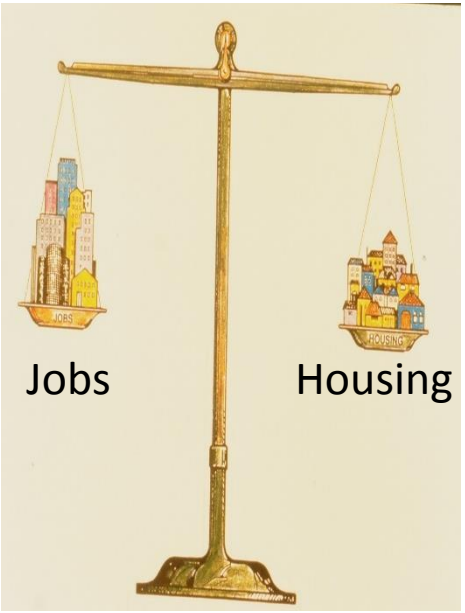
New Towns & Travel: Global Experiences

- **Goals:** housing production; stimulate regional development; de-congest core city

- **Mobility & Design:**
  - Self-Containment – balance of uses
  - Complete Communities – live, work, shop, learn, play



European Experiences

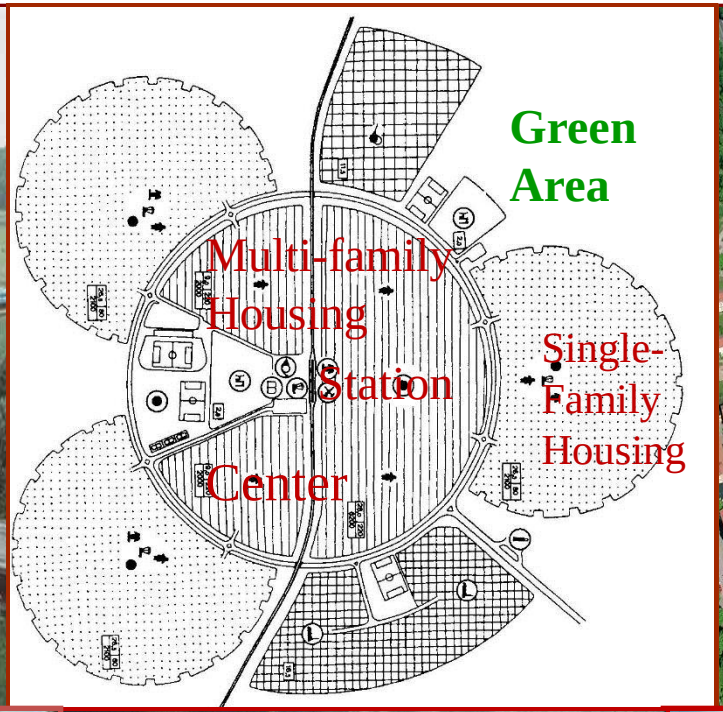
- **Scandinavia**: Stockholm – half-containment; linear balance; new-town/in-town (Hammersby); Copenhagen – Macro/Micro-scale planning

- **UK** – Regional development; Milton Keynes (auto-orientation); Runcorn (transit)

- **Netherlands** – Houton (bike design; transit corridor); Almere (external commuting)

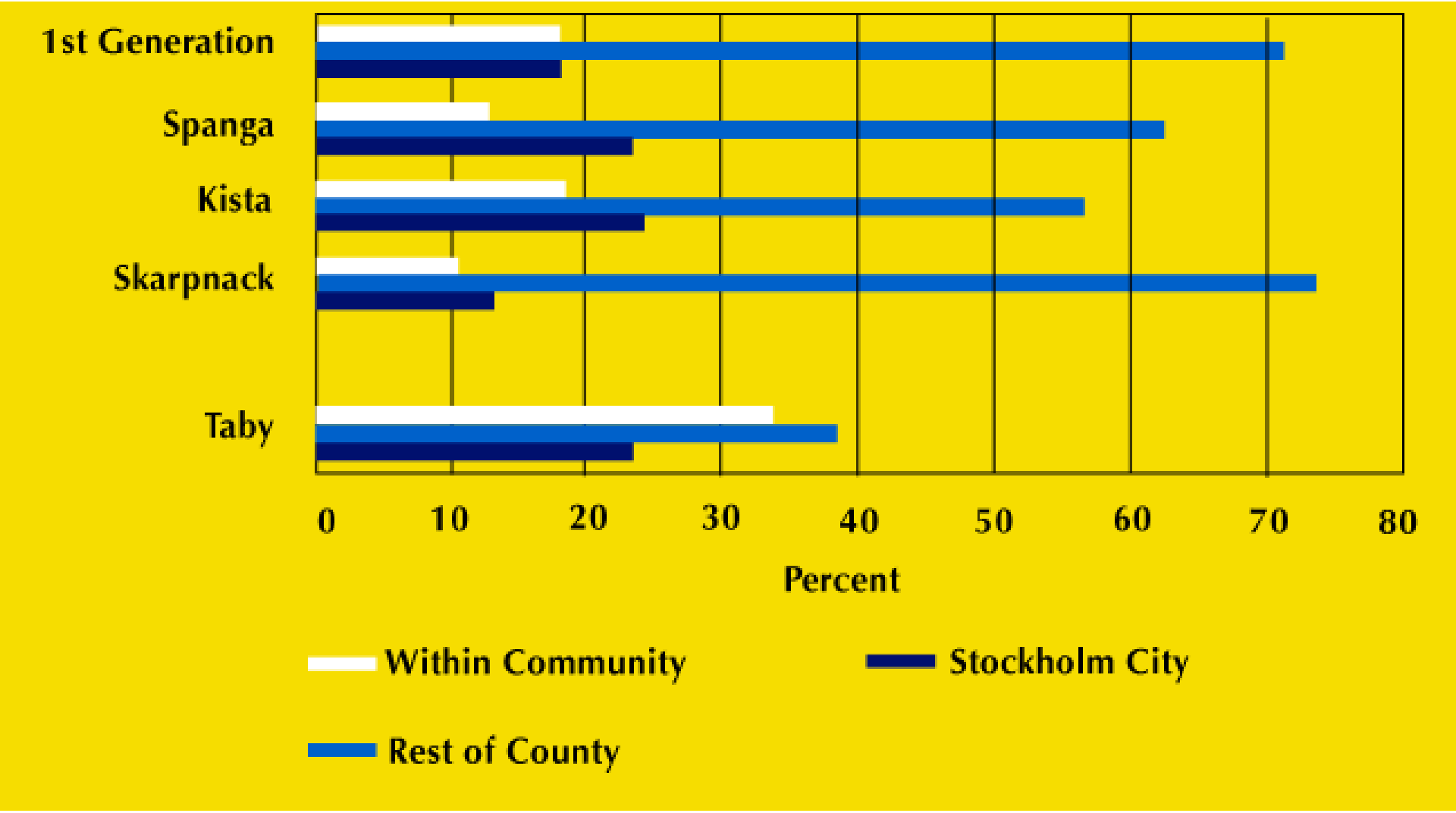
Stockholm

Transit-Oriented Corridors -- Necklace of Pearls



Kista Science City:
”Complete” Science Town to work, live, and study.

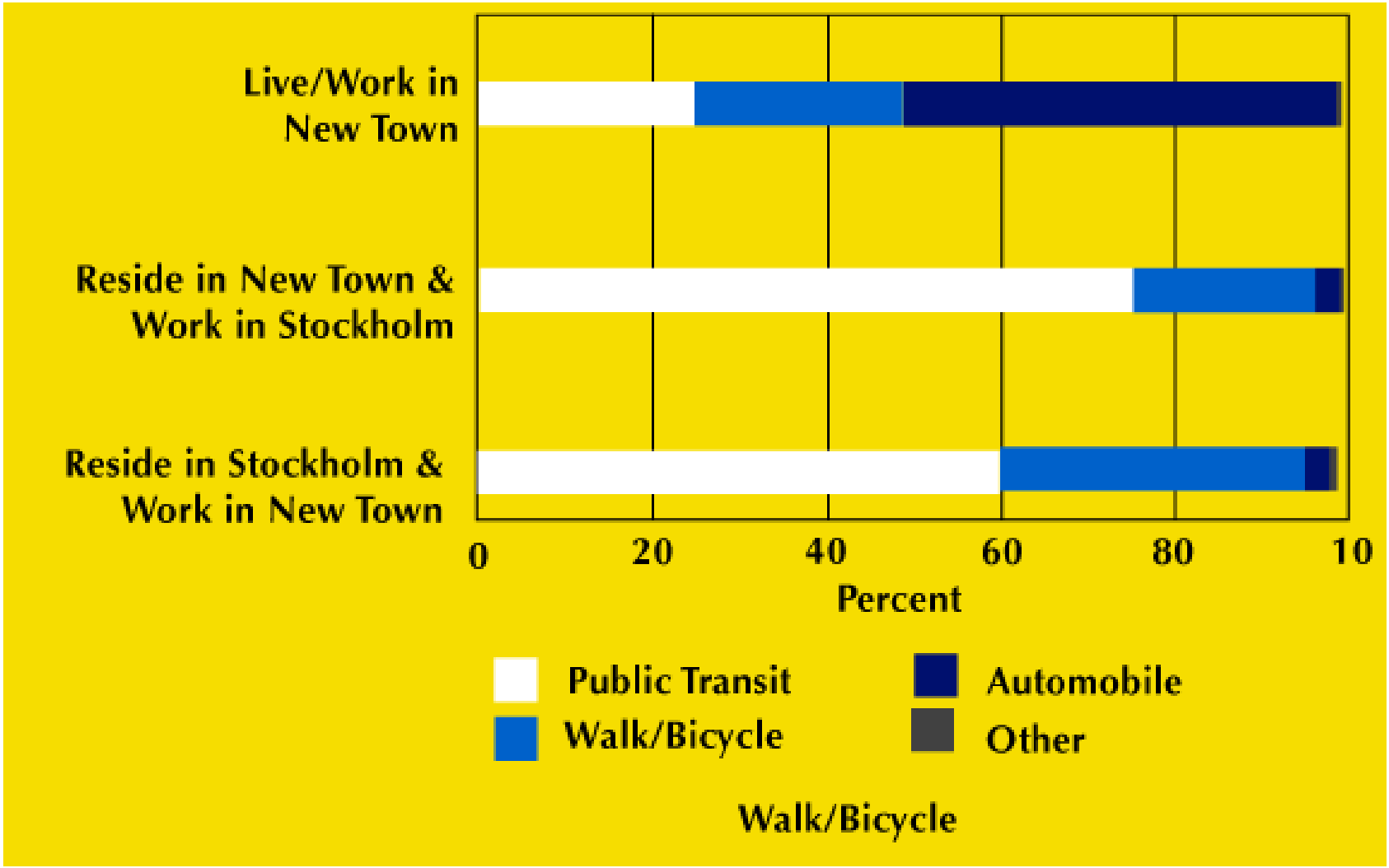
Workplace of Residents: 1995



Source: Cervero, 1997, 1998

Commute Modal Splits

By O-D Pattern, 1995



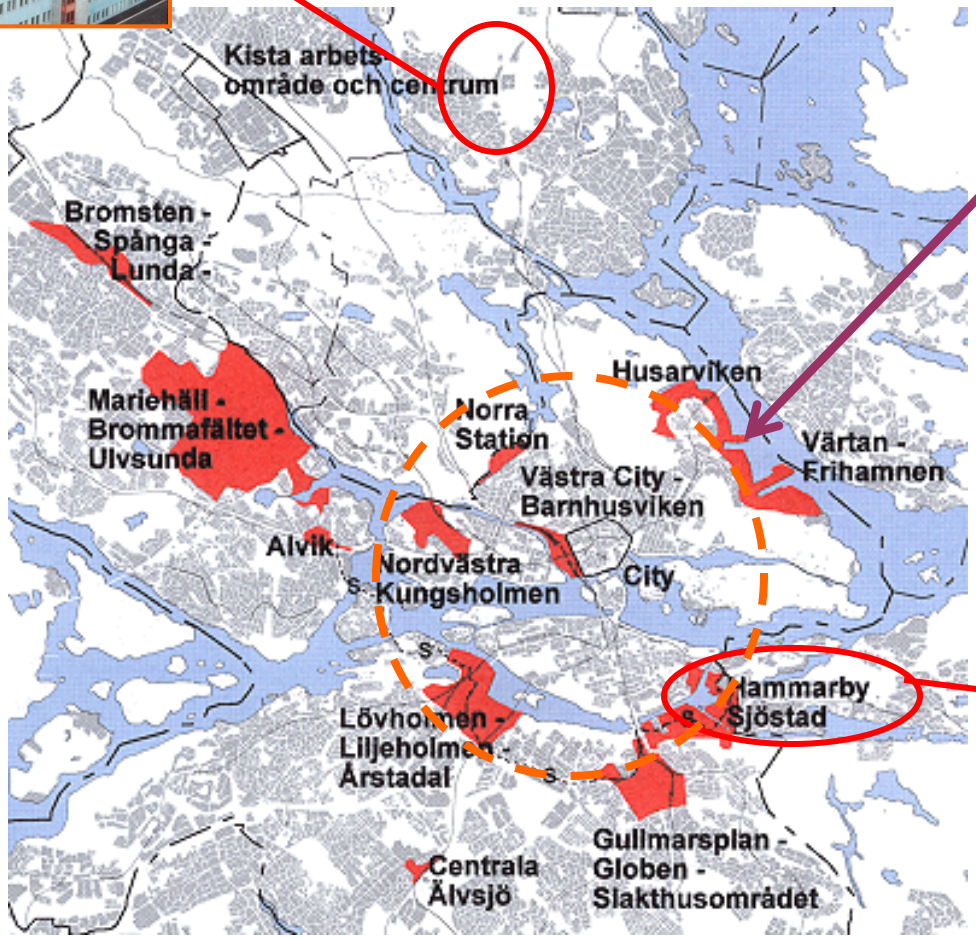
Source: Cervero, 1997, 1998

Stockholm's 2020 Plan

Science City (Greenfield) & Urban Regeneration (Brownfield)

Kista Science City

Inner-Ring Interconnected by Fast Trams

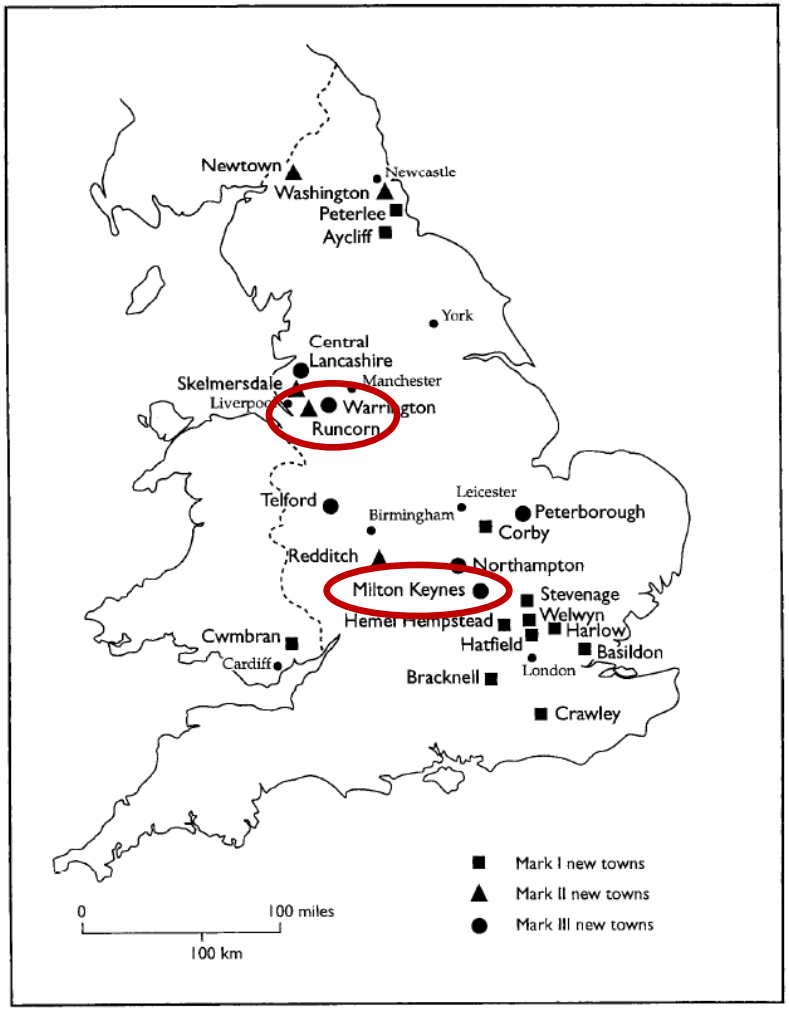


British & Dutch New Towns: Targeting Overspill Growth

Invoking E. Howard's Garden Cities Vision

Dutch New Towns: "Concentrated Deconcentration"

British New Towns: "Self-Sufficient Garden Cities"



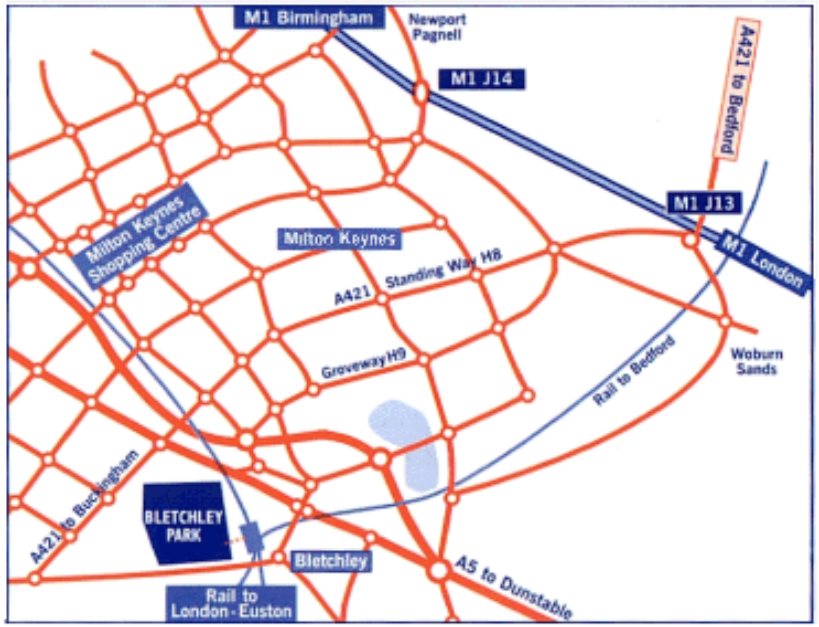
• Along with Houten, 1 of 15 national new towns of 40K to 80K population in & around Randstad

Almere

- *Travel Efficiencies* for local shopping & discretionary travel … and *Travel Excesses* for commuting & regional shopping
- 56% of employed-residents commute elsewhere
- 46% of workers "in-commute"
- Mean external commute:
  - 44 km
  - 56 minutes
- Mean regional shop trip:
  - 17 km
  - 30 minutes

Source: Laan, Lambert, "Changing Urban Systems: An Empirical Analysis at Two Spatial Levels, *Regional Studies*, Vol. 32, No. 3, 1998, pp. 235-247.

Milton Keynes: Car-Dependent New Town outside London's Greenbelt



20 D.U. per hectare

Index of Self-Containment

Independence Index =
(# work trips internal)/(# work trips external)

= 1.44 (1980)

= 1.36 (1998)

= 1.17 (2007)

Comparison of Travel: Milton Keynes (UK) and Almere (Netherlands)

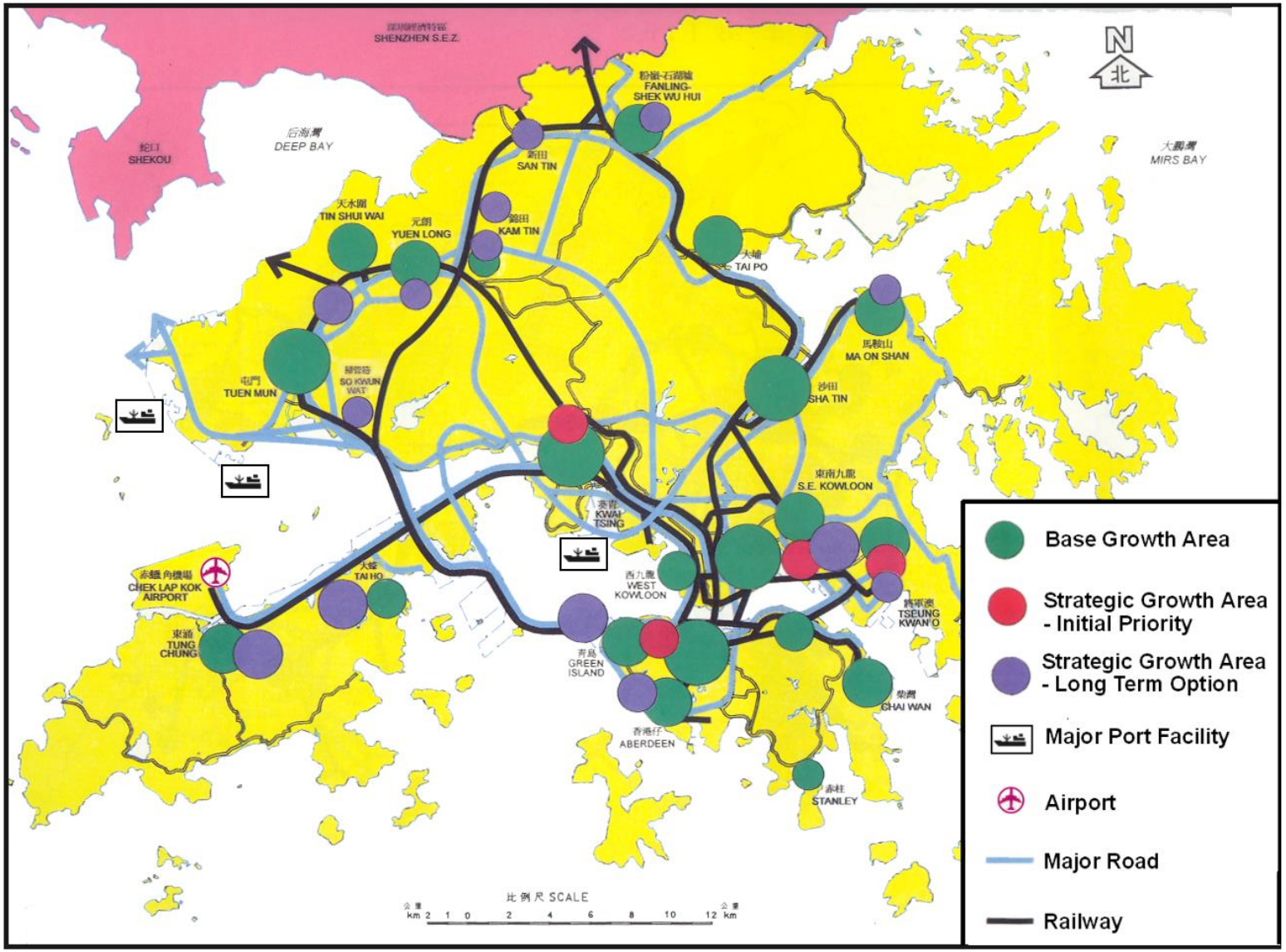
	Milton Keynes	Almere
Trips/ Person/Day	6.4	6.2
Cars/HH	1.37	0.94
% Residents see a car as "essential"	70%	50%

	Milton Keynes	Almere
% Commutes by:		
Cars/HH	59%	35%
Transit	17%	17%
Bicycle	6%	28%

Source: Roberts 1991

Asian New Towns

- **Tokyo** – Private railway-led new towns
- **Hong Kong** – TOD & Value Capture
- **Singapore** – Imbalanced by rail-linked; TDM – getting the prices right
- **Seoul** – Bedroom communities evolving to complete lifestyle places though regionally connected for high-level activities



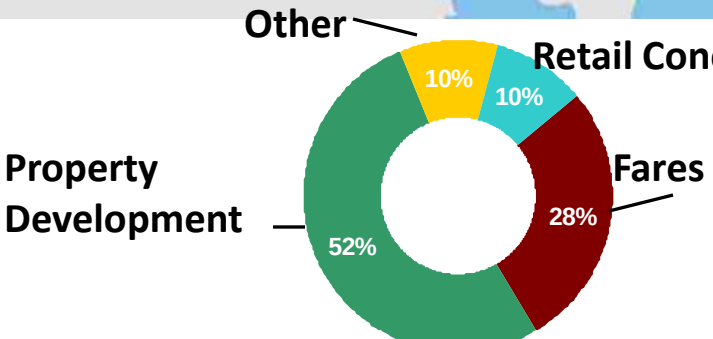
HONG KONG Long Range Plan: RECOMMENDED STRATEGY

Managing Urban Growth – New Towns Interlaced by Rail plus Entrepreneurial VALUE CAPTURE

Being Entrepreneurial

Hong Kong's "R+P" (Rail + Property)

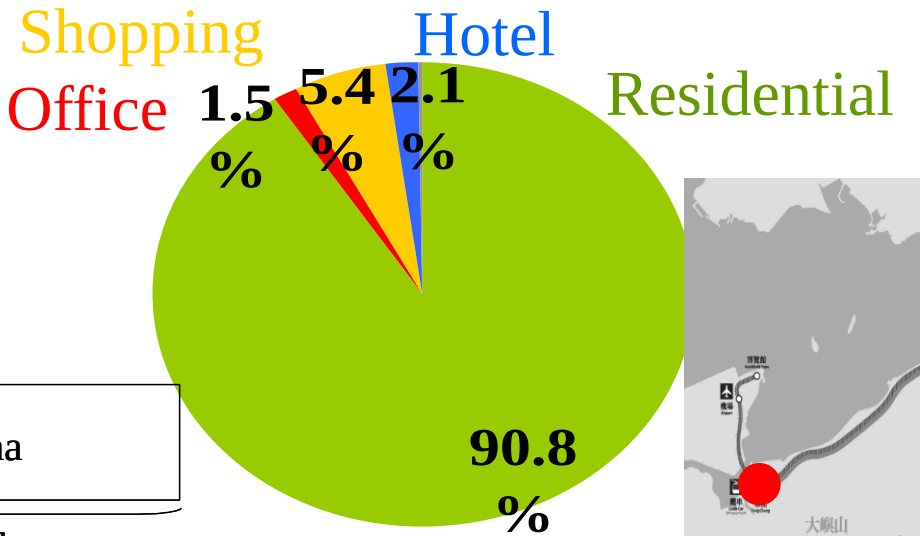
地鐵公司
MTR Corporation



MTR's Revenue Sources

R. Cervero & J. Murakami, Rail + Property Development in Hong Kong, *Urban Studies,* 2009.

TUNG CHUNG: New Town in New Growth Axis

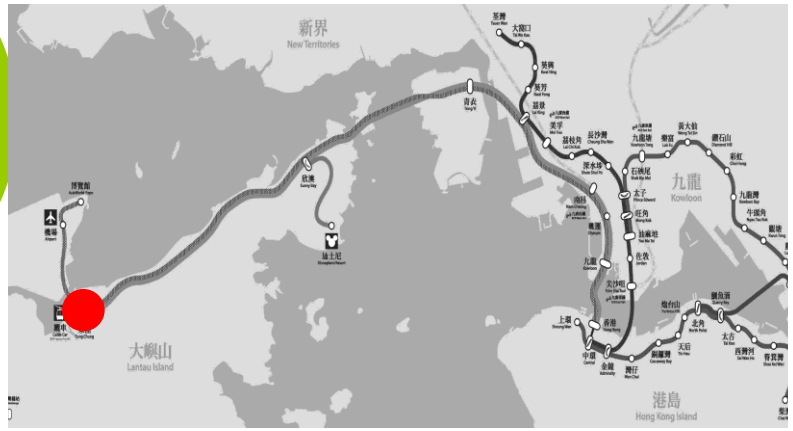


Plot Ratio=4.76

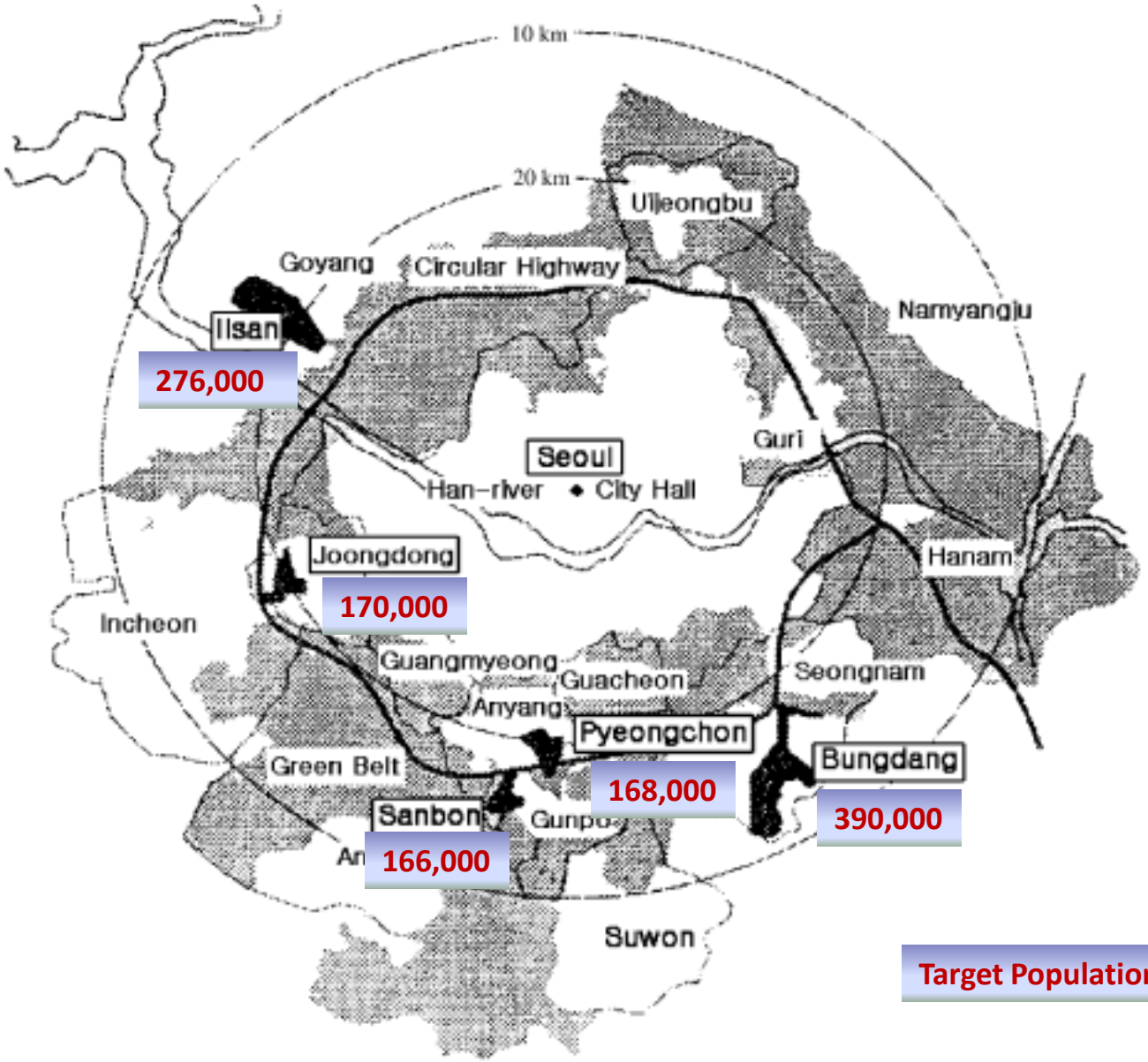
GFA=103.08ha

Site Area=21.70ha

Mixed Index =0.25



Five Major New Towns on Seoul's Orbit



New Town Commuting

Seoul's 5 Major New Towns

- **New Towns** initially *Bedroom Communities*
- **External Commuting:** 35% of commutes in five new towns were to Seoul (1998); average commuting time (34 minutes) longer than residents of nearby existing towns (26 minutes)
- **Congestion:** 1998-2003, average PM commute speeds in metro Seoul fell from 25 in to 17 kph
- **External commutes remain high**: KoTI review considers new towns as "far from being self-contained"

Tidal Commutes: Outbound afternoon traffic to Seoul's periphery

Ambitious Commercial Development Goals

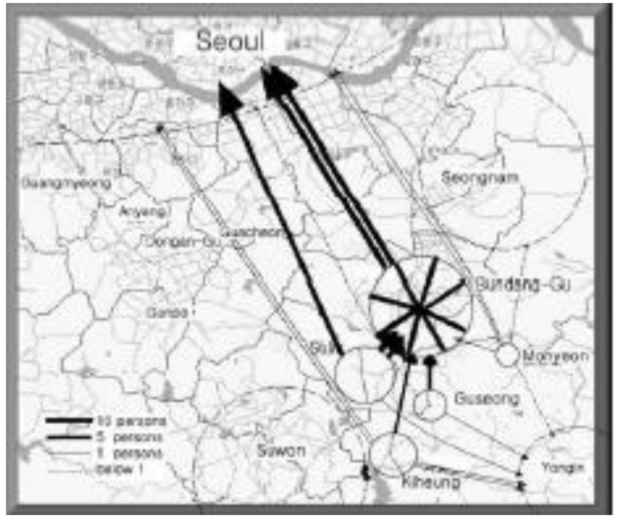
Comparison of the ratios of commercial areas in new towns and existing cities

	Commercial land (%)	Per capita commercial land (m^2/person)
Korean existing cities		
National average	1.9	4.8
Average of six large cities	2.0	3.7
Average of cities in the SMA	1.6	4.0
Japanese new towns		
Centri	4.0	3.0
Tamma	4.3	4.7
Kohoku	4.8	2.9
Korean new towns		
Bundang	8.1	4.2
Ilsan	7.8	4.5
Pyeongchon	4.8	1.5
Sanbon	4.2	1.1
Joongdong	10.4	3.4

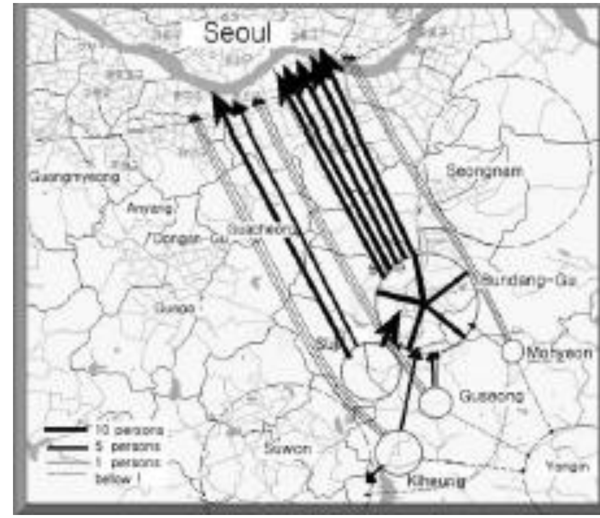
Source: Reorganized from Lee (1997) and KLC (1999).

Travel Patterns of Bundang New Town Residents by Non-Work Purpose

Groceries



Clothing



Leisure/Entertainment

*** 5 Seoul new towns have been growing as suburban retail attractions in region, especially Bundang and Ilsan, which are larger and farther from major town centers**

*** Bundang's commercial dependency on Seoul has diminished with time, especially for every-day goods; inter-dependency continues to high-level and specialized goods (entertainment, medical care).** Source: Lee & Ahn (2005)

Close

- **Economic inter-dependency**, regionalism, post-Fordism/service economy, globalization render self-containment unrealistic/ undesirable; co-dependent places
- **Complete communities** attainable adopting New Urbanism/Post-Modern design principles of inclusive, mixed-use development – everyday activities within a 5-minute walk
- **Design & Planning Matter**: Travel efficiencies/ sustainability benefits from Transit-Orientation, MXD, Walkable Communities, Place-making
- **New Towns as Lifestyle Places**: niche-markets; mid-stage lifecycle filtering