

Towards Car-lite Multi-modal Urban Mobility

Dr. Limin HEE
Director, Centre for Liveable Cities

Singapore: A City-State's Challenge



5.61m

719
sqkm

7800
pp/sq
km



Congestion

Singapore, 1970s



Transit-oriented

Singapore, today



**Develop reliable public
transport as the backbone**

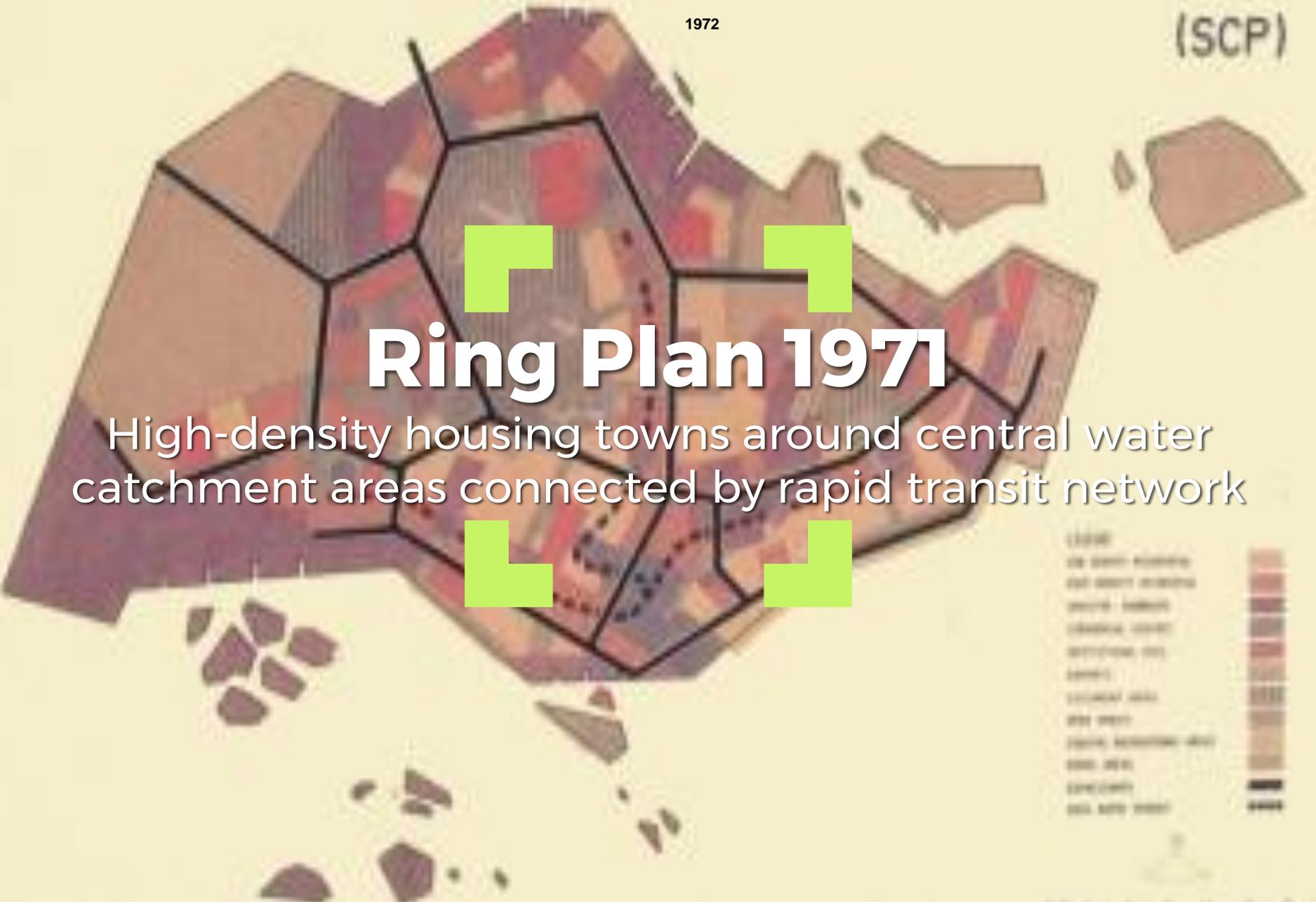
CONCEPT PLAN STRUCTURE

(SCP)

1972

Ring Plan 1971

High-density housing towns around central water catchment areas connected by rapid transit network



Toilet

Bay 2 mins Marina South Pier 5 mins

East will end half an hour earlier on Sunday

Orchard Boulevard

hard Turn

stop

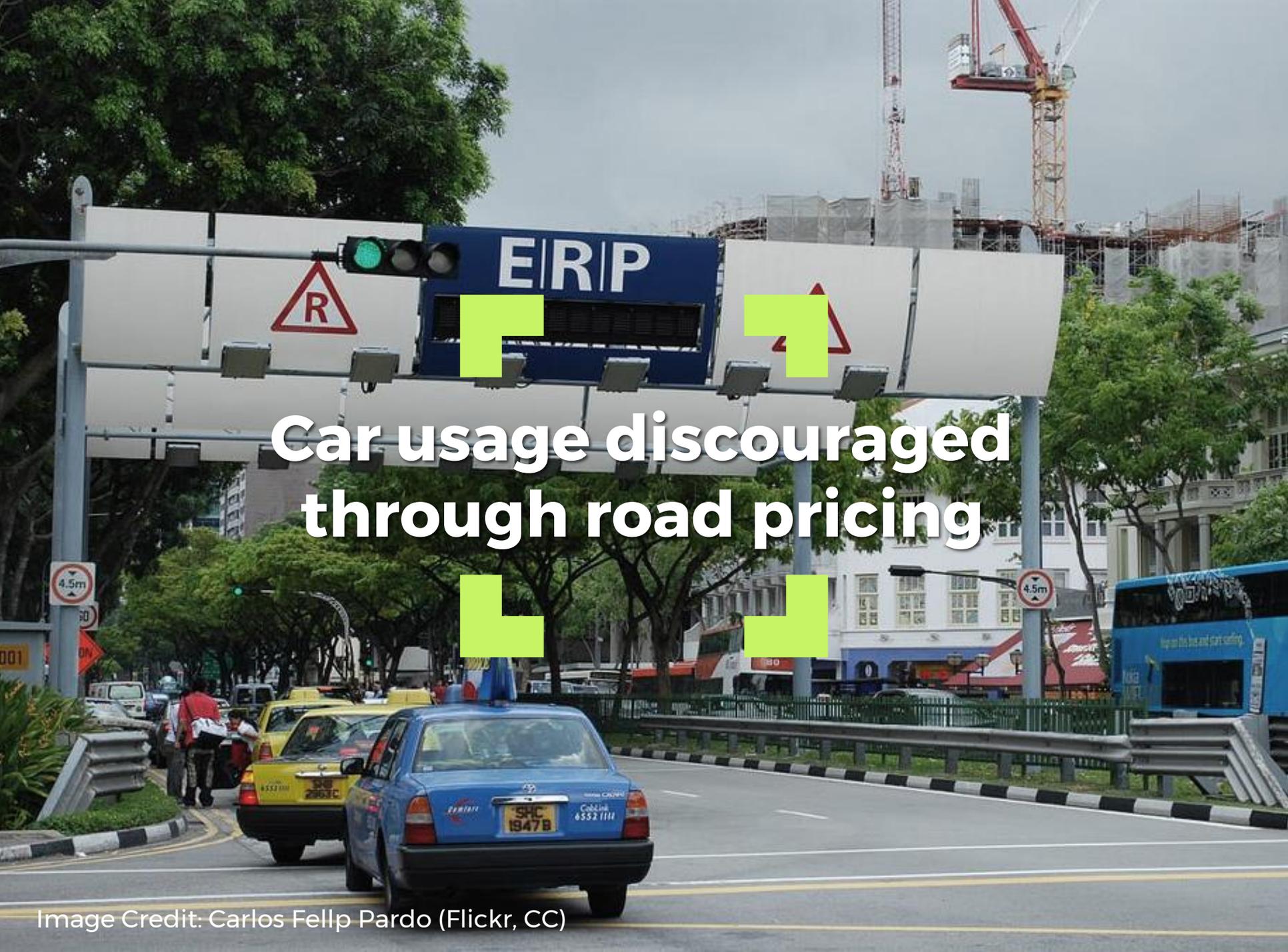


NS22 Orchard

Public Transport as the Choice Mode

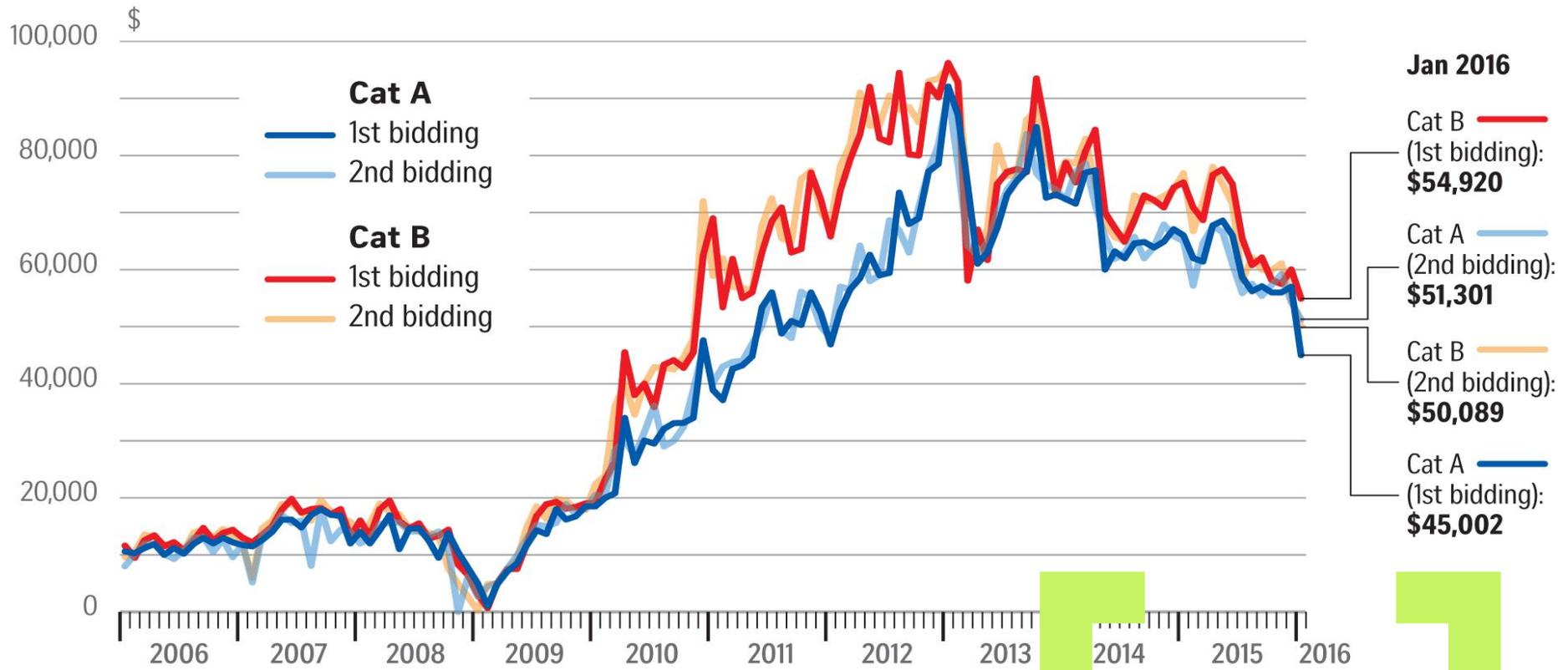


**Reduce reliance on
private transport**



Car usage discouraged through road pricing

COE premiums over the years



Source: LTA ST GRAPHICS

Car ownership discouraged through vehicle quota system



**Minimise travel demand
through good planning**



Good Planning Matters

High-density, mixed-use, walkable



Integrated development

co-location of compatible uses

**Afford-
able
housing**

**Medical
Centre**

**Elder-
care/
Child-
care**

**Shops /
Hawker
Centre**

**Commu-
-nity
Park/
Farm**





Seamless connection

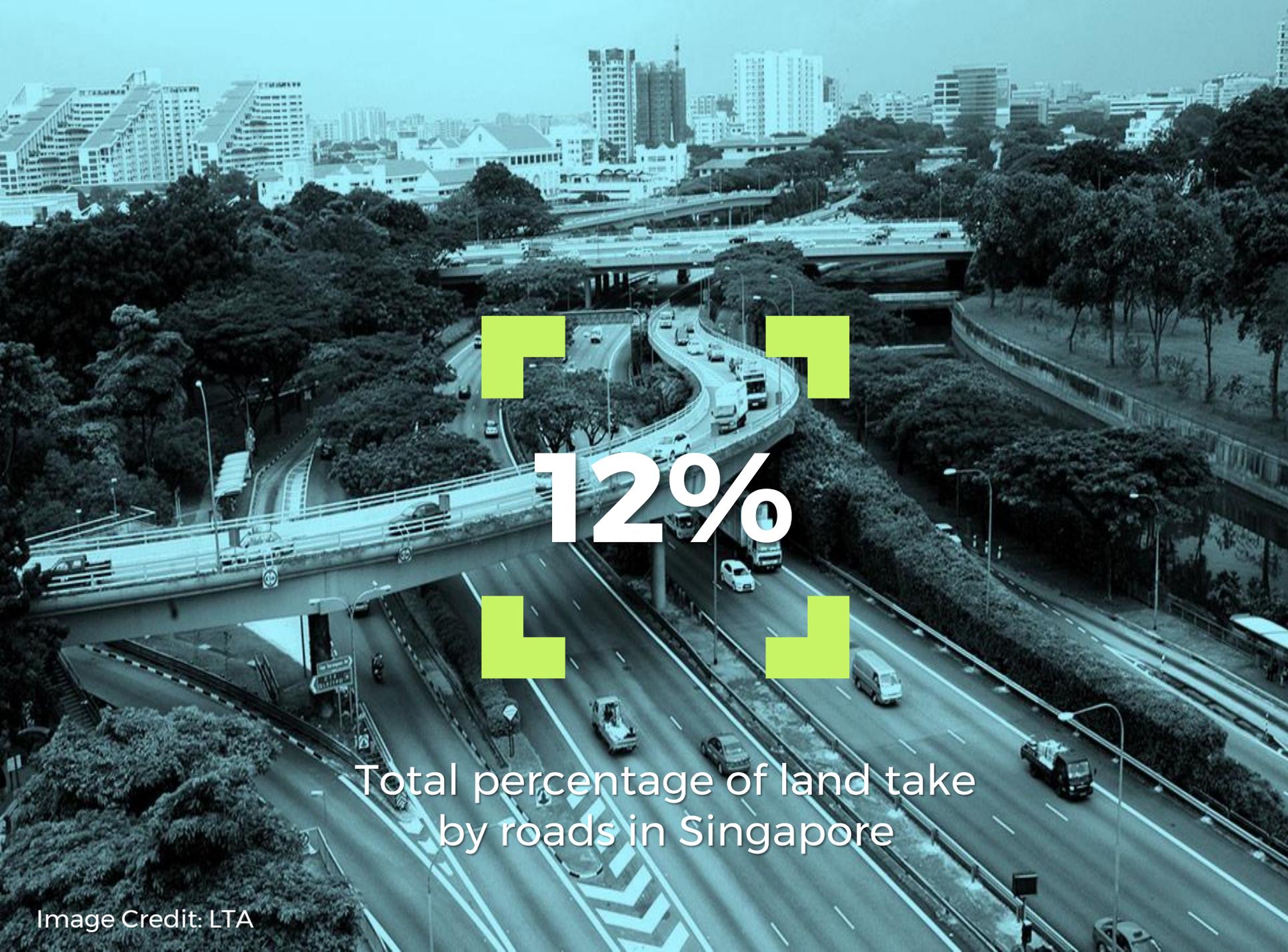
At grade, underground, elevated

But, more challenges ahead...

Growing
Population
& Economy

Commuter
Expecta-
tions &
Norms

More Acute
Space
Constraints



12%

Total percentage of land take
by roads in Singapore

An aerial photograph of a parking lot in a residential or commercial area. The parking lot is filled with various cars, including a silver van with a Coca-Cola logo. The surrounding buildings are modern, multi-story structures with balconies. The image has a blue tint. In the center, there is a large white text overlay '2 in 5' flanked by four yellow L-shaped brackets pointing towards the text.

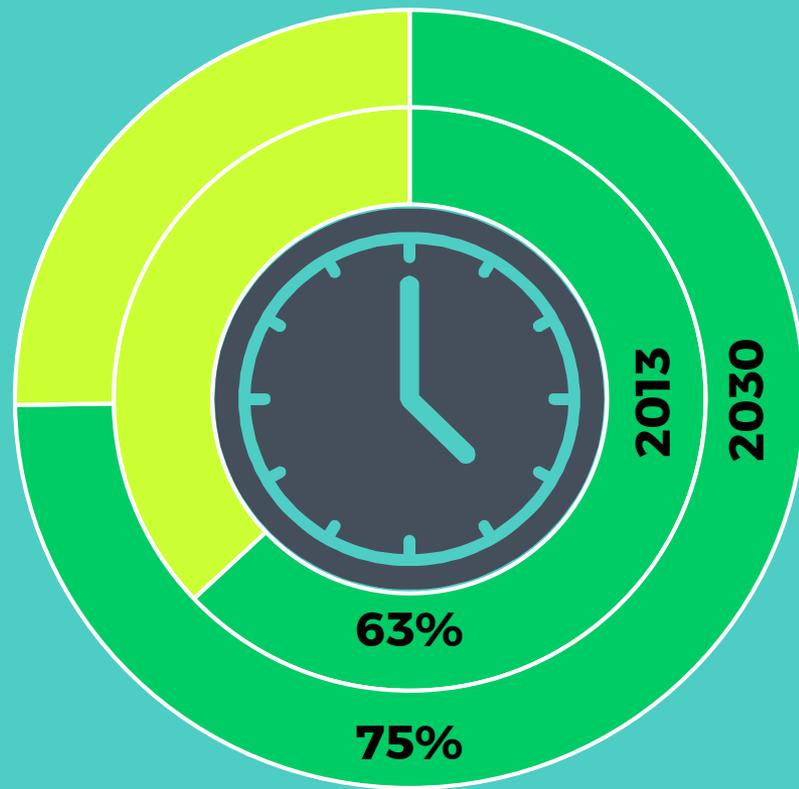
2 in 5

Singapore households
own at least 1 car



Car-lite & Multi-modal

Singapore's urban mobility vision by 2030



- Public transport
- Private transport

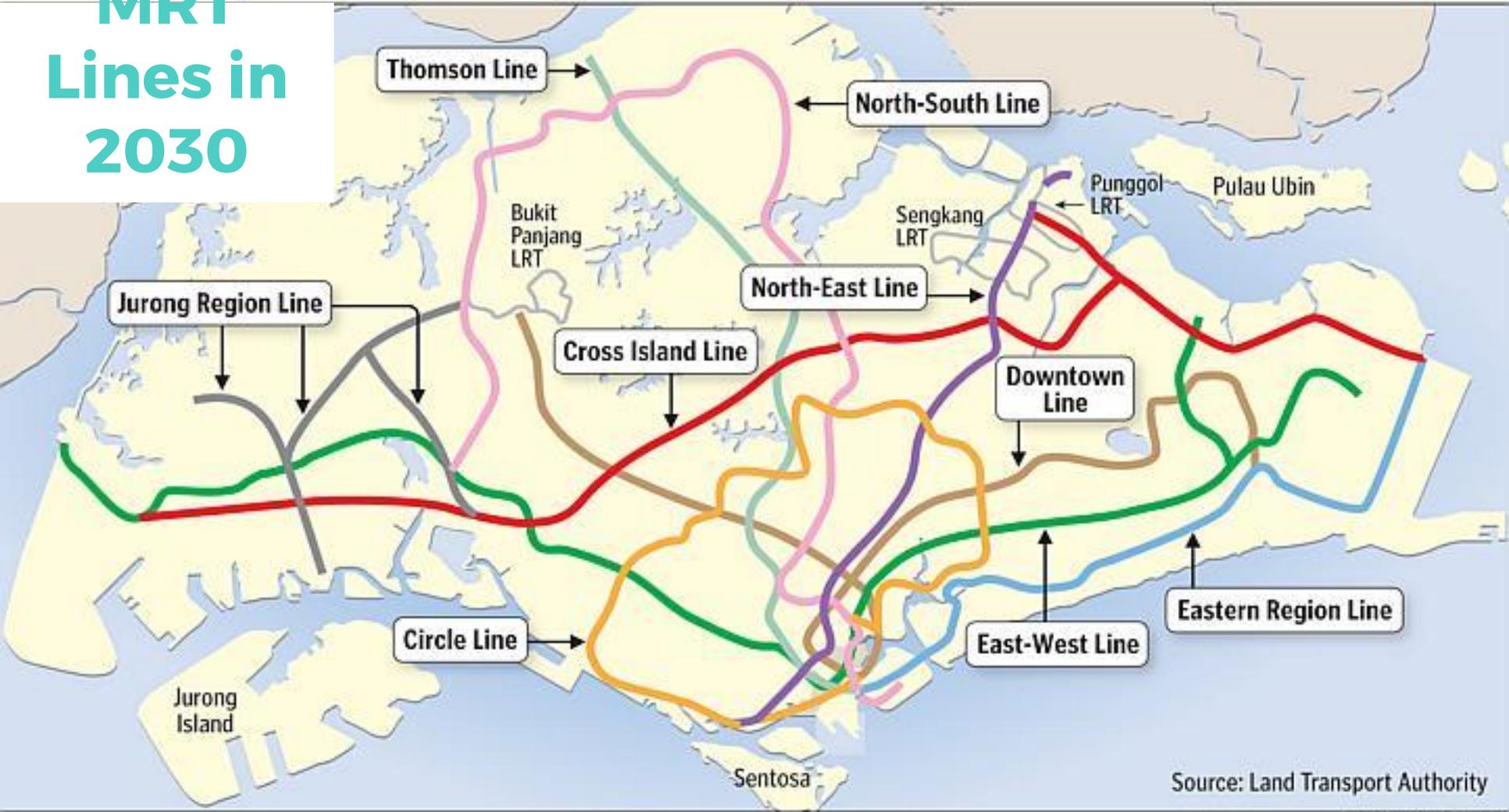
75%
peak hour
travel
made on
public
transport
by 2030

Opportunities ahead...

Major
public
transport
improvements



MRT Lines in 2030



Source: Land Transport Authority

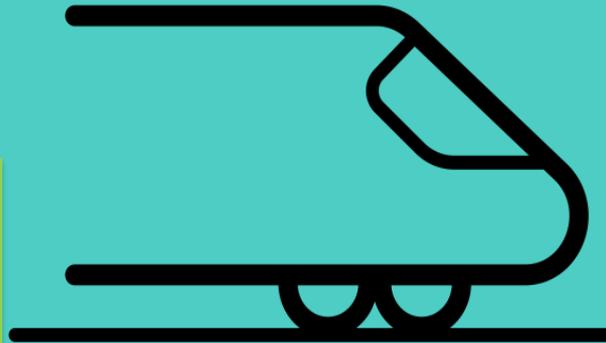
Graphic Credit: LTA/ ST

2013

178km

2030

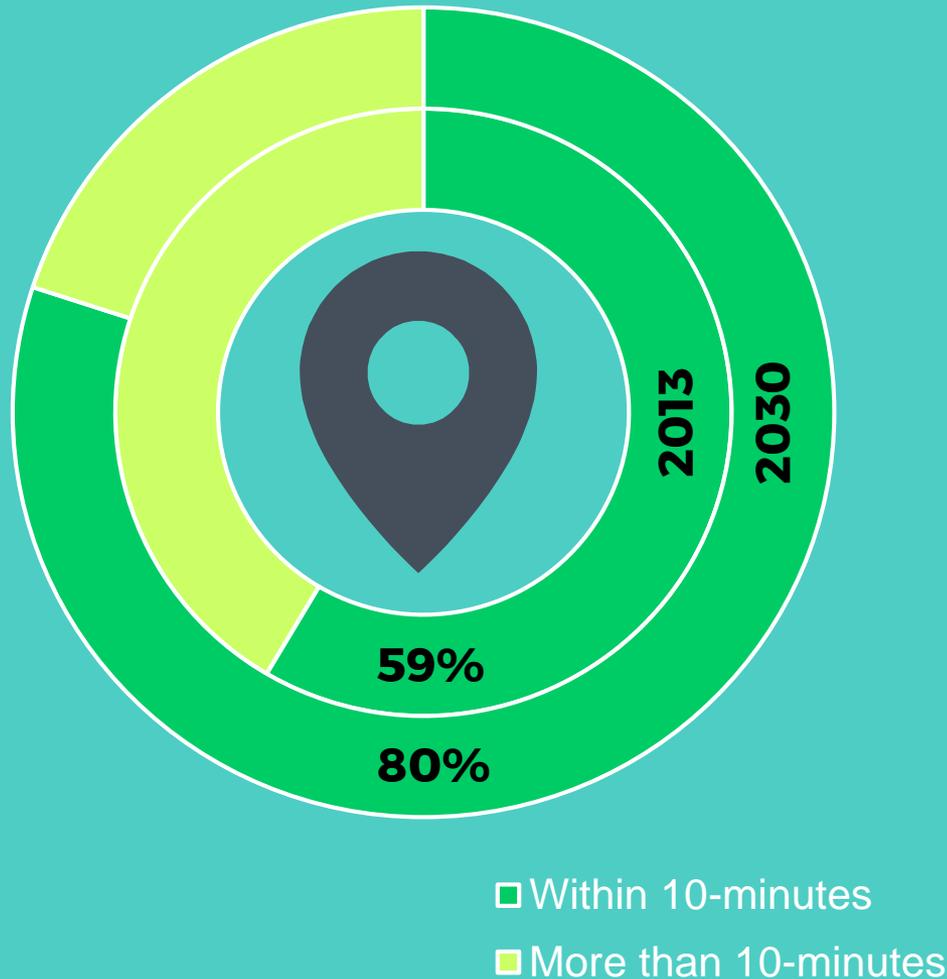
360km



360
km
of rail
network
by 2030

8in10

homes
within
10-min
walk of
a train
station
by 2030



More Buses, Better Rides



800 more buses

**20% bigger bus fleet
by 2016**

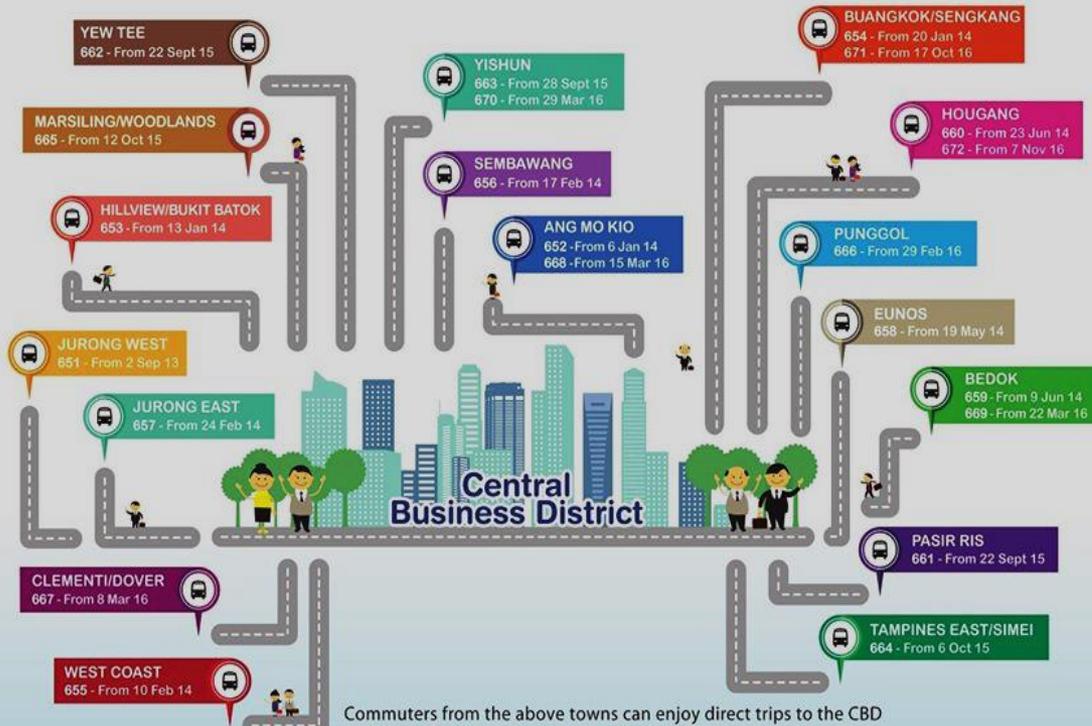
**Bus
enhancement
programme**

Graphic Credit: LTA



City Direct Bus Services

Your One Ride to the CBD



Commuters from the above towns can enjoy direct trips to the CBD on board City Direct Bus Services. The City Direct Bus Service caters

More new buses

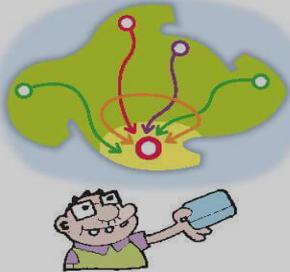
More services

Partnership with
private operators
to further
augment
capacity

TRAVEL **EARLY** TRAVEL **FREE** ON THE **MRT**



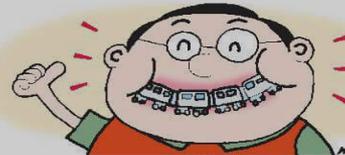
- ➔ **Start your train ride** on a weekday from any MRT or LRT station outside the city area
- ➔ **Your train ride is free** when you exit any of the city area stations before 7.45 am
- ➔ **Enjoy up to 50 cents off** when you exit between 7.45 am and 8.00 am



- ➔ **The city area MRT stations are** Bayfront, Bras Basah, Bugis, Chinatown, City Hall, Clarke Quay, Dhoby Ghaut, Esplanade, Lavender, Marina Bay, Orchard, Outram Park, Promenade, Raffles Place, Somerset, Tanjong Pagar.



- ➔ **A one-year trial to benefit YOU, from 24 June 2013**
Free ride for early commuters. A more comfortable ride for all!



➔ For more details, please visit <http://www.lta.gov.sg>

Travel demand management

Travel smart programme

Work with both individuals and corporates

Incentivise preferred travel behaviours



**Improve first-
and-last-mile
connectivity:
inclusive and
safe**

Image Credit: LTA



Walk2Ride

Silver zones
School zones

Opportunities ahead...

Major
public
transport
improve-
ments

From asset
ownership
to shared
services





30,000

Estimated number of dockless shared bikes in Singapore



1 million

Number of active UBER riders
in Singapore as of May 2017

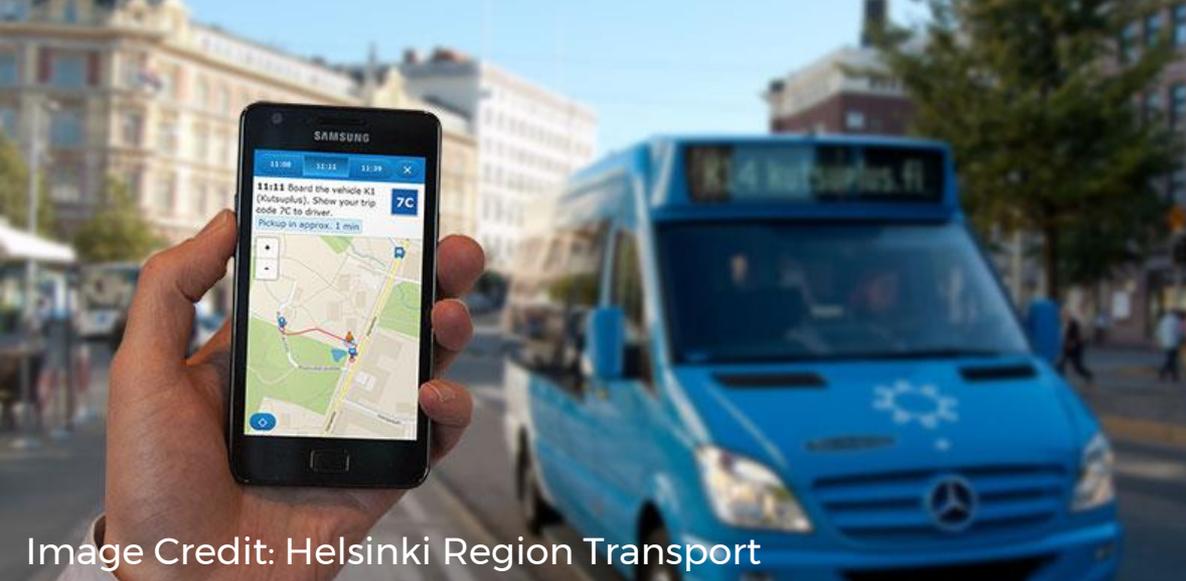


Image Credit: Helsinki Region Transport

On-demand and AV as part of the future mobility ecosystem

But to be
centred around
public
transport, active
mobility and
shared modes

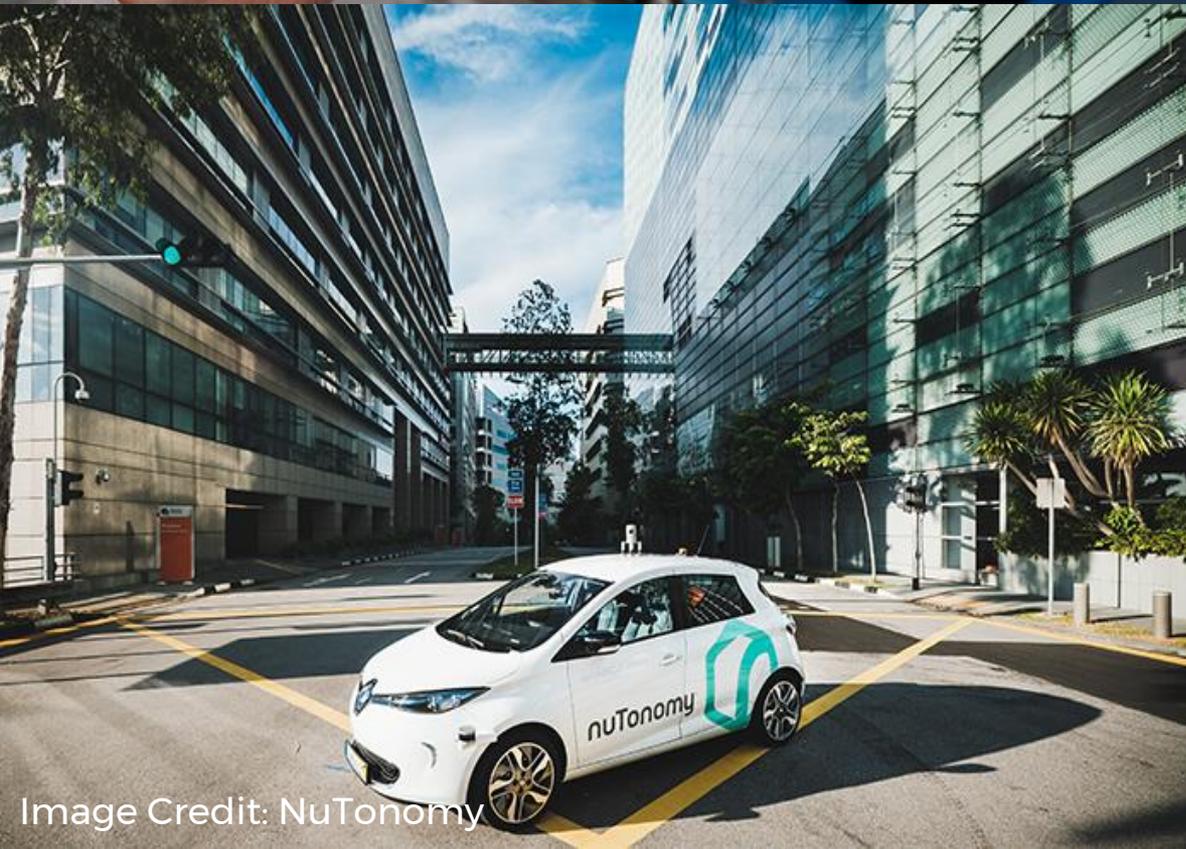


Image Credit: NuTonomy

Opportunities ahead...

Major
public
transport
improvement

From asset
ownership
to shared
services

Promote
Active
Mobility



2013

213km

2030

700km



**700
km**

of cycling
paths
by 2030

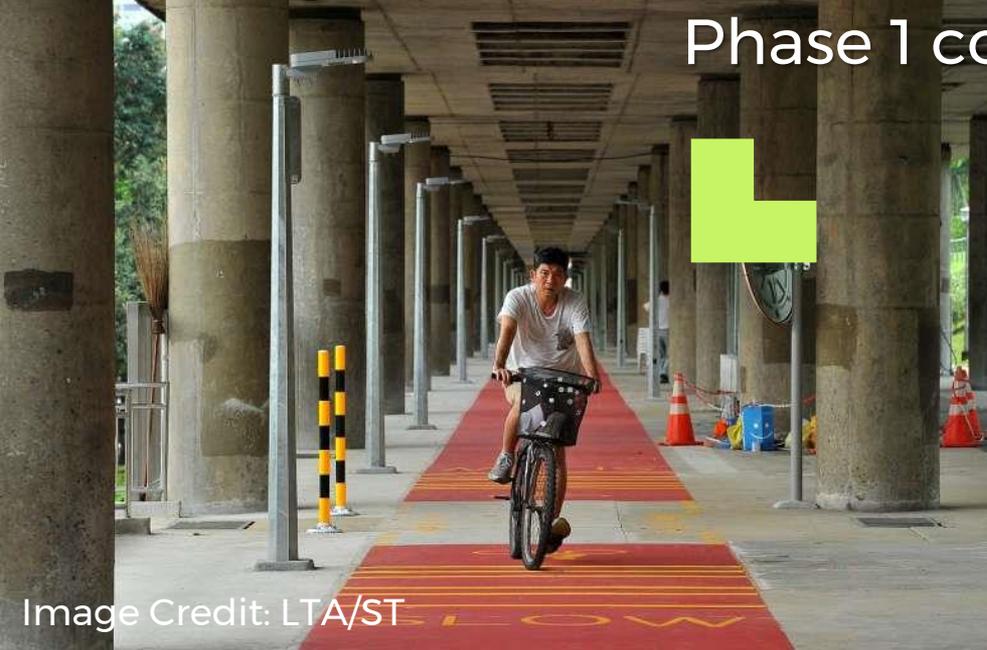


**CLC - Collaborative research on
Active Mobility**
Jan Gehl in Ang Mo Kio

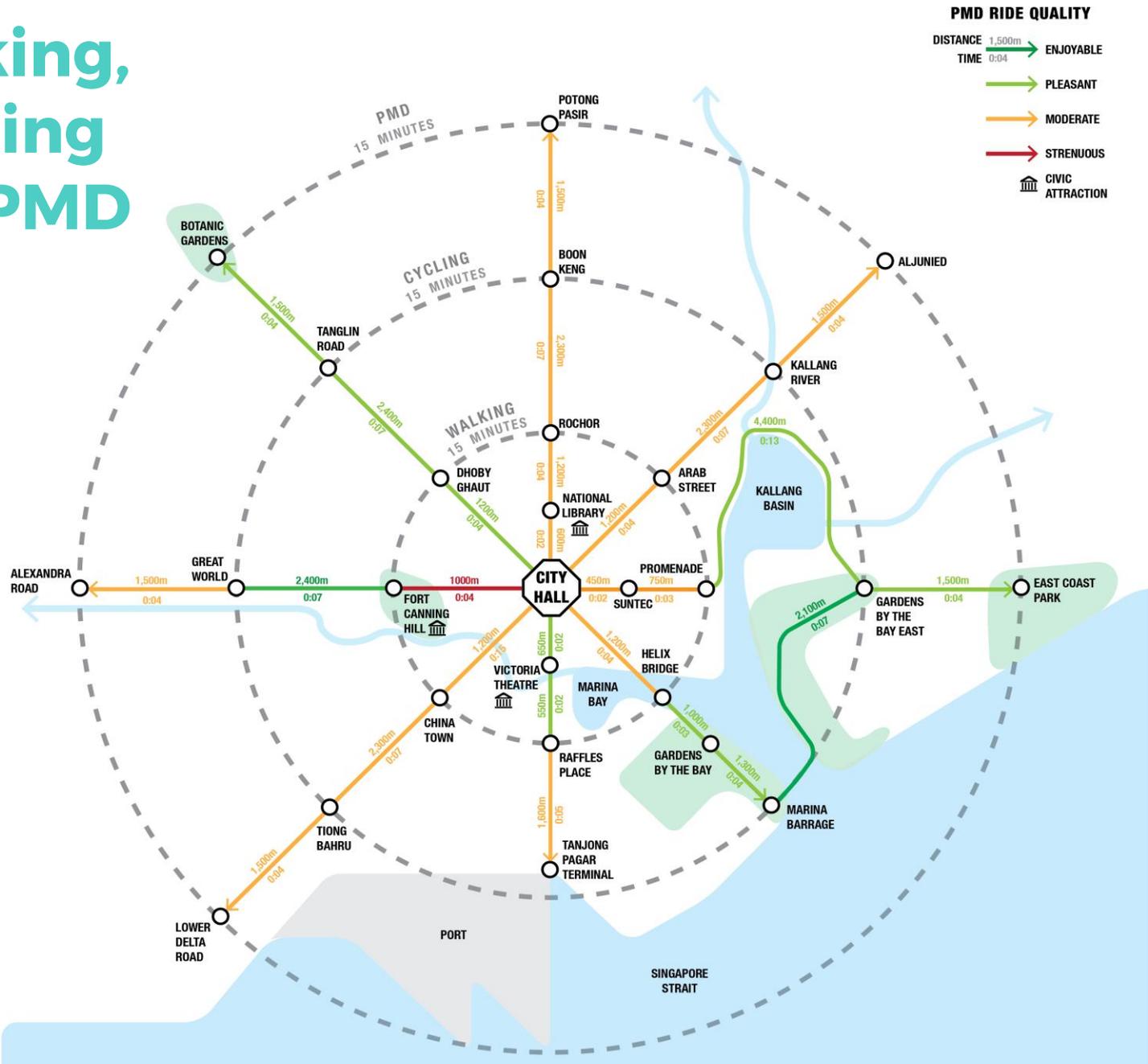


Ang Mo Kio: First Model Cycling Town

Phase 1 completed



Walking, Cycling and PMD



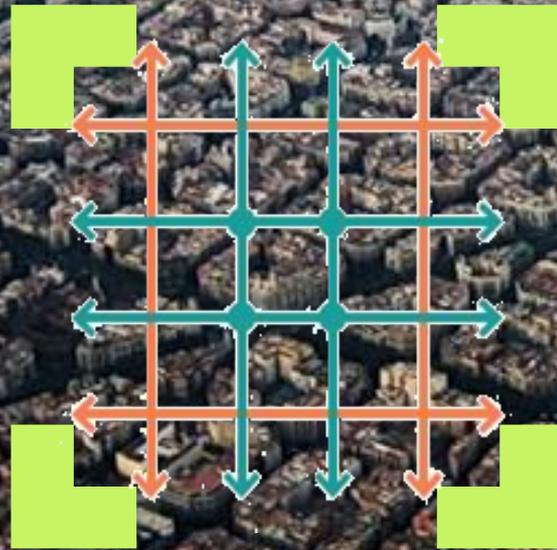
Graphic Credit: CLC



**Towards a truly car-lite
multi-modal urban mobility**

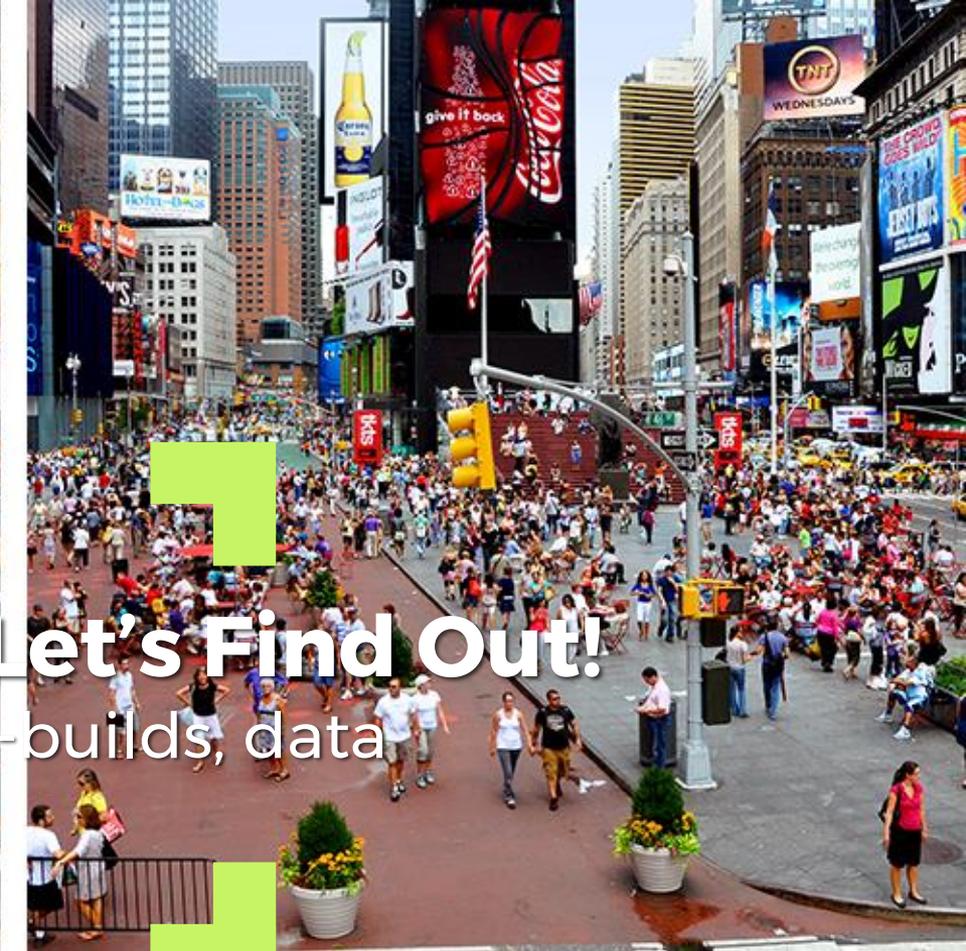
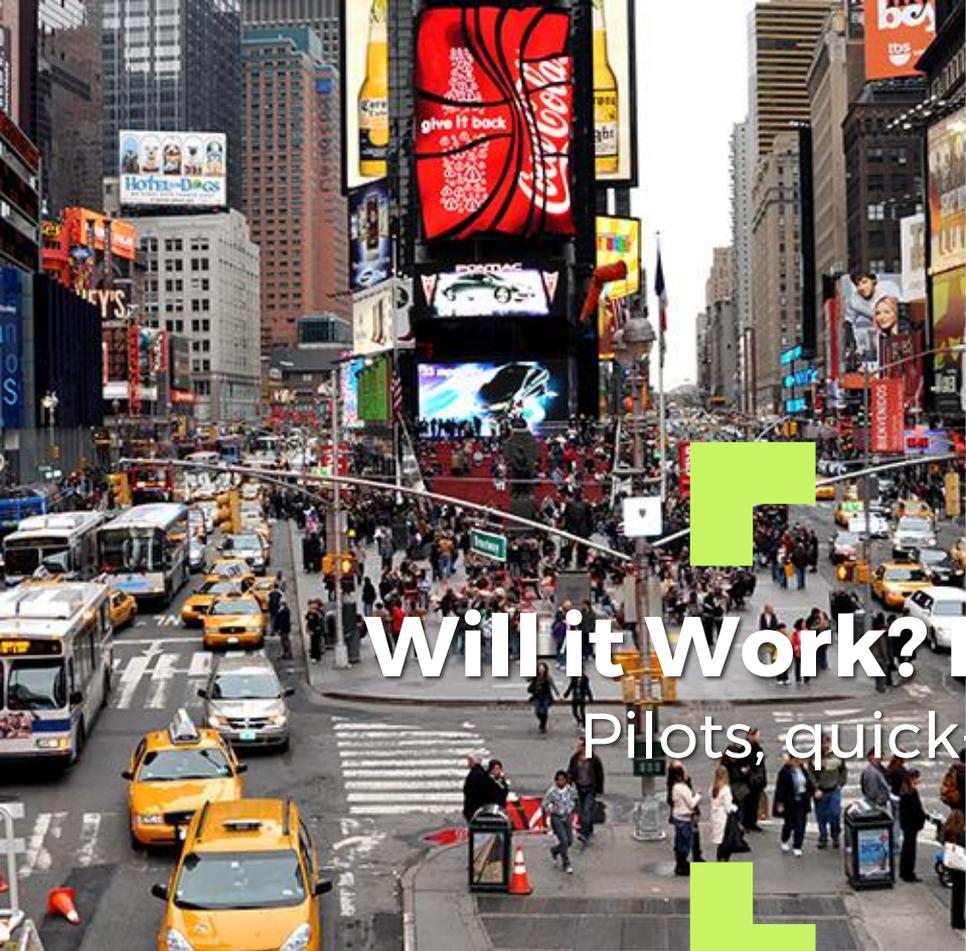


Further reduce the appeal of private cars
put a stop to underpriced parking and car usage



Turn Street Design on its Head System-wide

From one street to one block to one city



Will it Work? Let's Find Out!
Pilots, quick-builds, data





District-level travel demand management strategies

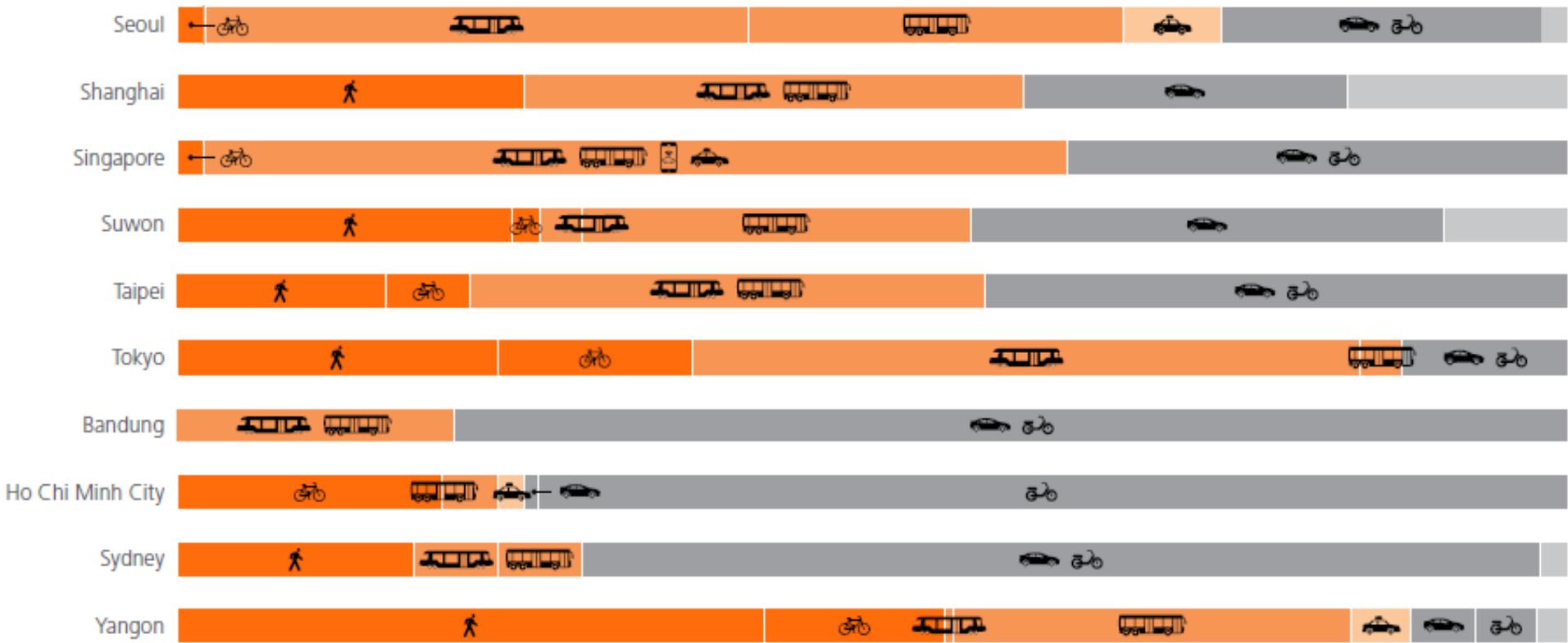
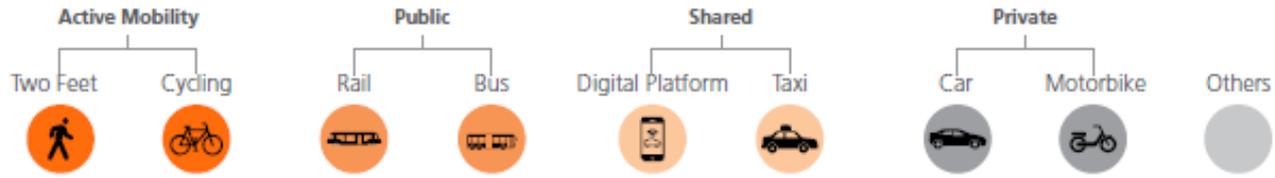
Win-win for all

A woman wearing a black dress, a black helmet with orange accents, and red sneakers is riding a white car-sharing bicycle on a paved city street. The bicycle has a large front wheel and a smaller rear wheel. The background shows lush green trees and a red building. The scene is brightly lit, suggesting daytime. Four bright green L-shaped graphic elements are positioned around the text: two at the top and two at the bottom.

Change Mindsets & Make Car-lite Cool

Everyone can be the influencer

Mode Share Across the 10 Cities



Graphic Credit: CLC/ULI



Sharing the Ride Taipei

Starting Off

10 Cities

Takeaways

Airport

Shaping a Car-free Zone

Seoul



Every Day Can be a Festival

Suwon



“By closing off the roads to cars for a longer period, people would be encouraged to re-organise their daily life around walking, cycling and public transport during the festival period, and adopt a car-free lifestyle even after the festival...”

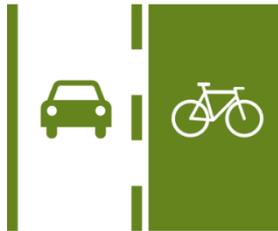
Mr Konrad Otto-Zimmerman

Former Secretary General of ICLEI &
Creative Director at The Urban Idea

Key thrust towards Car-lite Multi-modal mobility future



1.



**Get the
Fundamentals
Right**

2.



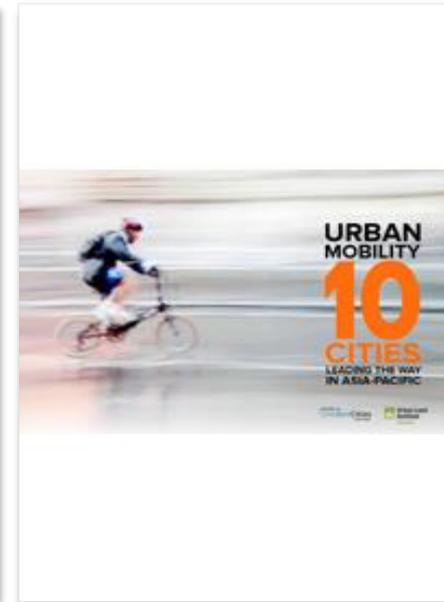
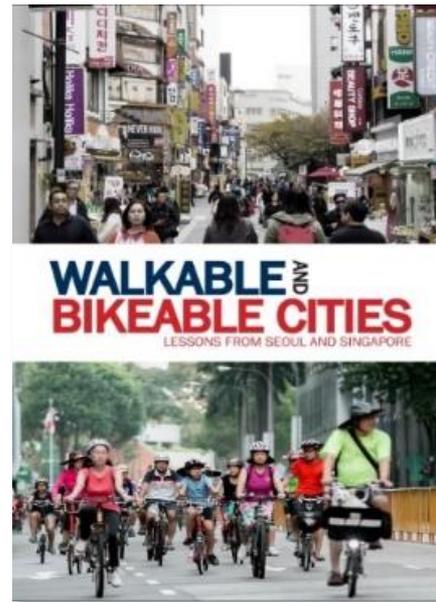
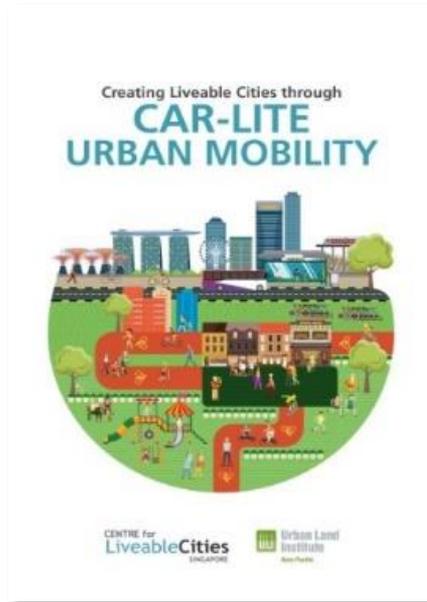
**People-private-
public: New
Forms of
Collaboration**



**Multi-pronged
Approach to
Secure Buy-in &
Shape Mindsets**

CLC Research – Our Mobility Collection

To distill, create and share



Available at <http://www.clc.gov.sg/>



CENTRE for
LiveableCities
SINGAPORE



Thank You!

See you at **World Cities Summit** in Singapore
on **8-12 July 2018**

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