

Contextualizing TOD Principles: Planning Strategies for Real Estate Development Along HCMC Metro Line 1

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01

Introduction

Land-market responses preceded the operational commencement of Metro Line 1.



20.5M

passenger trips since
opening

HURC1, 2025



<6%

only 2 of 36 social &
affordable projects lie within
800m of a station

Huong et al., 2025



+150–300%

land price rise along the line
during construction

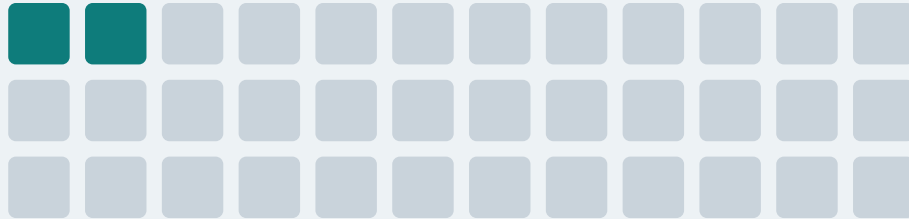
CBRE Vietnam

Resolution 98/2023/QH15 pilots TOD: high-density, mixed-use centres with walking and urban rail as the main local modes.

The risk: TOD can price out the people who need transit most



HCMC early warning: affordable housing near metro stations

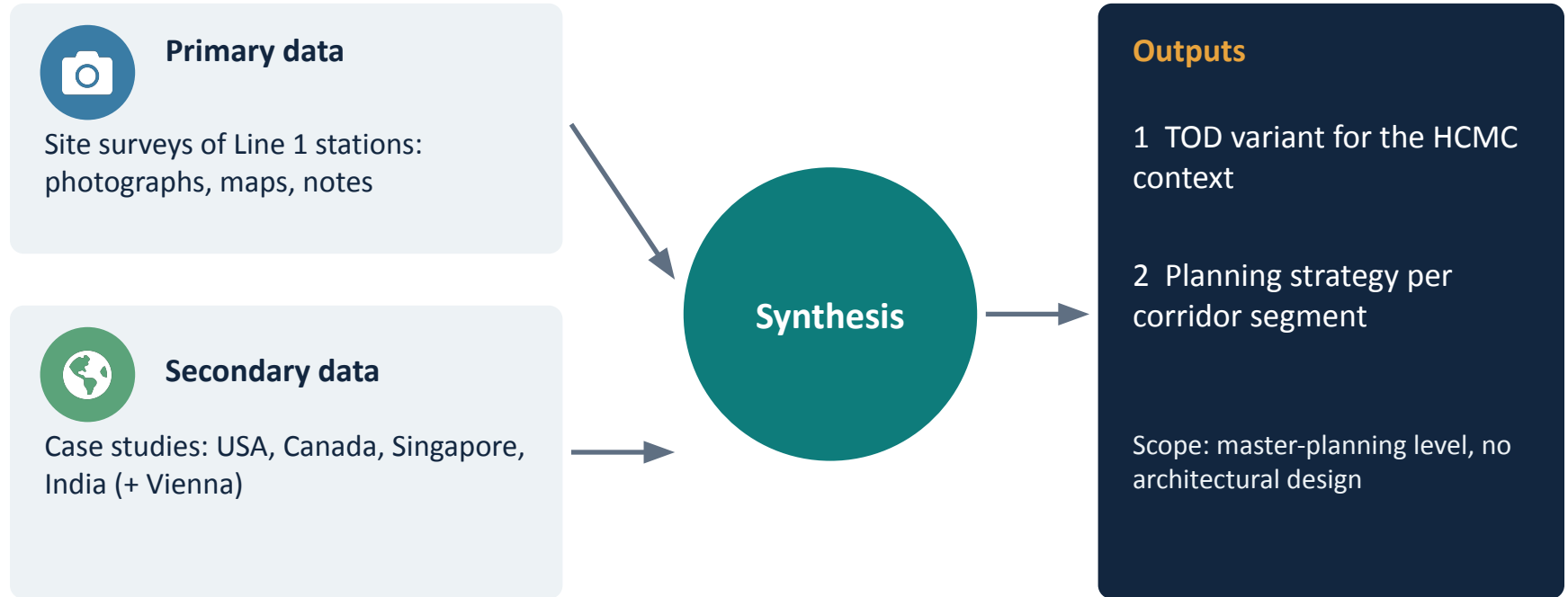


2 of 36 projects within an 800 m catchment

Research aim

Show how TOD principles vary in the HCMC context and propose station-area planning strategies along Metro Line 1

Methodology

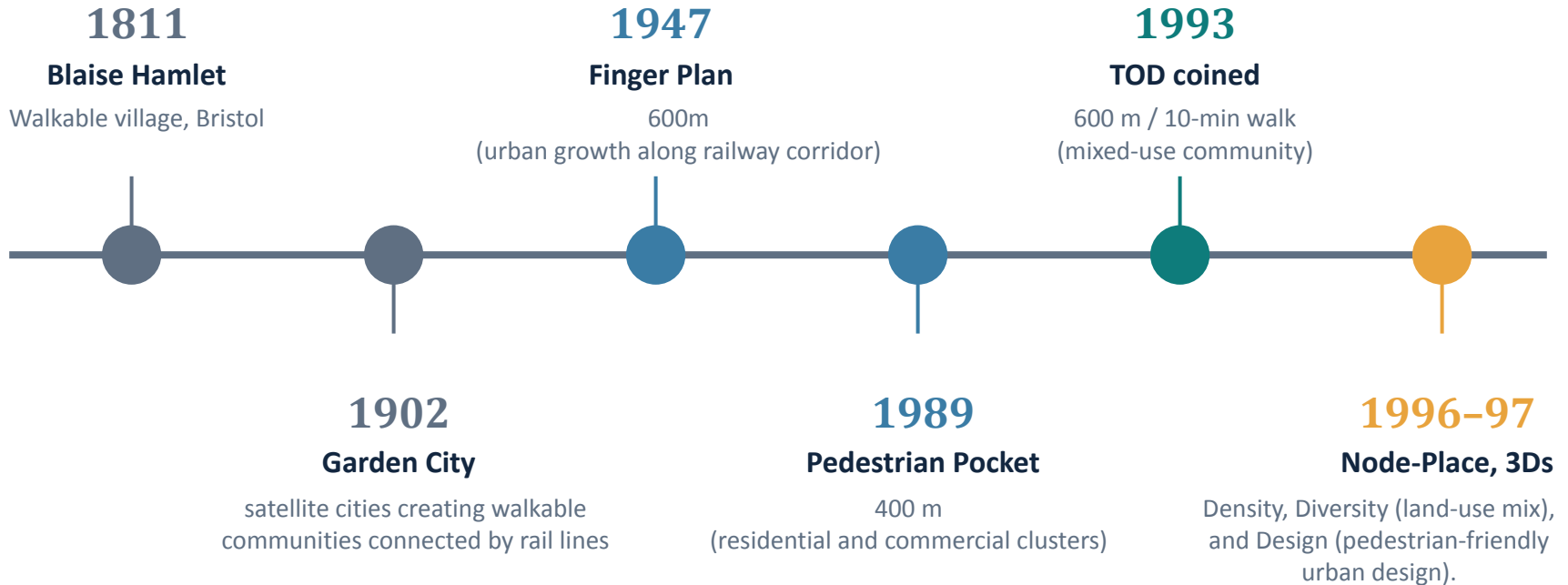


02

TOD: history and definitions

From garden cities to measurable standards

Two centuries of ideas converge on the station area



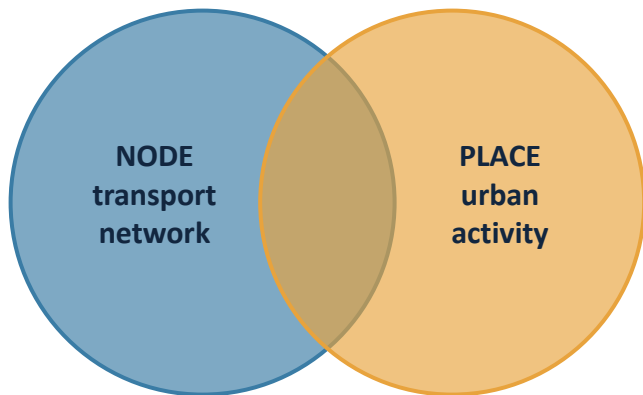
The concept of Transit-Oriented Development (TOD) has undergone a rich evolution in both theory and practice.

Measuring TOD: from 3Ds to 7Ds, Node-Place and TOD-ness



Cervero & Kockelman 1997 → Ewing & Cervero 2001–2010

Bertolini 1996



Performance-based TOD (Dittmar & Ohland, 2004)

Location efficiency

Diverse choices

Land value capture

Place-making

Resolve node-place conflict

2007–17: TOD Index with GIS & multi-criteria analysis (actual vs potential TOD)

Today: standardised principles and multi-scale frameworks

ITDP TOD Standard v3.0 (2017): eight principles



Walk



Cycle



Connect



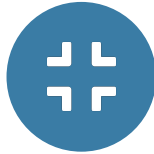
Transit



Mix



Densify

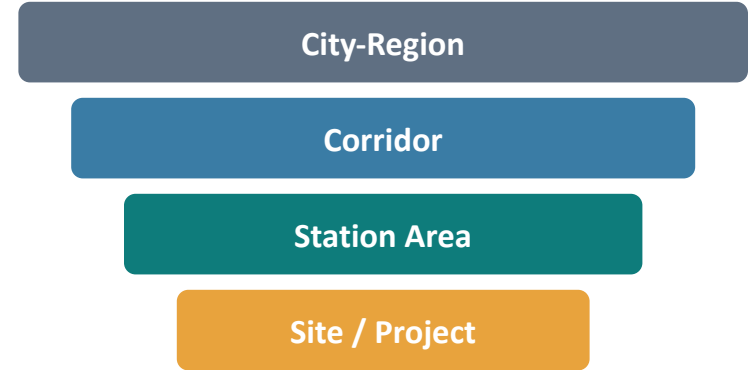


Compact



Shift

World Bank: four planning scales



3V model



The Relational/Contextual TOD approach: adapt to specific regional contexts - whether inner-city, suburban, rural, or in developing nations. (Thomas & Bertolini, 2017)

Four perspectives on what “TOD” means



Urban form

400–800 m walkable catchment; density, diversity, design

Calthorpe 1993; Cervero & Kockelman 1997; Ewing & Cervero 2010



Node-Place function

Balance mobility role and urban activity; capture land value

Bertolini 1996; Dittmar & Ohland 2004



Regional context

No one-size-fits-all: inner city, satellite, suburban, rural

Curtis 2012; Thomas & Bertolini 2017; K2 Research 2020



Standards & frameworks

Measurable, scorable implementation: ITDP 8 principles, World Bank 3V

ITDP v3.0; World Bank

03

International lessons

USA · Canada · Austria · Singapore · India: five levers against transit-induced displacement

Five levers to prevent displacement around stations



Framework synthesised from case studies, applied to HCMC in the following sections

1 - Keep the land: lease it, reserve it, preserve it

99 yrs leasing

Singapore: land bought at market value (1966 Act), leased via HDB for public housing near transit

Transit - first

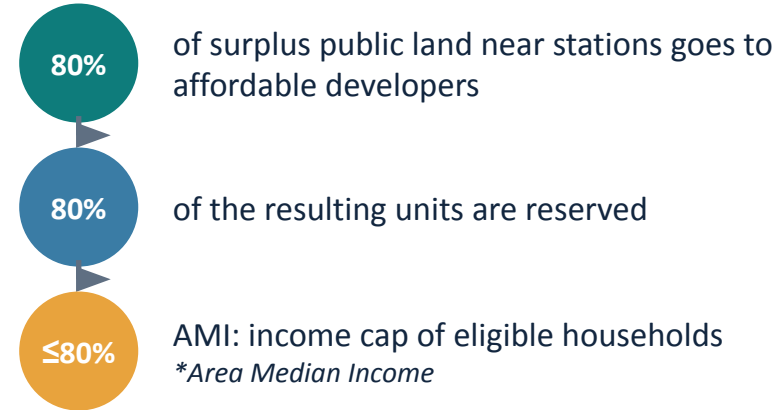
Vienna: Transit-first districts on public land; ground leases with permanent affordability

Preservation-first

buying and renovating existing homes BEFORE a line is announced is faster and cheaper than replacing them after prices rise.

Sound Transit “80/80/80” rule

Seattle & Washington D.C.



2 · Zoning that makes affordability a condition of density

Richmond, Canada

≥5%

Projects over 80 units dedicate ≥5% of floor area to low-cost market rental

Massachusetts, USA

20%

Chapter 40R*
Developments of 13+ units: 20% for households <80% AMI, for at least 30 years

**the Smart Growth Zoning and Housing Production Act, enacted in Massachusetts in 2004)*

Vancouver, Canada

1 : 1

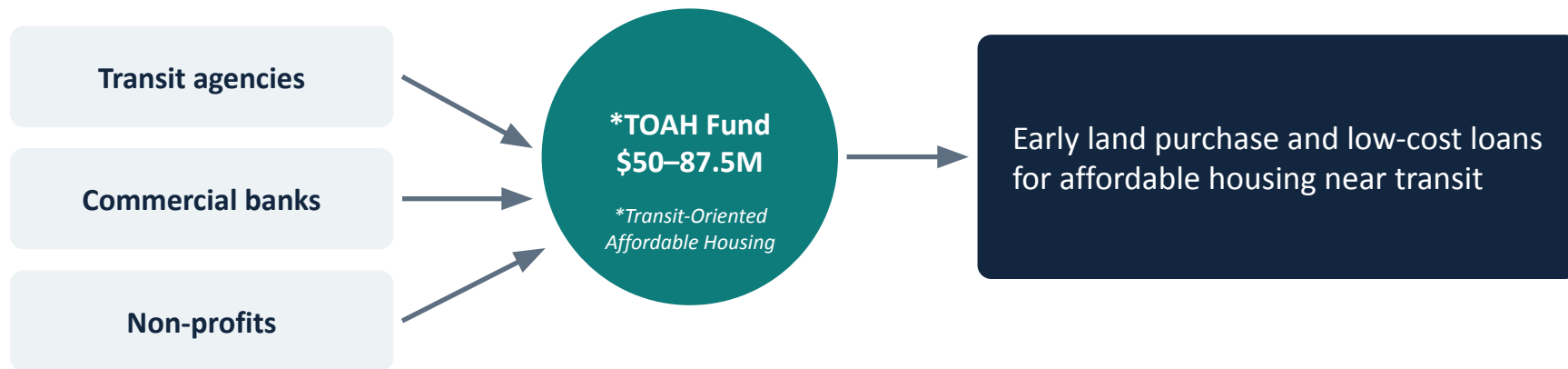
Enforces a "Rate of Change Policy"
Every demolished rental unit is replaced: no net loss

Washington, USA

Stay

Mandating affordable units in TOD keeps low-income residents near stations without raising regional costs

3 · Fund early acquisition and reward affordable supply



San Francisco Bay Area; Denver runs a similar dedicated TOD fund

MFTE

Multi-Family Tax Exemption

Seattle: property-tax exemption in 12 yrs if $\geq 20\%$ of units are affordable rentals

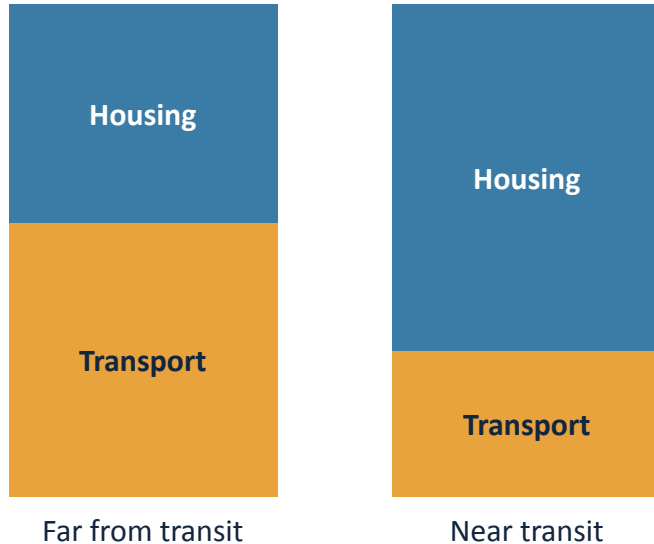
LIHTC

Low-Income Housing Tax Credit

US federal tax-credit scoring favours projects within walking distance of stations

4 · Lower the cost burden, protect community anchors

Housing + Transportation (H+T) cost framework *(illustrative)*



Cheaper transport offsets higher housing cost

Reduce parking requirements

New Westminster allows 1 space per rental unit within 400 m of frequent transit, \$20–45k saved per parking space:

Reserve room in station areas for:



Street vendors

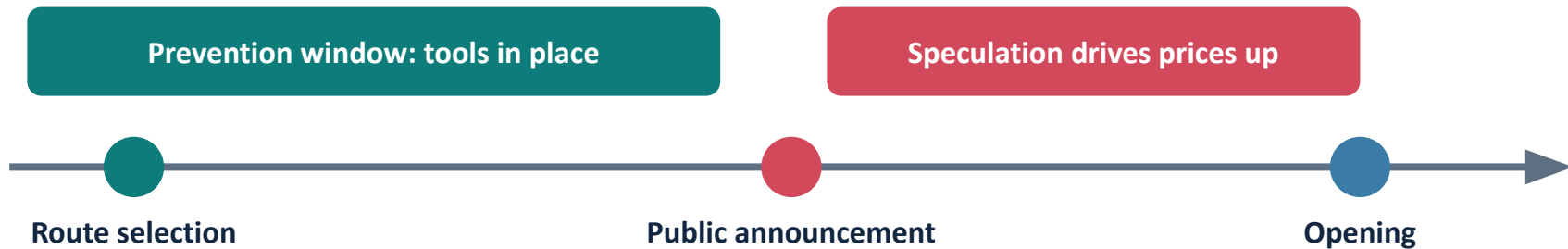


Childcare



Cultural hubs

5 · Act before the announcement, then keep measuring



Longitudinal equity dashboard



04

HCMC and Metro Line 1

Strategy, corridor facts, building typology and project mix

HCMC's TOD strategy: three levels, two zones

Regional TOD

Comprising multimodal transport hubs that integrate high-speed transport model - such as the Tan Son Nhat - Long Thanh airport cluster, Song Than Station, the New Eastern Bus Station, and the Hiep Phuoc - Cat Lai port cluster

City-level TOD

Shaping compact urban hubs comprising Ben Thanh Central Station, Thu Thiem Station, An Suong TOD, Mien Tay TOD, and Nga Tu Ga TOD

Network-core TOD

situated along metro lines traversing the inner city and radial routes

Core zone: compact, mixed-use

Access zone: density, feeders

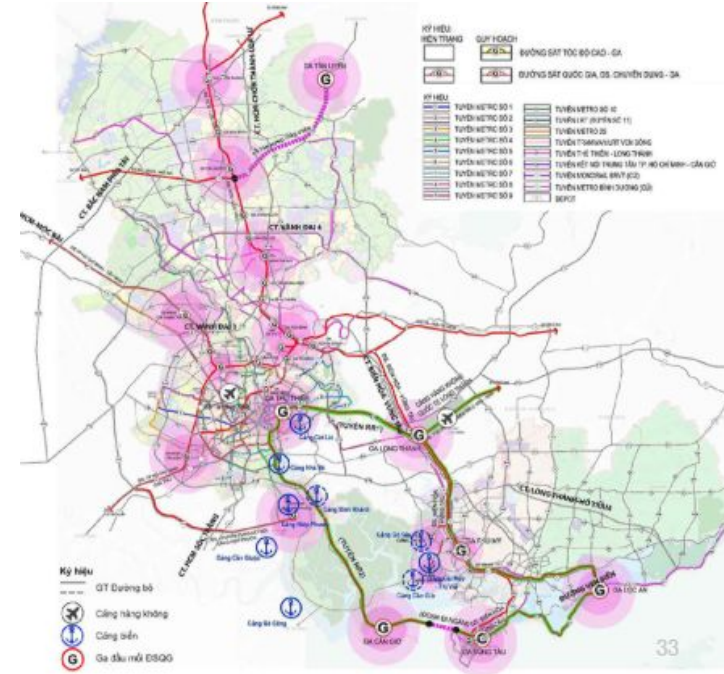
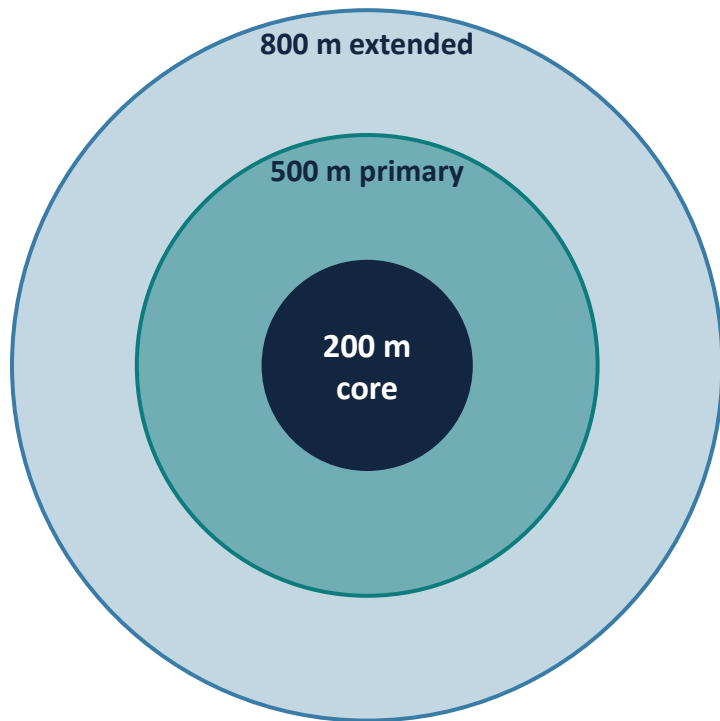


Fig. 1 Proposed rail and metro network (VIUP, 2026)

Station catchments: 200 / 500 / 800 m, and a legal opening



- Core ≤ 200 m** Pedestrian-first, high-density mixed use
- Primary ≤ 500 m** Diverse urban functions
- Extended ≤ 800 m** Interchange and connectivity

Legal basis for local TOD rules

Urban Development Law, Art. 13

City Council sets its own TOD indicators

Resolution 21/2026

TOD zone up to 1,000 m from station

Next resolution

Faster procedures, higher FAR, within infrastructure capacity

Metro Line 1: 14 stations, 19.7 km, Ben Thanh to Suoi Tien



19.7 km

2.6 km underground (3 stn) + 17.1 km elevated (11 stn)

VND 43.7 trillion

Japanese ODA via JICA

17 trains

3 cars each; opened 22 Dec 2024

17 + 12 yrs

preparation + construction

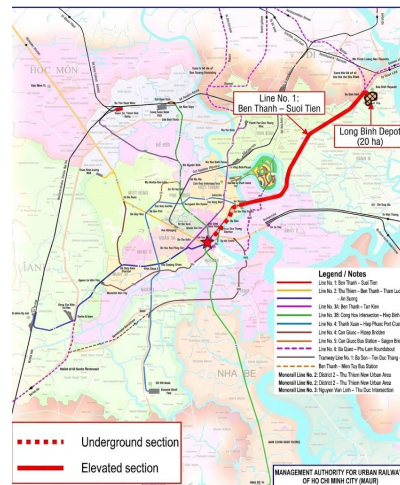


Fig. 2 Metro Line 1

Ben Thanh → Le Loi → Ba Son
→ Saigon Bridge → Hanoi
Highway → Long Binh Depot

One corridor, three urban realities



Central core · Ben Thanh – Ba Son

Luxury mixed-use, branded residences;
underground links

High-income, expats; huge transient
crowds

No land left for affordable housing

Transitional · Van Thanh – An Phu

Gated TOD condos with skywalks; isolated
older public housing

Middle-to-high income

Redevelopment pressure on old estates

Peripheral hub · Rach Chiec – Suoi Tien

Mid-cost and social housing, worker
lodging; feeder-bus access

Students, factory workers, low-to-middle
income

Noise and pollution; fragmented access



Field evidence: two very different station areas



Phuoc Long & An Phu stations (Source: by Authors)



Binh Thai & High-Tech Park stations (Source: by Authors)

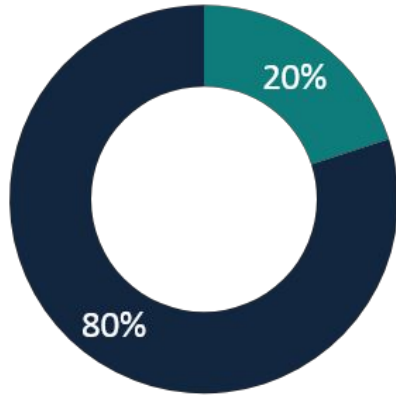
Transitional

Gated high-end towers sit next to older low-rise public housing under growing redevelopment pressure.

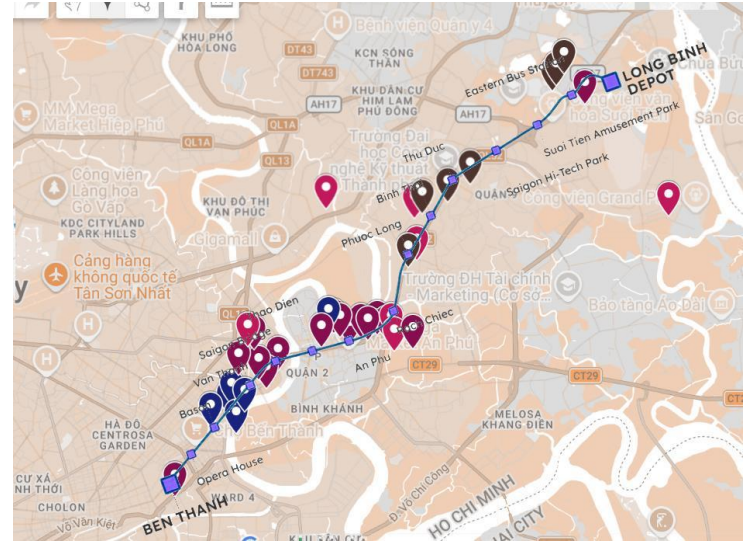
Peripheral

Affordable and social housing, resettlement blocks and worker lodging rely on feeder buses and need buffers from industrial corridors.

60 projects along the line: only 1 in 5 is affordable



■ Affordable (12) ■ Commercial, high-end, luxury (48)



Projects by class: brown: low-cost, pink: mid-high, blue: luxury
(Source: by Authors)

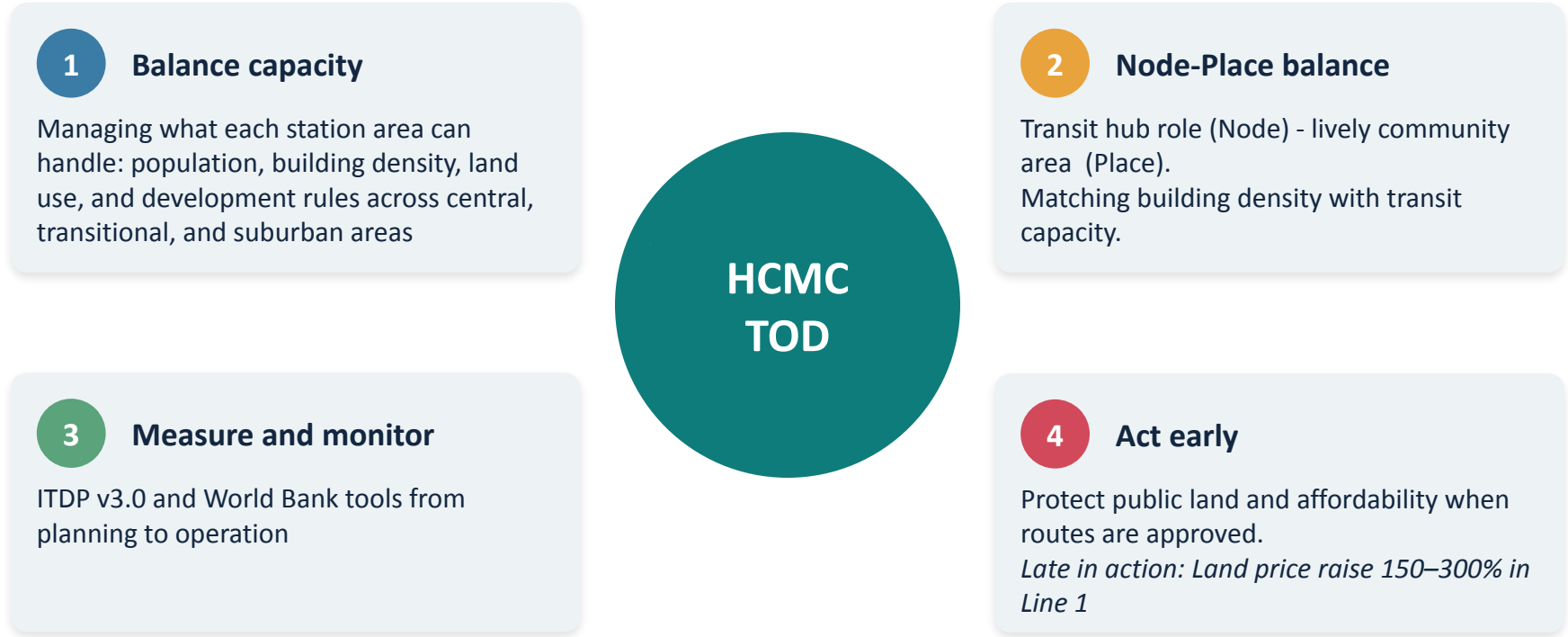
75% of affordable projects (9 of 12) sit in Thu Duc City, concentrated from Binh Thai to Suoi Tien

05

Proposed policy framework

Four general moves, then segment-specific instruments

A context-fit TOD framework for HCMC



Not copy-paste: adapt international models to local land, law and demographics

Segment-specific instruments along Metro Line 1



Central core

Public land leases

99 years with affordability conditions

TOD fund

commercial-centre revenue funds
affordable housing nearby

Transitional

10–15%

floor area for social or affordable
rental within 500–800 m

30–40%

of density-bonus floor space becomes
affordable units

Peripheral

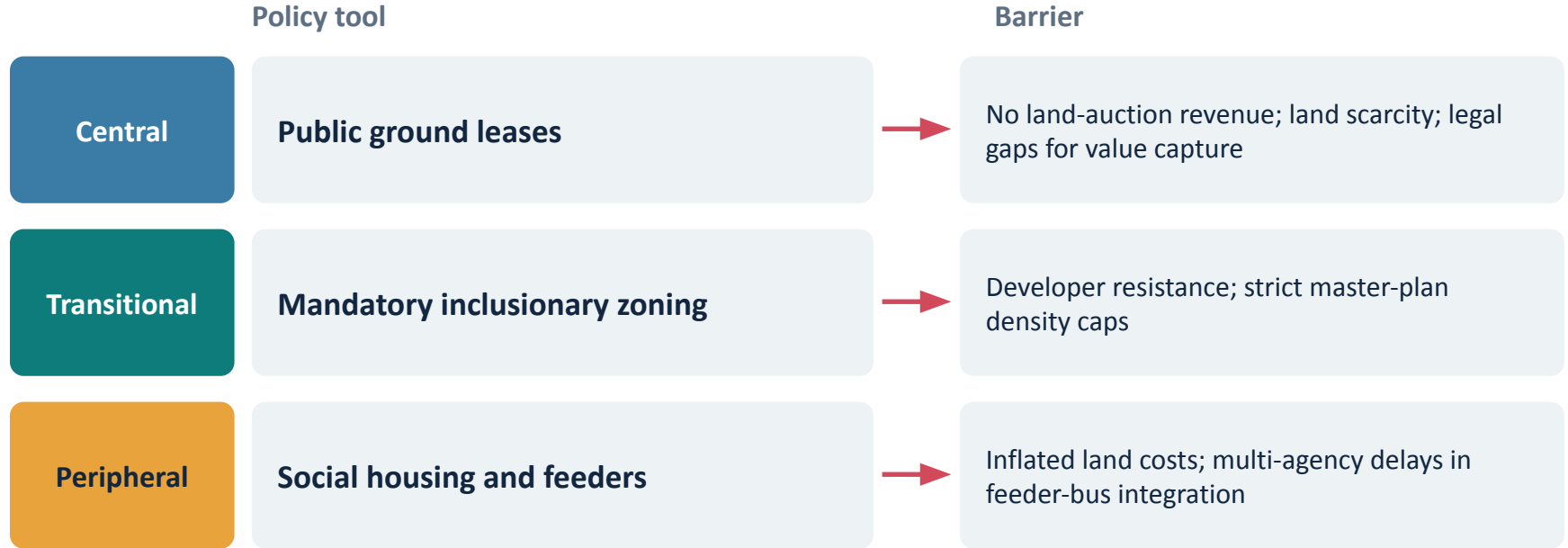
Social housing

first call on remaining public land near
stations

Livelihood space

vendors, small business, motorbike
parking, feeder buses

Why it is hard: a barrier in every segment



Land inflation on Line 1 means anti-displacement controls arrived too late

Conclusions: lock in equity before the next line opens



Learn

Global levers prove affordability needs land, zoning, funds and timing



Diagnose

Line 1: a clear gradient, 80% market housing, affordable stock pushed to the edge



Act

Land banking and inclusionary frameworks in advance for Metro Line 2 (Ben Thanh – Tham Luong)

A foundation for multi-sector, sustainable TOD governance in Ho Chi Minh City.

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Appendix

No.	Station Name / Cluster	Project / Apartment Name	Location / Station Connection	Real Estate Segment
1	District 1 Underground Cluster	Grand Marina Saigon	Ba Son Station	Ultra-luxury (Branded Residences)
2	(Ben Thanh – City Theater – Ba Son)	Vinhomes Golden River (Ba Son)	Ba Son Station	Ultra-luxury / High-end
3		The Metropole Thu Thiem	Ba Son Station (via Ba Son Bridge)	Ultra-luxury
4		The River Thu Thiem	Ba Son Station (via Ba Son Bridge)	Ultra-luxury
5		Soho Residences (100 Cau Kho)	Ben Thanh Station	High-end
6		203 Nguyen Trai Apartment	Ben Thanh Station	Resettlement / Budget
7		Vincom Dong Khoi (Apartments)	City Theater Station	Ultra-luxury
8	Van Thanh & Tan Cang Stations	Vinhomes Central Park	Tan Cang Station	High-end
9	(Binh Thanh District)	Sunwah Pearl	Tan Cang / Van Thanh Station	High-end
10		The Manor I & II	Van Thanh Station	High-end / Mid-to-High
11		City Garden	Van Thanh Station	High-end
12		Pearl Plaza (SSG Tower)	Van Thanh Station	High-end
13		41Bis Dien Bien Phu Apartment	Tan Cang Station	Mid-tier / Budget
14		115 Tan Cang Apartment	Tan Cang Station	Budget
15		Wilton Tower (Novaland)	Van Thanh Station	Mid-to-High
16	Thao Dien & An Phu Stations	Masteri Thao Dien	Thao Dien Station (Direct Connection)	High-end
17	(Thu Duc City - Former District 2)	Lumière Riverside	Thao Dien / An Phu Station	High-end
18		Q2 Thao Dien	Thao Dien Station	High-end
19		Gateway Thao Dien	Thao Dien Station	High-end
20		The Nassim	Thao Dien Station	Ultra-luxury / High-end
21		Tropic Garden	Thao Dien Station	Mid-to-High
22		Thao Dien Pearl	Thao Dien Station	High-end
23		The Vista An Phu	An Phu Station	High-end
24		Estella Heights	An Phu Station	High-end
25		The Estella	An Phu Station	High-end
26		Masteri An Phu	An Phu Station	High-end
27		Cantavil An Phu & Premier	An Phu Station	Mid-to-High
28		Imperial An Phu	An Phu Station	Mid-to-High
29		Lexington Residence	An Phu Station	Mid-to-High
30		Eaton Park (Gamuda Land)	An Phu / Rach Chiec Station	High-end

No.	Station Name / Cluster	Project / Apartment Name	Location / Station Connection	Real Estate Segment
31		An Cu High-Rise	An Phu Station	Mid-tier
32		An Loc - An Phuc Apartment	An Phu Station	Mid-tier / Budget
33		An Khang Apartment	An Phu Station	Mid-tier
34		Ministry of Public Security Apartment	An Phu Station	Mid-tier / Resettlement
35		120-Unit Apartment (Thu Thiem)	An Phu Station	Resettlement / Budget
36		PetroVietnam Landmark	An Phu Station	Mid-tier
37	Rach Chiec & Phuoc Long Stations	The Global City (Apartments)	Rach Chiec Station	High-end / Ultra-luxury
38	<i>(Thu Duc City - Former District 9)</i>	Masteri Lumière Boulevard	Rach Chiec Station (Connected)	High-end
39		Centana Binh Trung Tay	Rach Chiec Station	Mid-to-High
40		Phuc Yen 2 (Near Rach Chiec)	Rach Chiec Station	Mid-tier
41		Lavita Garden	Phuoc Long Station	Mid-tier
42		Metro Star	Phuoc Long Station (Pedestrian Bridge)	Mid-to-High
43		Flora Fuji	Phuoc Long Station	Mid-tier
44		Lucky Dragon	Phuoc Long Station	Mid-tier
45	Binh Thai & Thu Duc Stations	Moonlight Residences	Binh Thai Station	Mid-to-High
46	<i>(Thu Duc City)</i>	Lavita Charm	Binh Thai Station	Mid-tier
47		TDH Truong Tho Apartment	Binh Thai Station	Mid-tier / Budget
48		Saigon Gateway Apartment	Binh Thai Station	Mid-tier
49		Urban Green (Kusto)	Binh Thai Station (Connected)	Mid-to-High
50		Centum Wealth Apartment	Thu Duc Station	Mid-tier
51		TDH Phuoc Long Apartment	Thu Duc Station	Mid-tier
52		Dong Phuong Tower	Thu Duc Station	Budget
53	High-Tech Park & Suoi Tien / New Mien Dong Stations	Vinhomes Grand Park	High-Tech Park Station (Feeder Bus)	Mid-to-High
54	<i>(Thu Duc City)</i>	S3.01 - S5 (Origami / Rainbow)	High-Tech Park Station (Metro Feeder)	Mid-tier
55		The 9 Stellars	Suoi Tien Station (Adjacent to Depot)	High-end
56		Bcons Suoi Tien	Suoi Tien Station	Budget / Affordable
57		Bcons Mien Dong	Suoi Tien Station	Budget / Affordable
58		The East Gate	Suoi Tien / New Mien Dong Bus Station	Budget / Affordable
59		Bcons Plaza / Bcons City	Suoi Tien Station (VNU)	Mid-tier
60		HQC Binh Minh Apartment	Suoi Tien Station	Social Housing / Budget