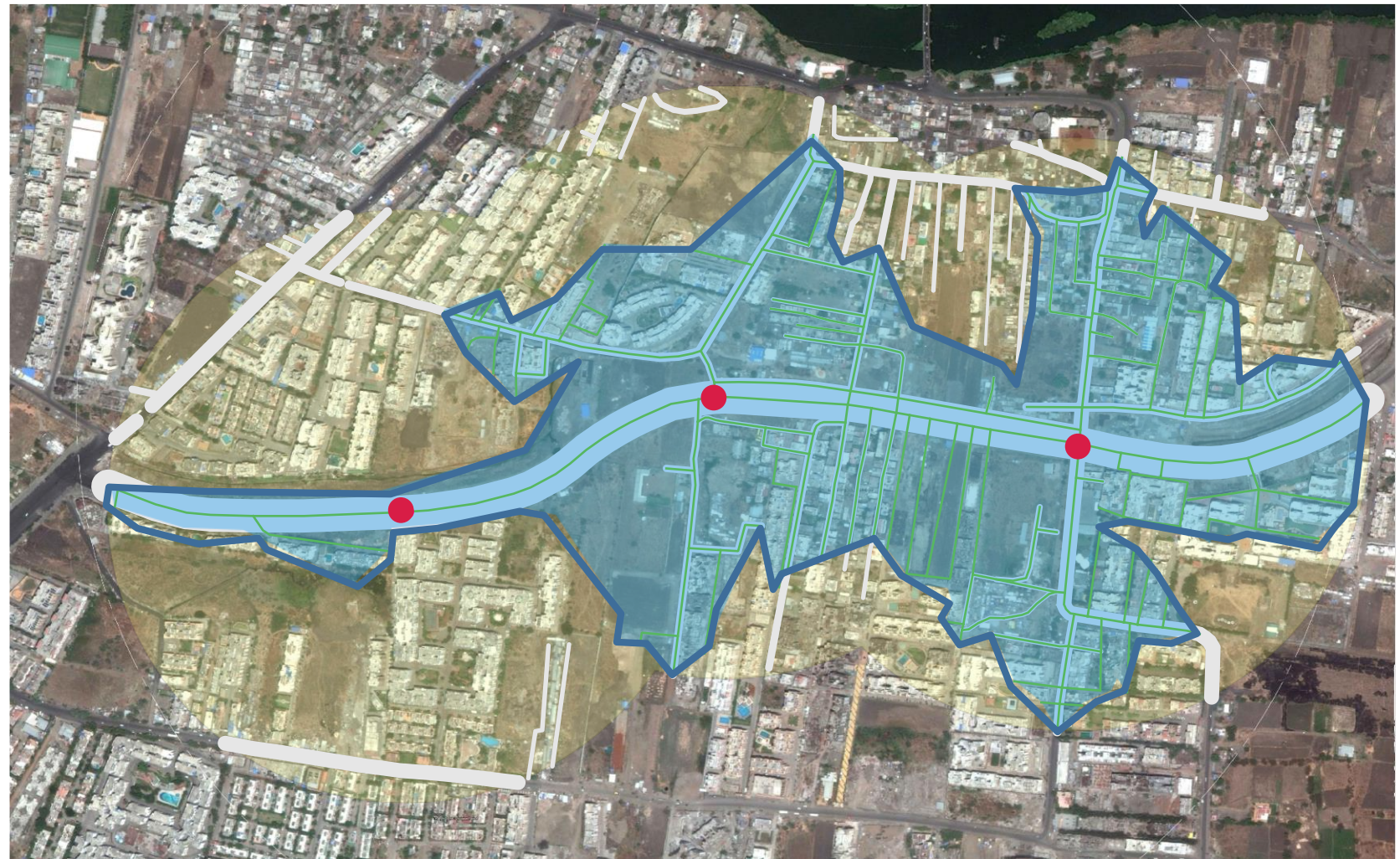
✓ People-oriented

Dense network of direct short paths to improve accessibility

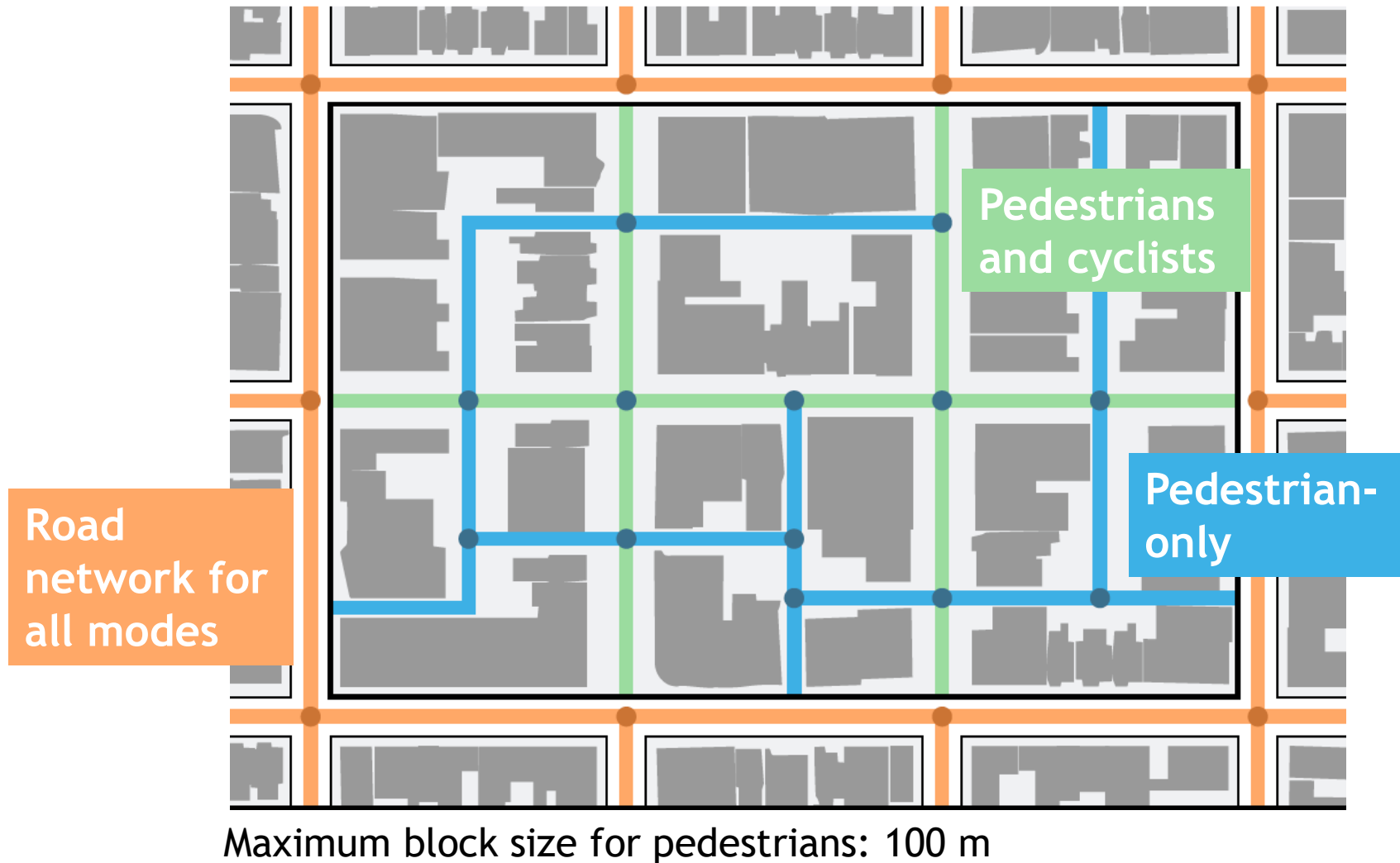
5 min walking radius around BRT stations



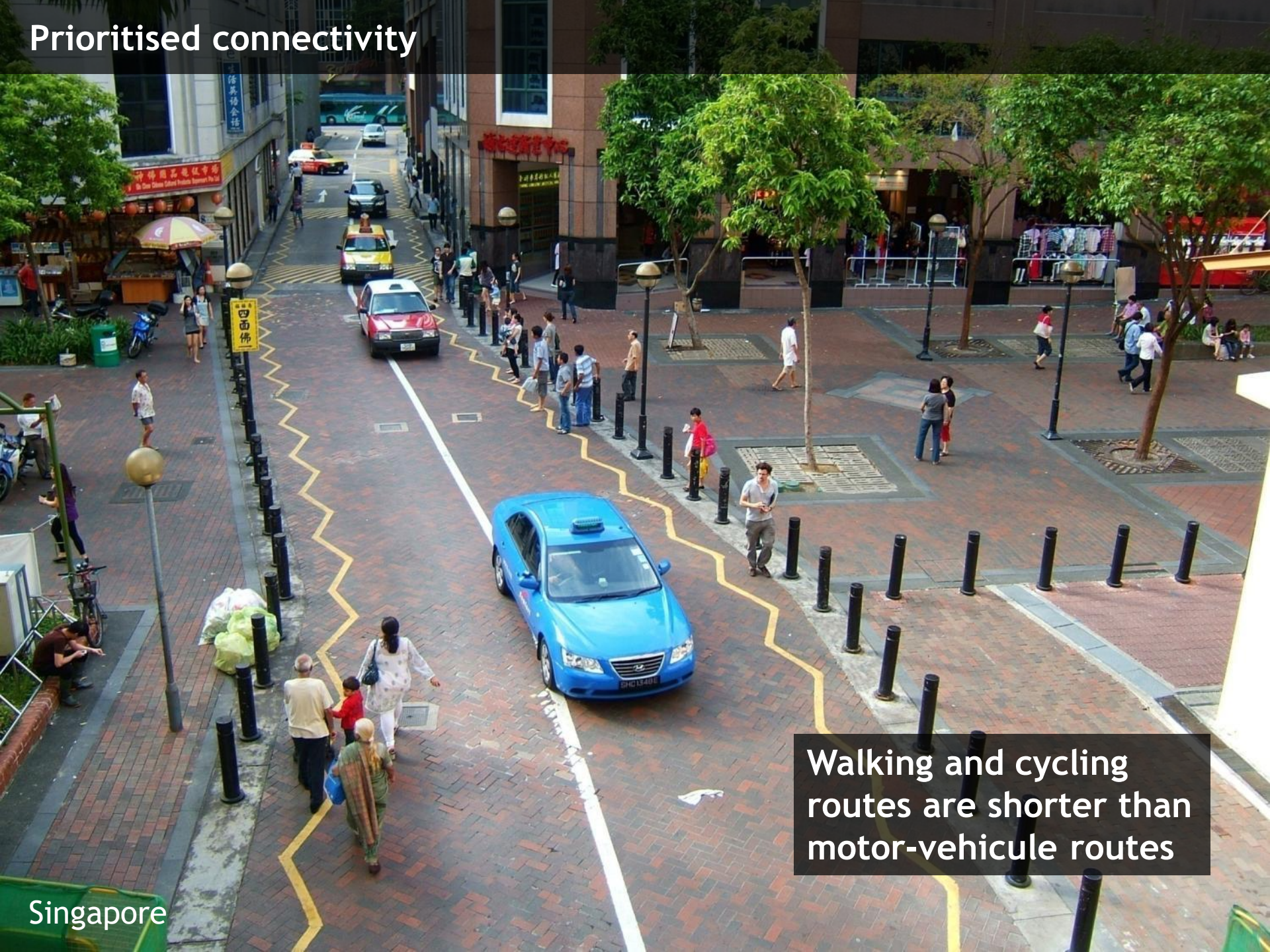
Actual area people can reach in 5 min



Prioritised connectivity for NMT users



Prioritised connectivity



Walking and cycling routes are shorter than motor-vehicule routes

Mix

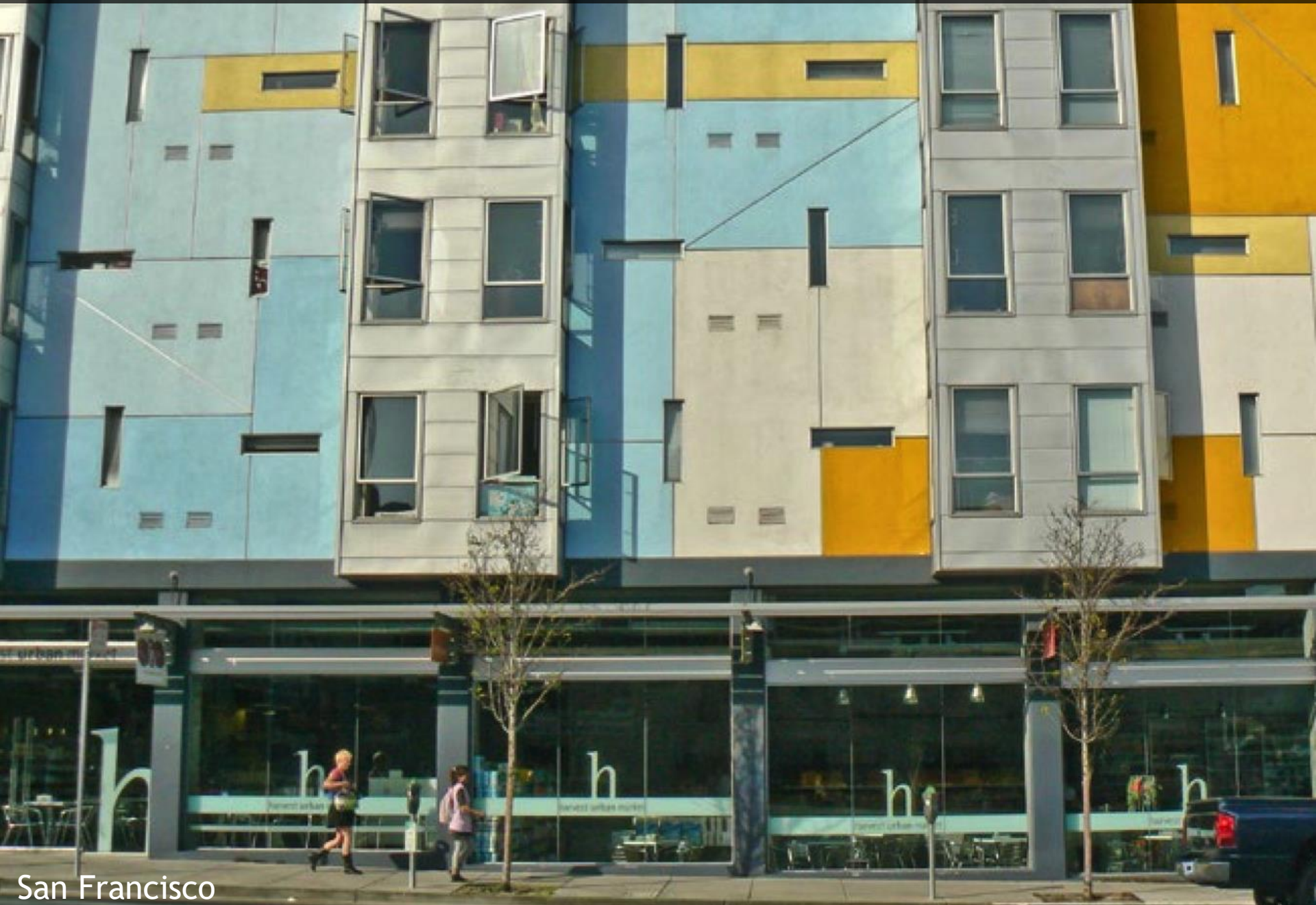




THE PROJECT

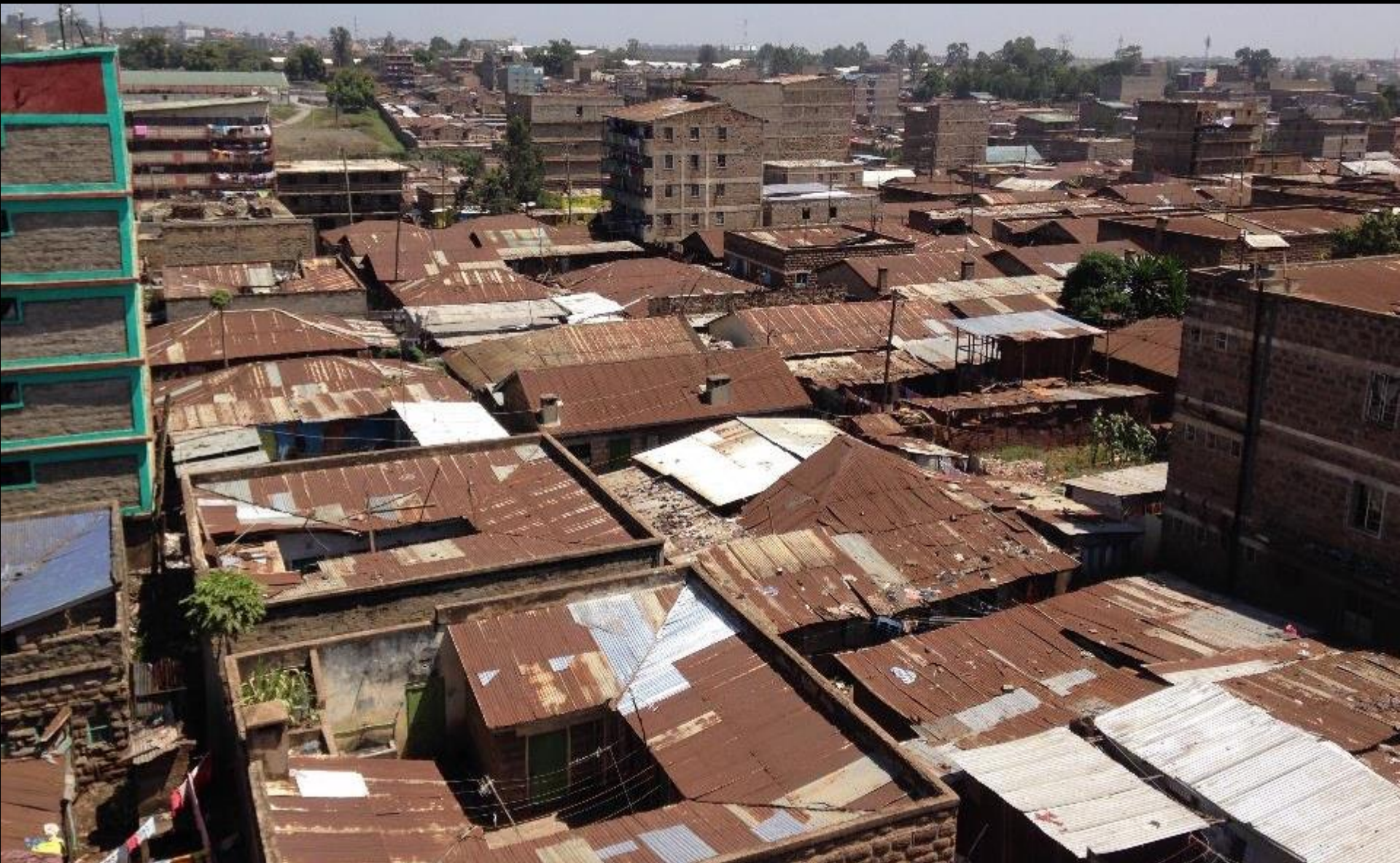


Mix of incomes near public transport



San Francisco

Upgrading informal settlements



Access to public parks

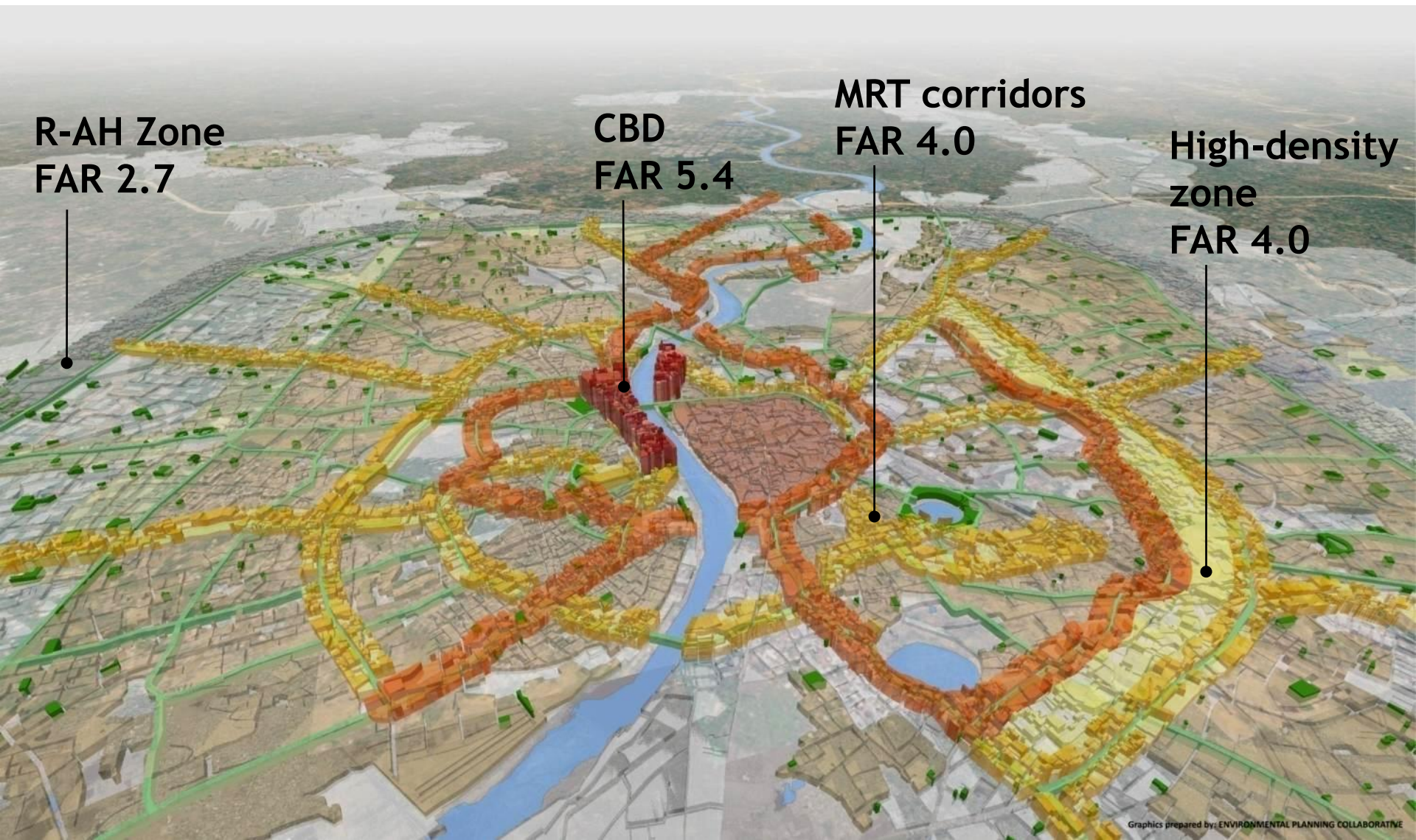


**Important for environmental
and mental health**

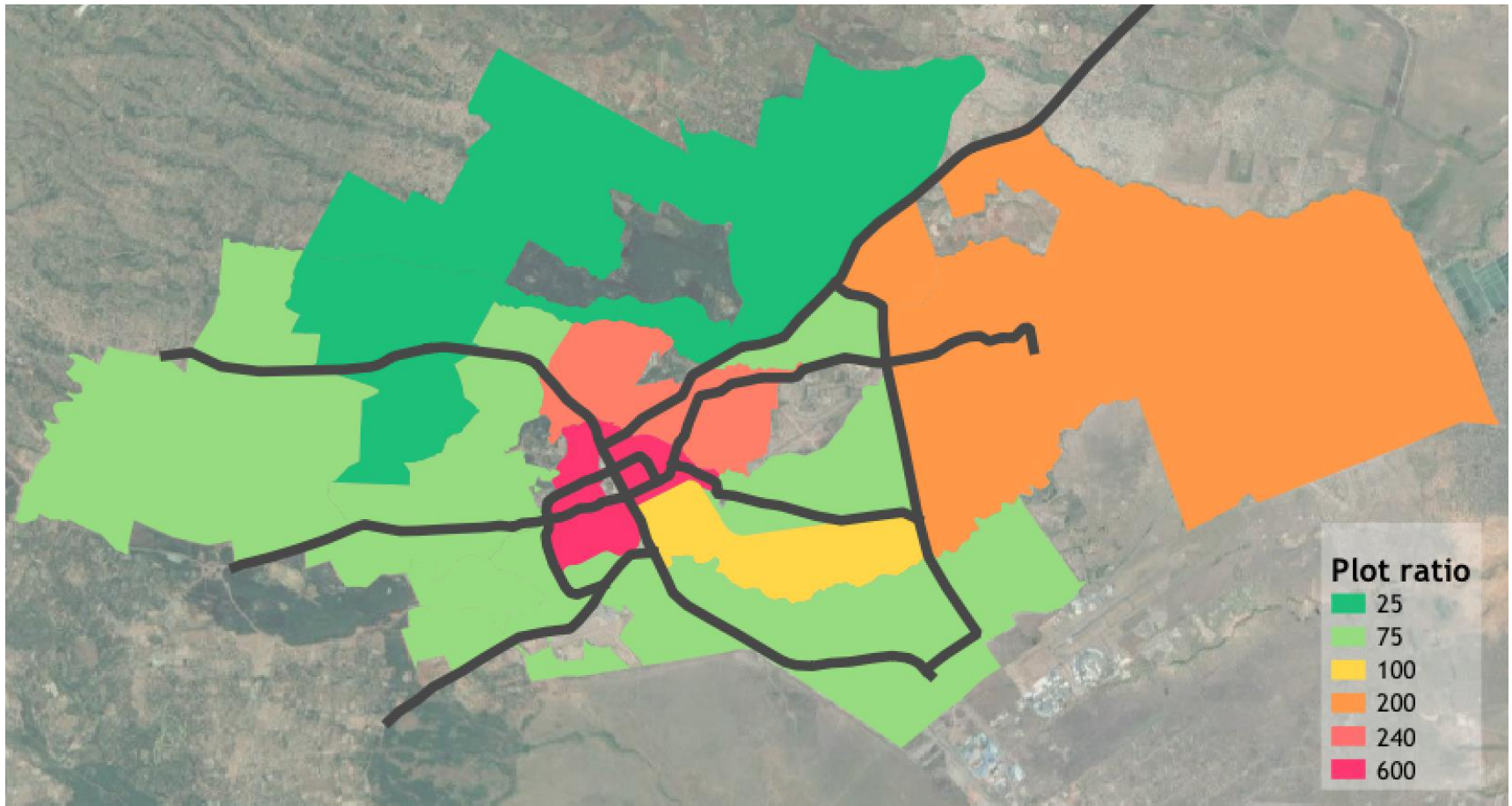
Densify



Compact development along transit lines



Nairobi zoning



No relation between BRT network & land use intensity

Highest intensity of uses around quality mass rapid transit



BRT corridor



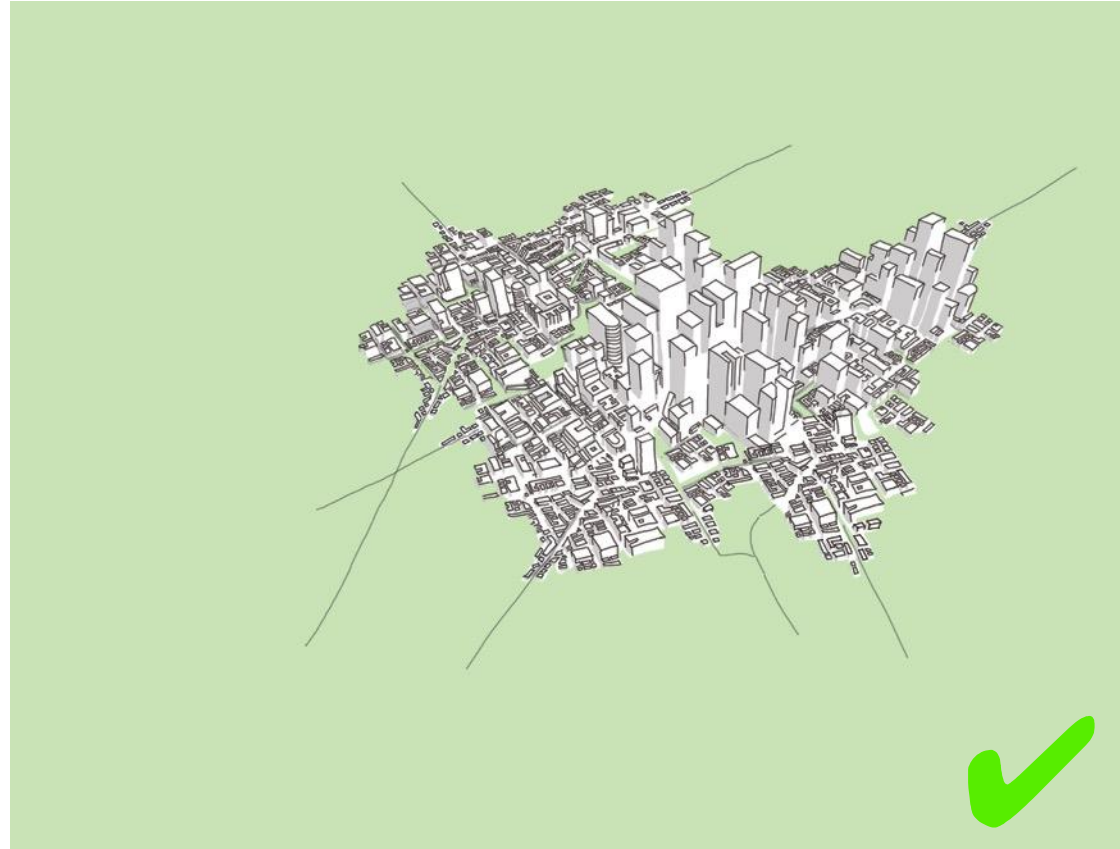
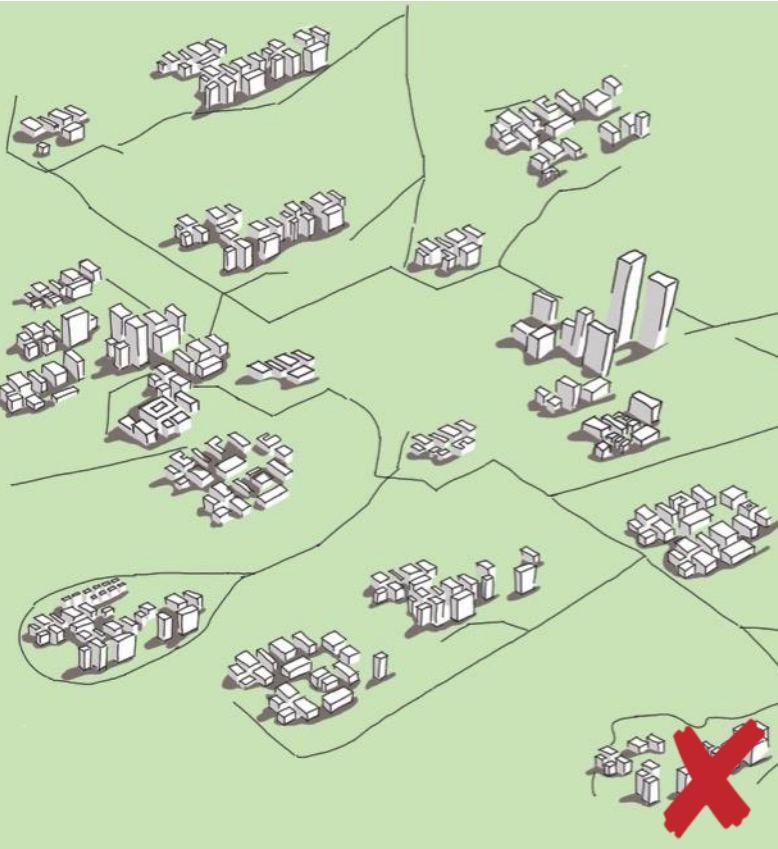
Liveable density



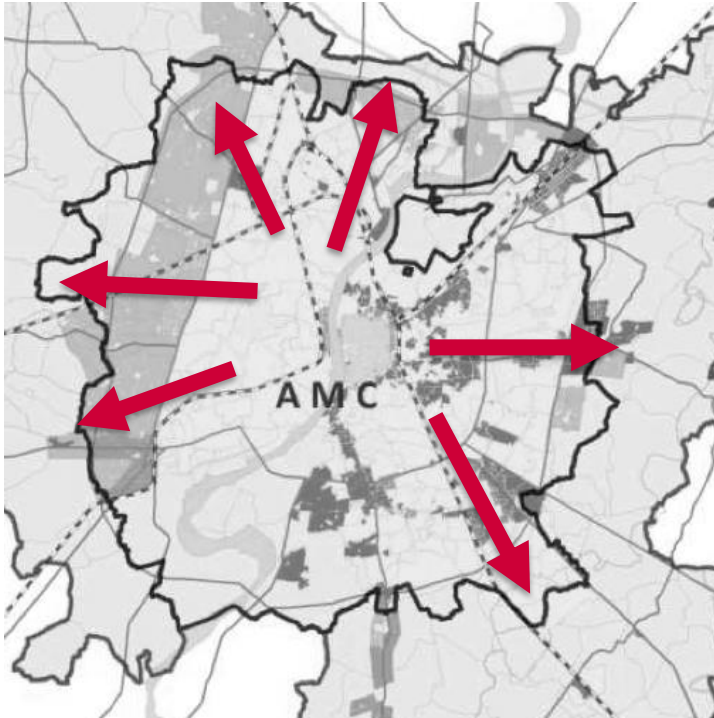
Compact



Compact growth at the metropolitan level

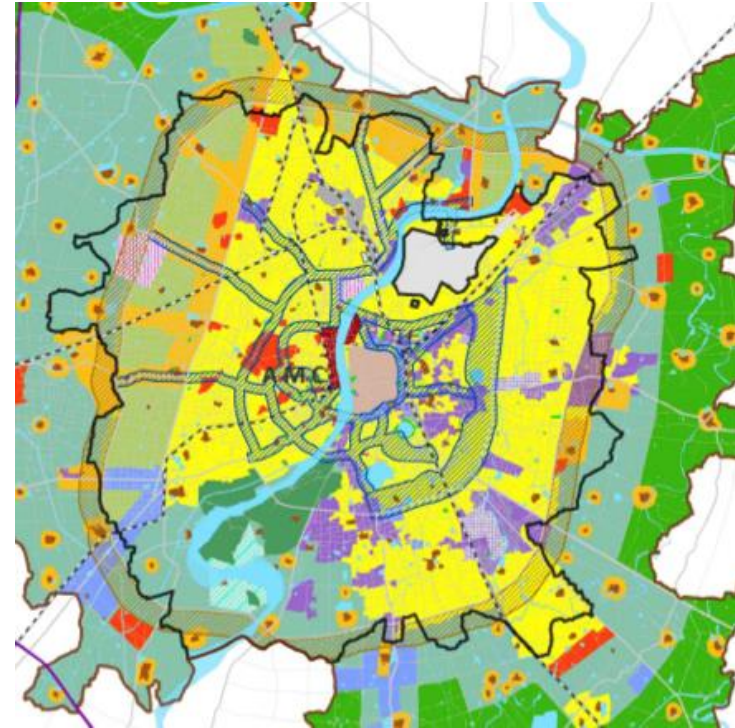


Ahmedabad: Change in strategy



Development Plan (2002)

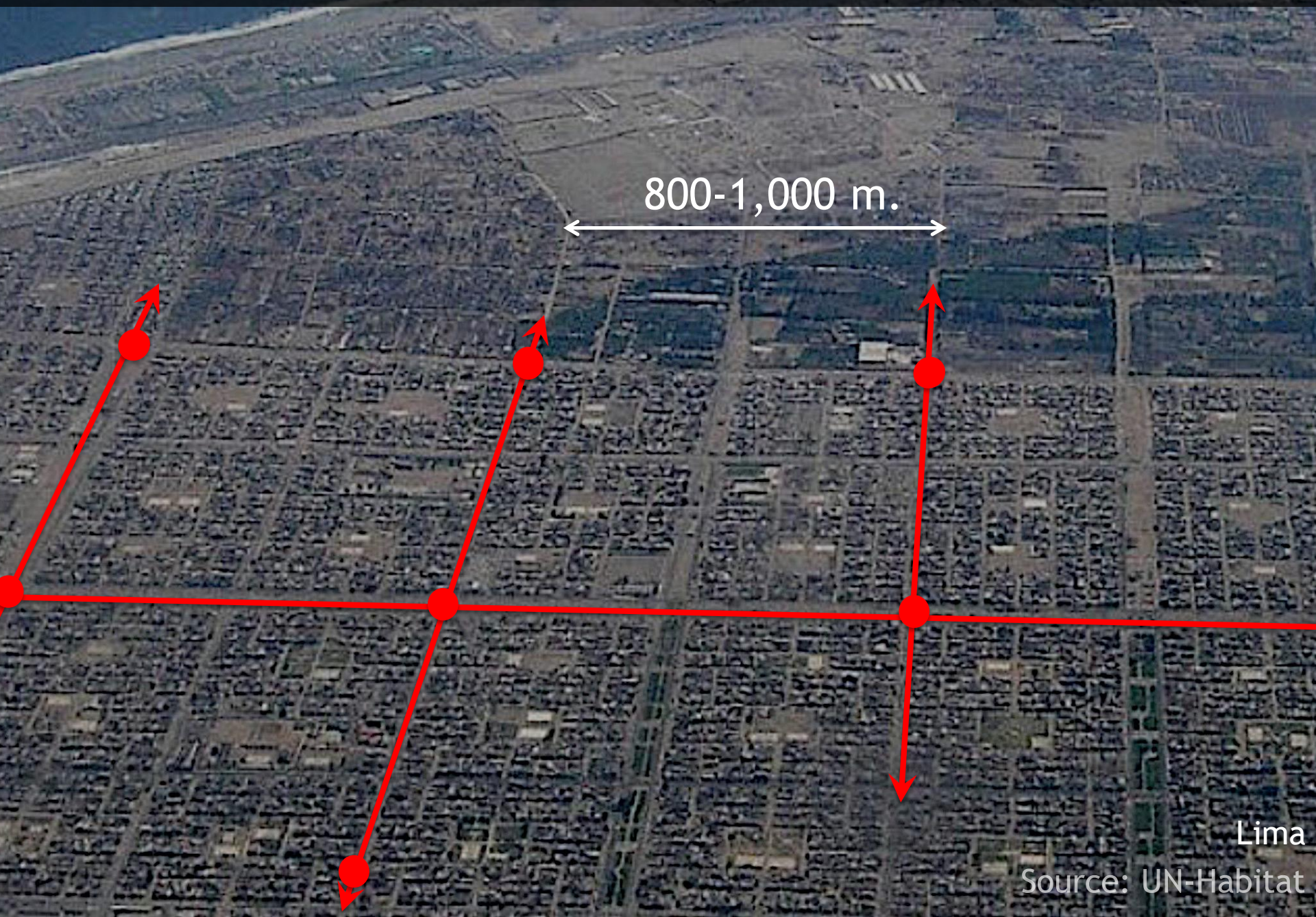
Focus on low-density,
outward expansion



Development Plan (2021)

Compact development along
rapid transit corridors

Orderly expansion where growth does occur



800-1,000 m.

Lima

Source: UN-Habitat

Shift



Copenhagen: 1950s

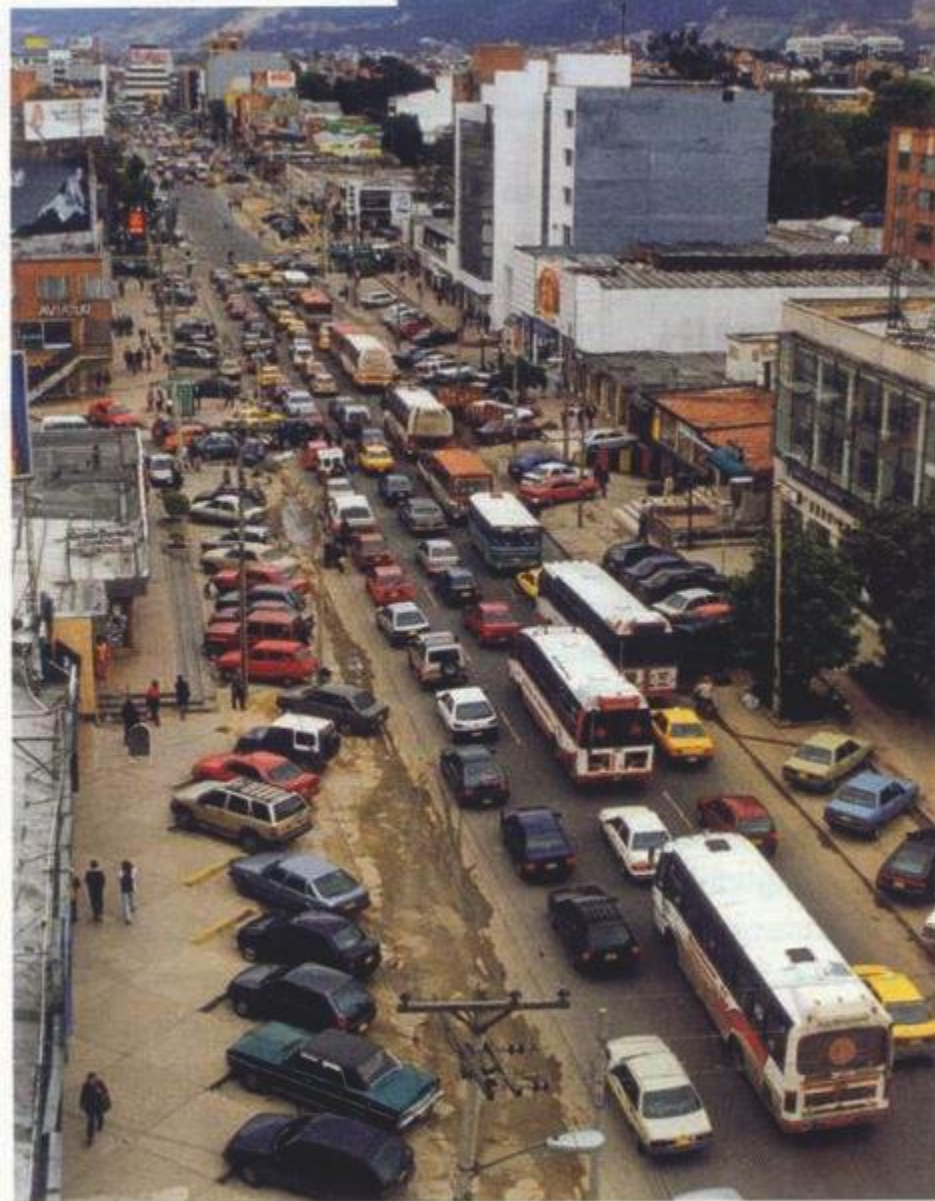


Copenhagen: Today

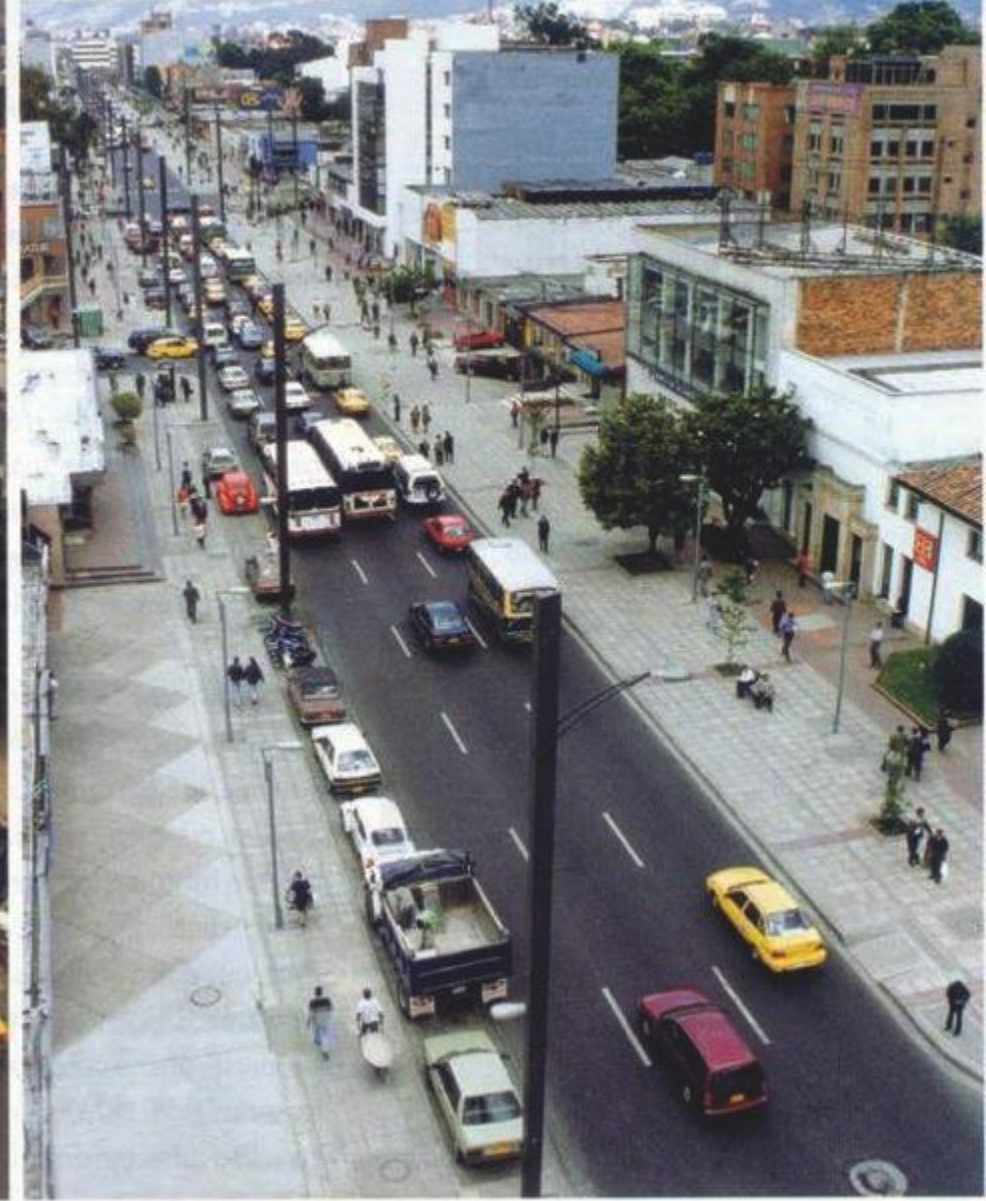


Create clear parking & no-parking zones

Primer semestre 1998



Noviembre de 2000



Performance pricing

- Increase fees in areas with high demand

Grosvenor Square in London



No meters

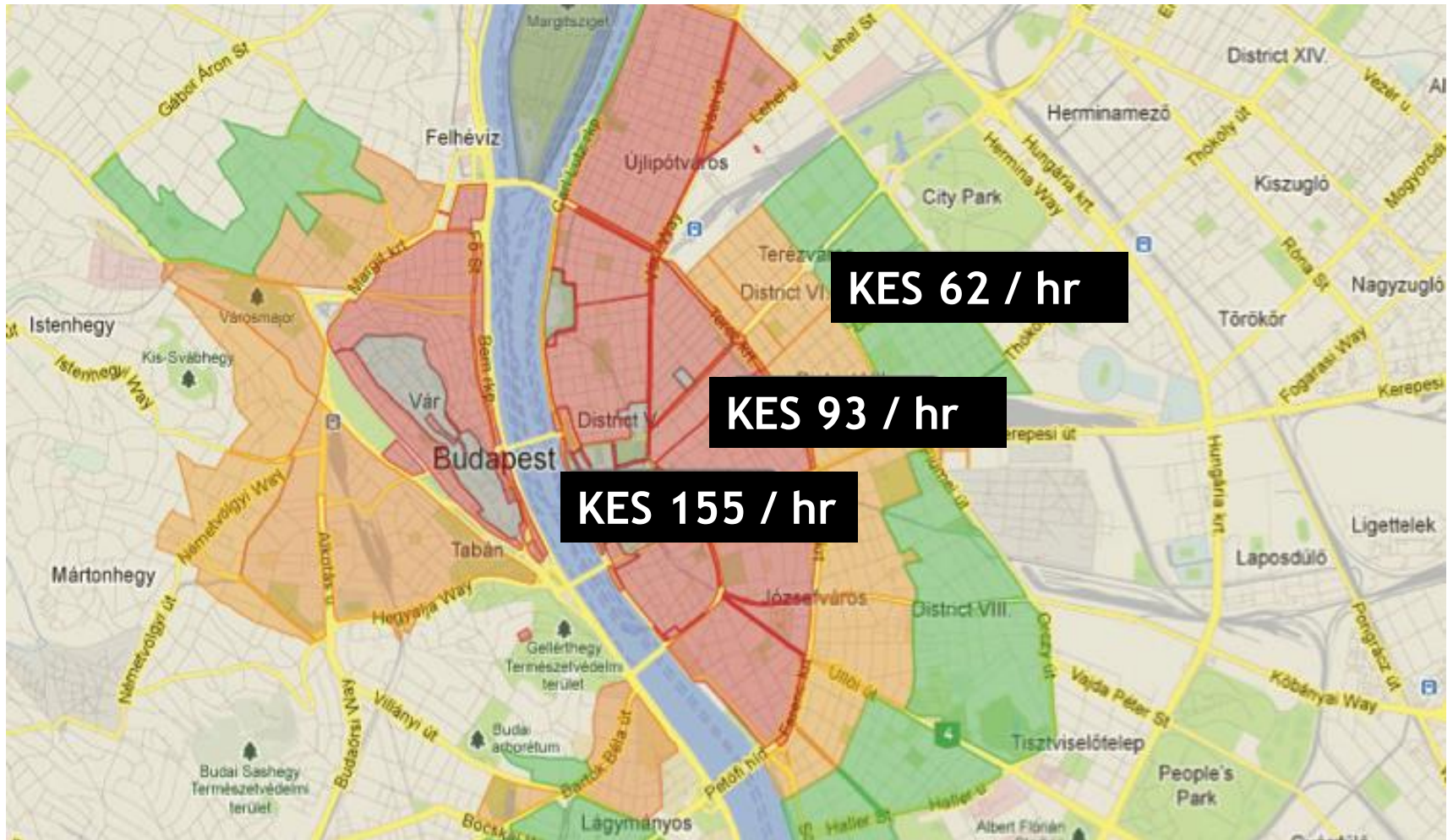


Meter price: £



Meter price: ££££

Performance pricing



Budapest parking zones

High demand → High use fee
(Not more supply!)

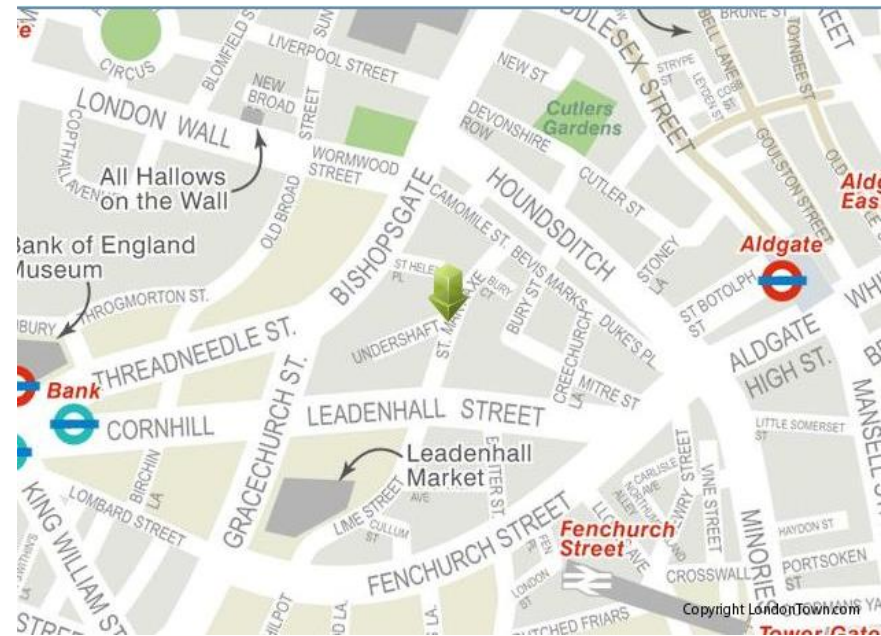
Excessive parking provision in new projects



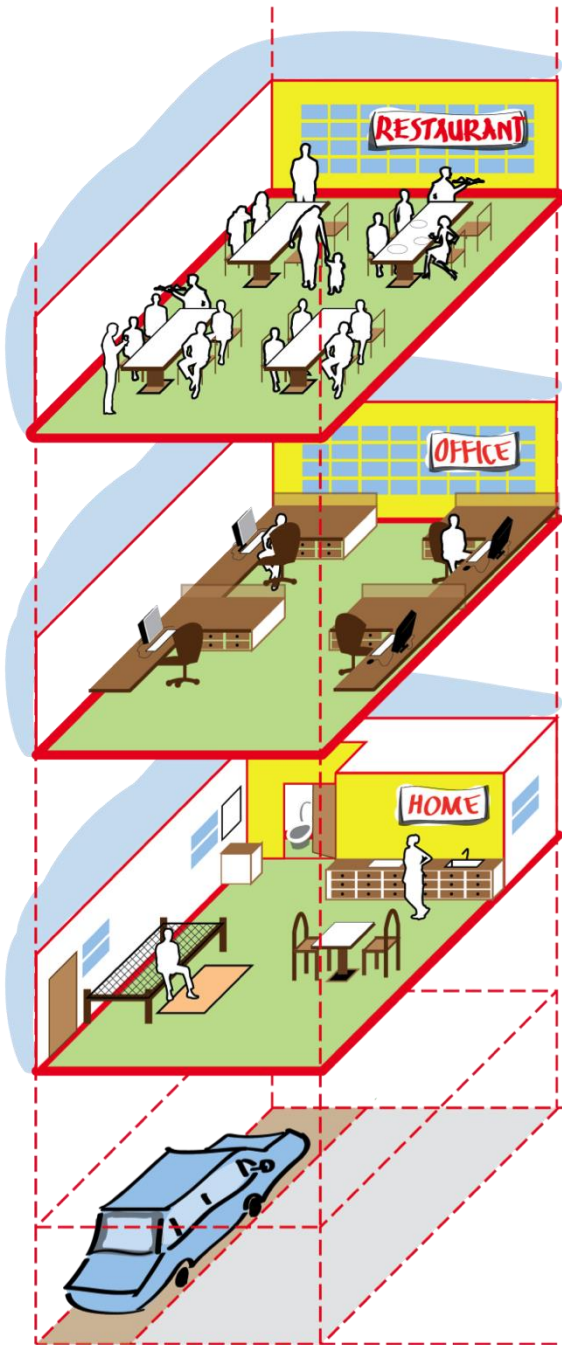
Britam tower

- **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



= Dining space for 15 people

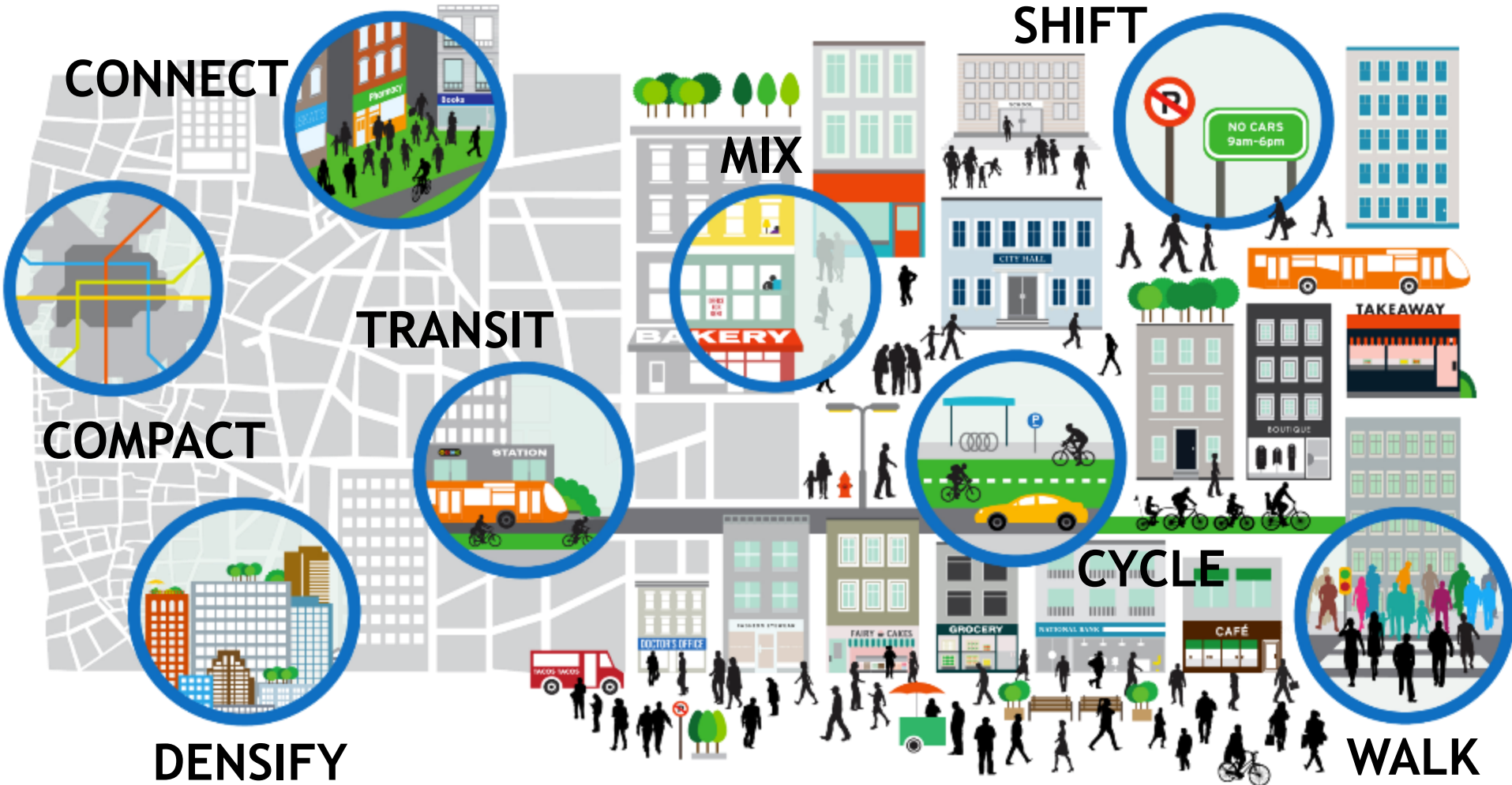
= Office space for 4 people

= 1 affordable housing unit

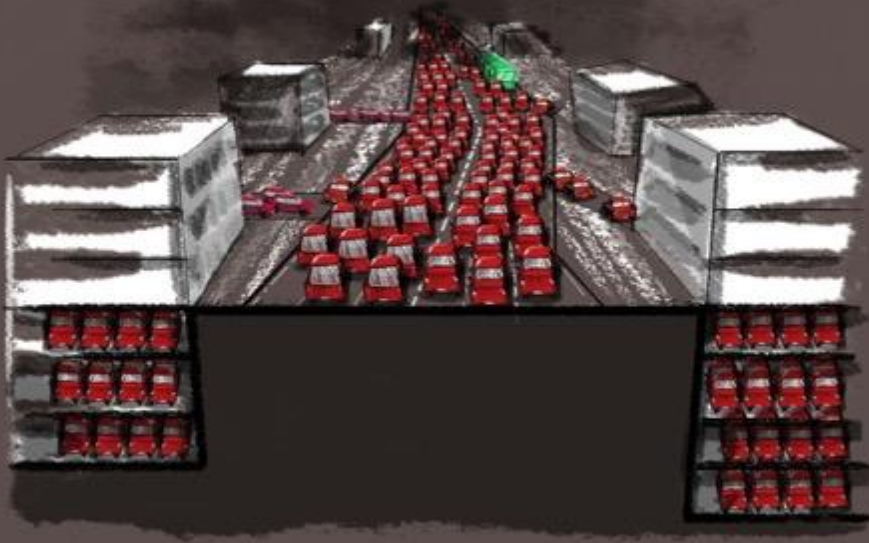
1 parking space (23 - 28 sq m)

(with associated driveway)

The 8 principles



Cities for cars



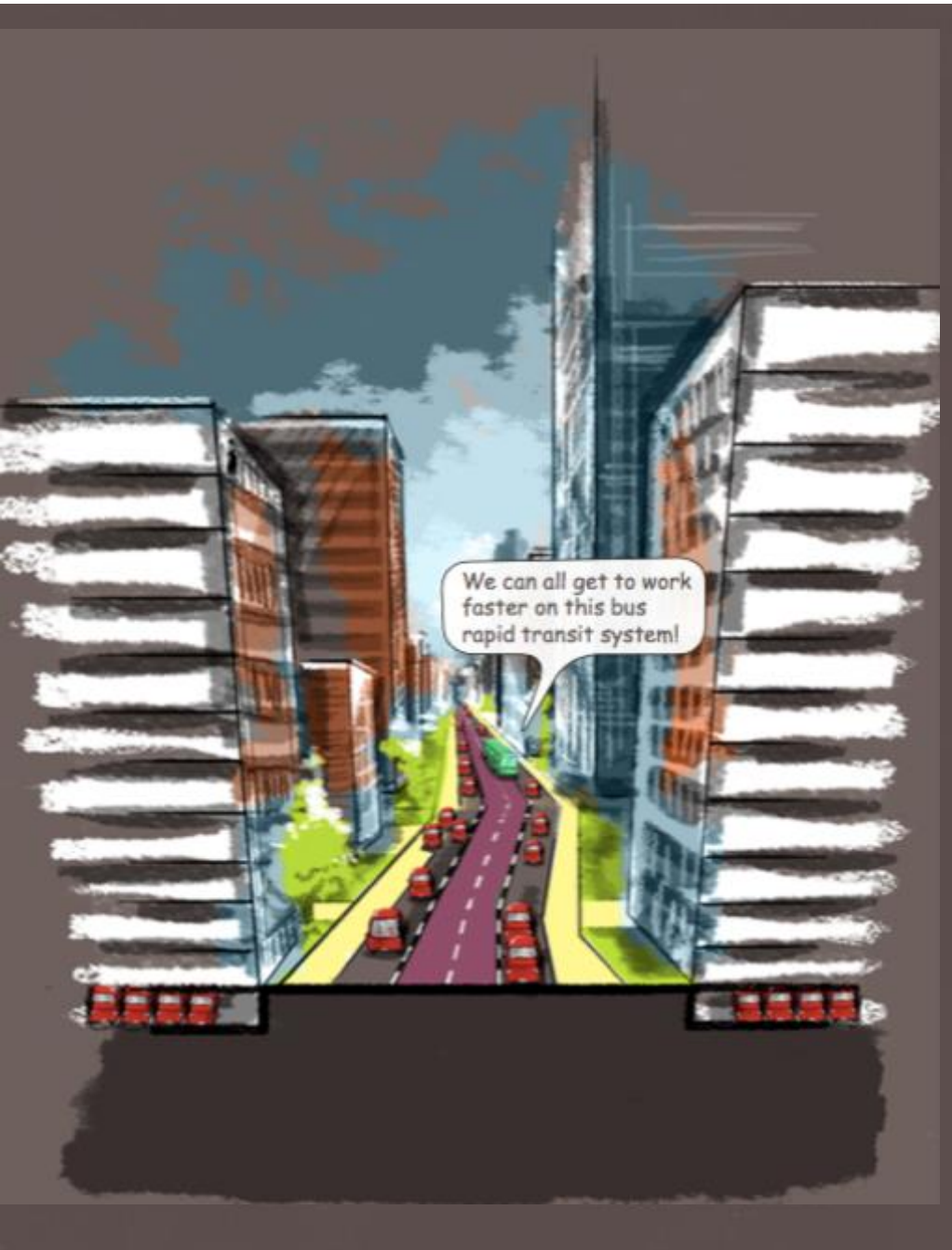
Build roads

Add traffic jams

Add pollution

Add road deaths

Cities for people



Add transit

Add density

Cut parking

Better quality of life!



More information:
www.todstandard.org

africa.itdp.org
Twitter: @itdpafrica