

# The Theory of Urban Fabrics: Principles and Practices

By  
Peter Newman  
Professor of Sustainability  
CUSP, Curtin University  
Western Australia

# How did I get from Chemistry to Sustainable Transport....?

PhD in Chemistry 1964-72



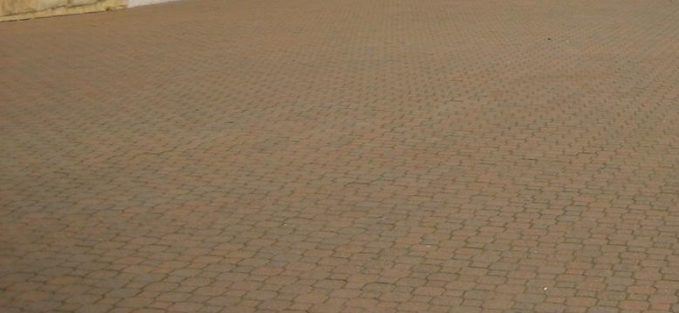
Professor, 15 books, 250 articles on sustainable transport...IPCC, IA...



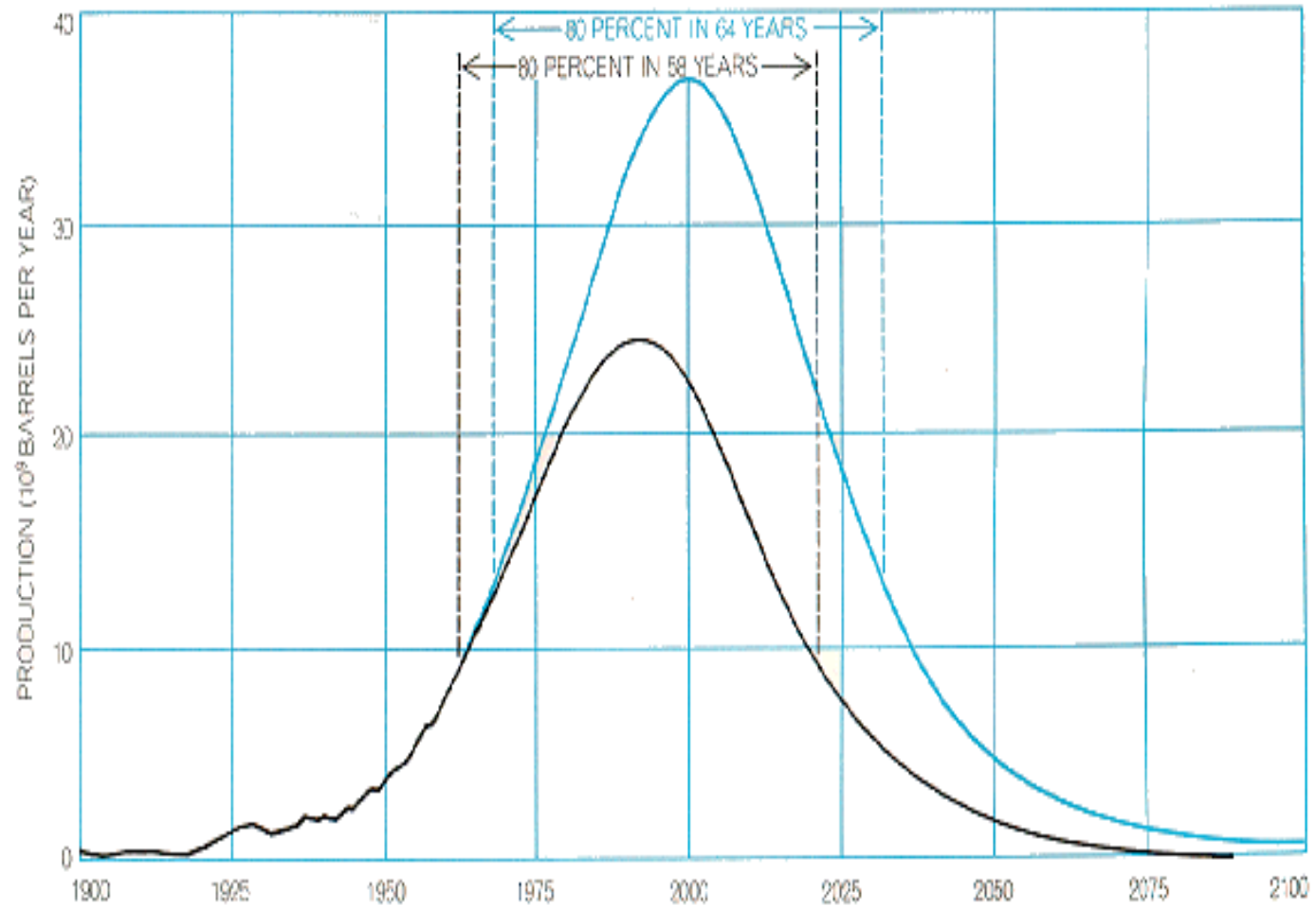
# Delft – 1972/73, studying Environmental Science and discovering European cities



Stanford  
1973-4  
Studying  
Ecology and  
discovering...



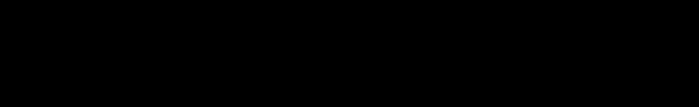
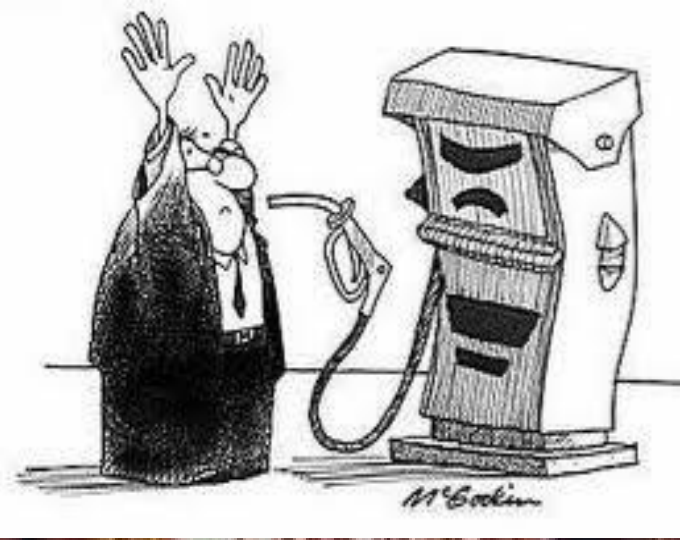
# PEAK OIL.....



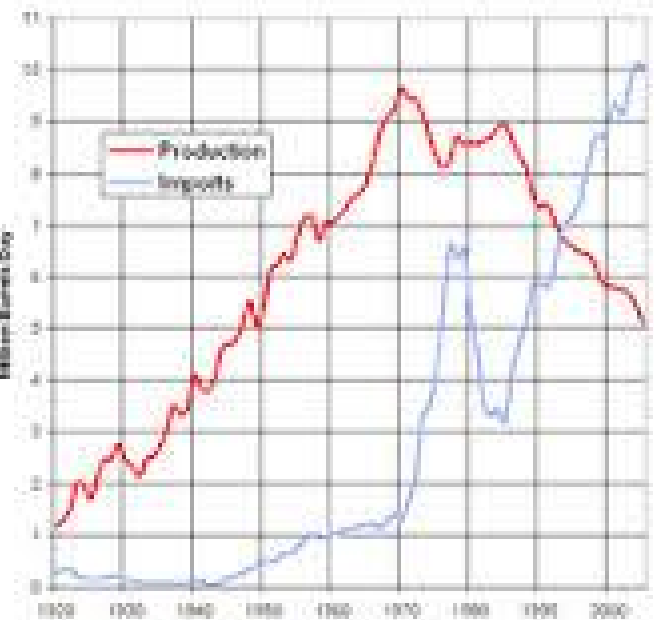
CYCLE OF WORLD OIL PRODUCTION is plotted on the basis of two estimates of the amount of oil that will ultimately be produced.

The colored curve reflects Ryman's estimate of  $2,100 \times 10^9$  barrels and the black curve represents an estimate of  $1,350 \times 10^9$  barrels.

The Hubbert Peak  
Sci Amer 1971



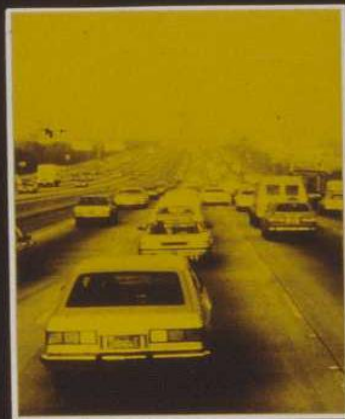
US Oil Production and Imports



Society collapsing... 1973



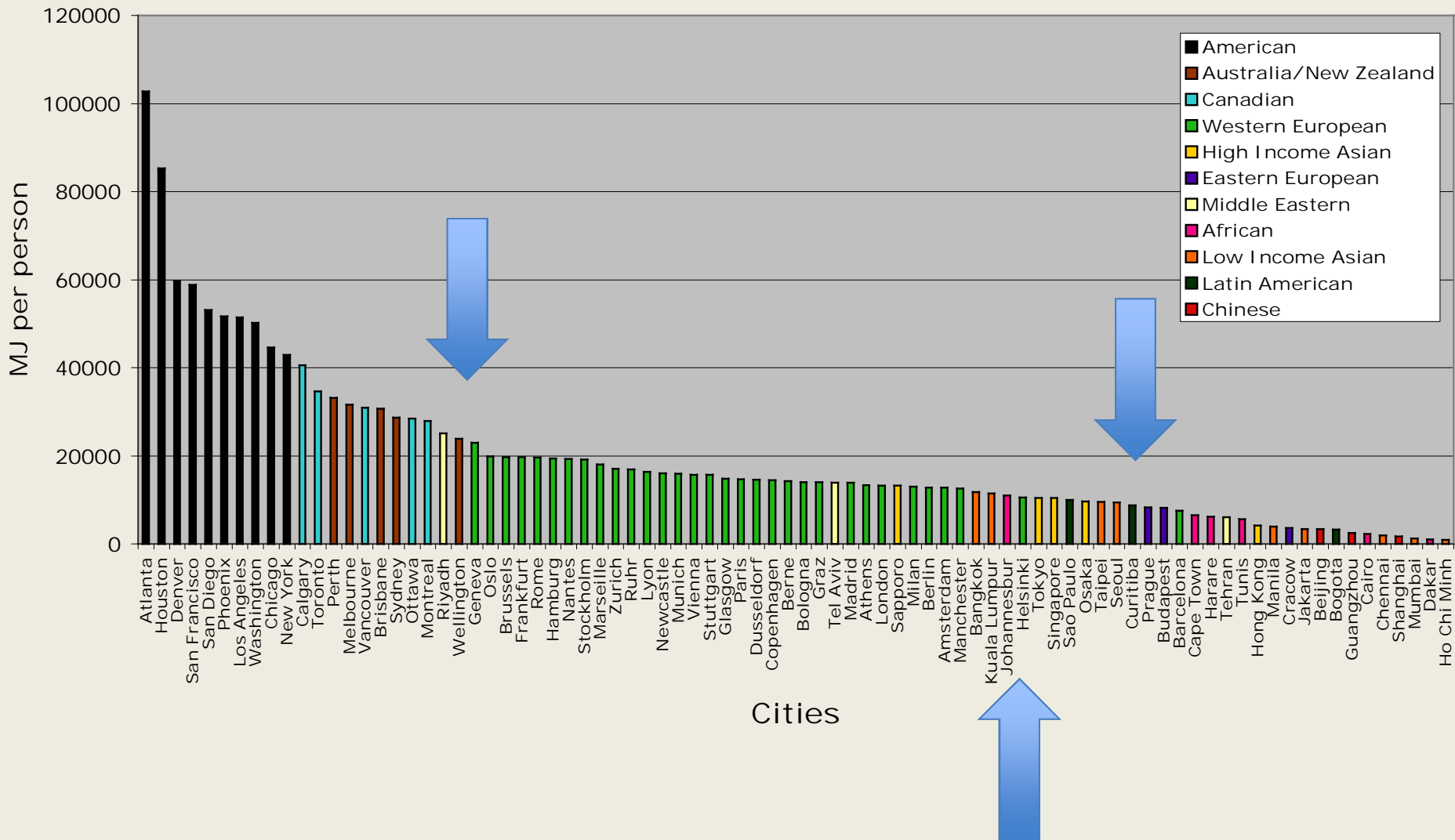
# CITIES AND AUTOMOBILE DEPENDENCE



AN INTERNATIONAL SOURCEBOOK

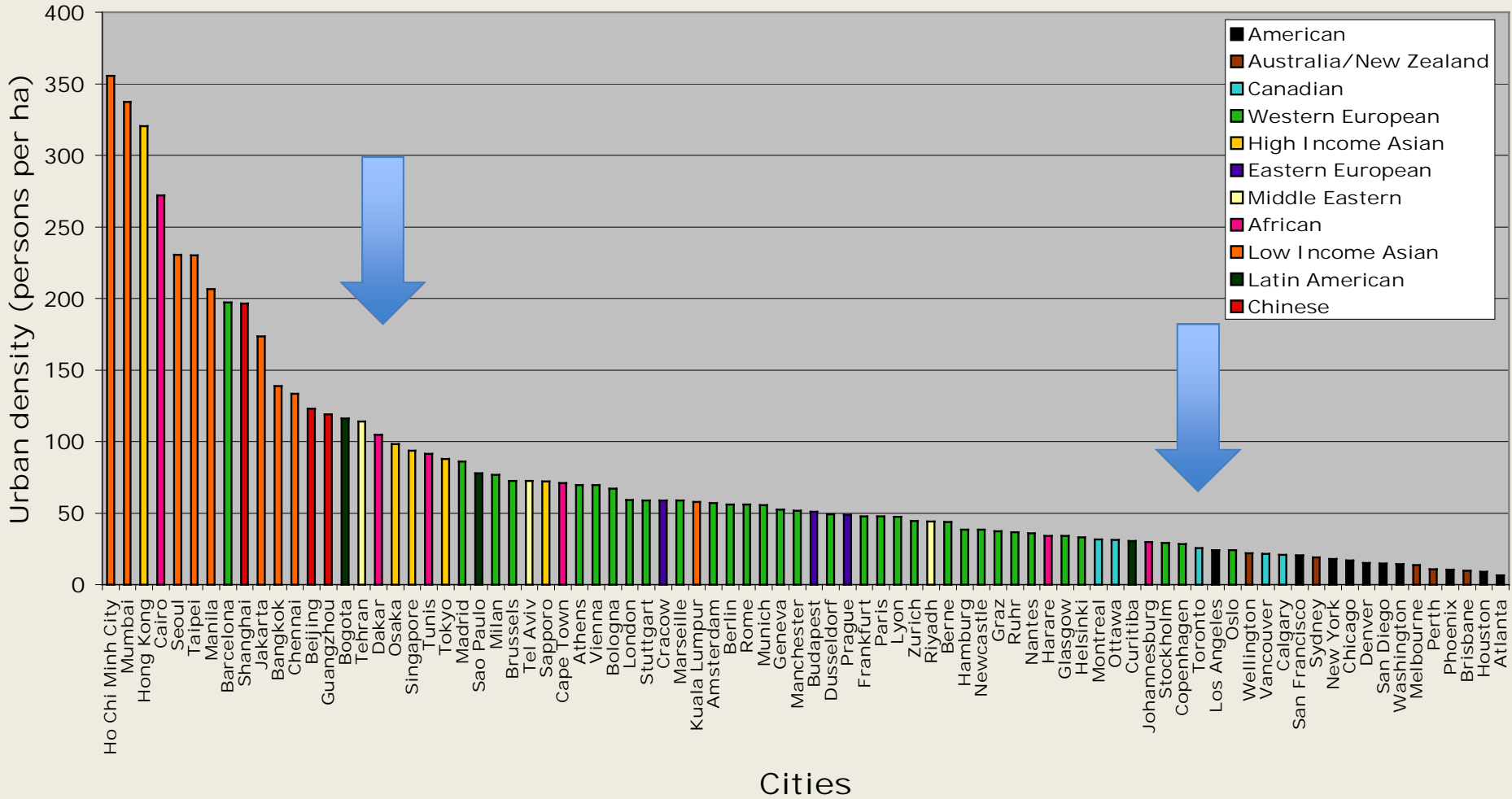
PETER NEWMAN  
JEFFREY KENWORTHY

# Private Passenger Transport Energy Use per Person, 1995

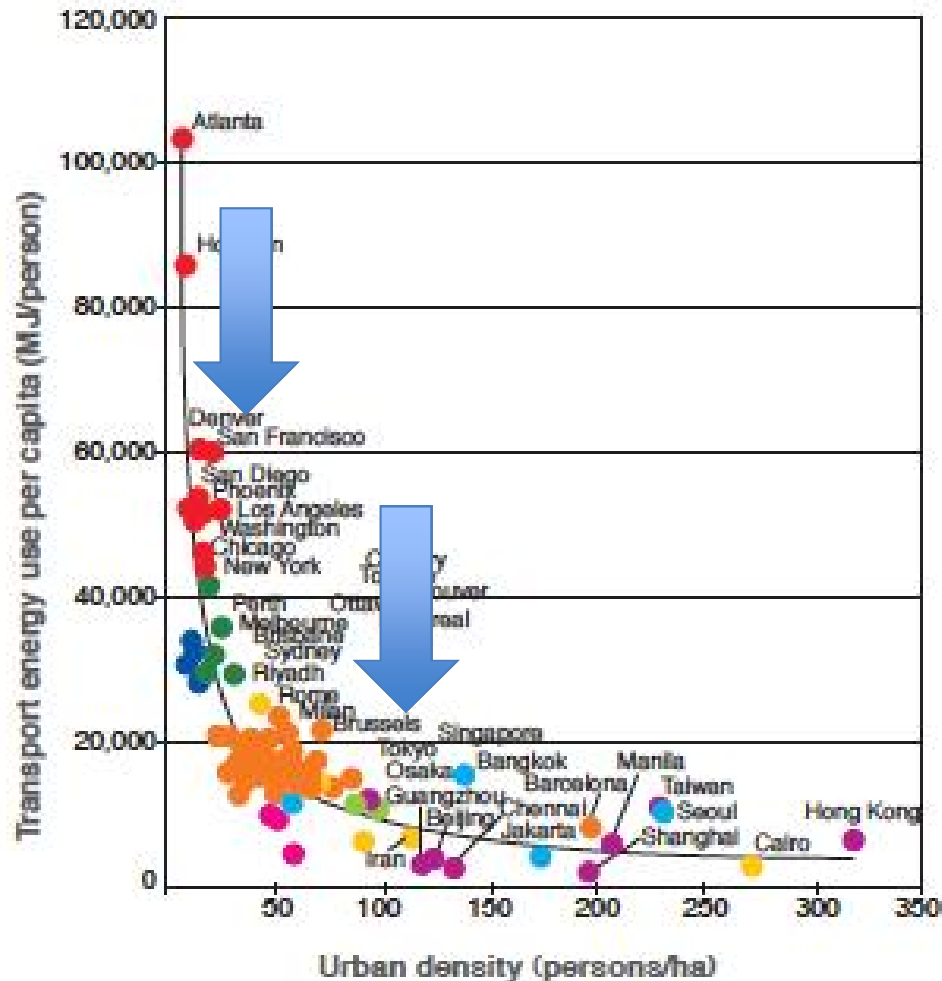




# Urban Density, 1995 (Persons/Ha)



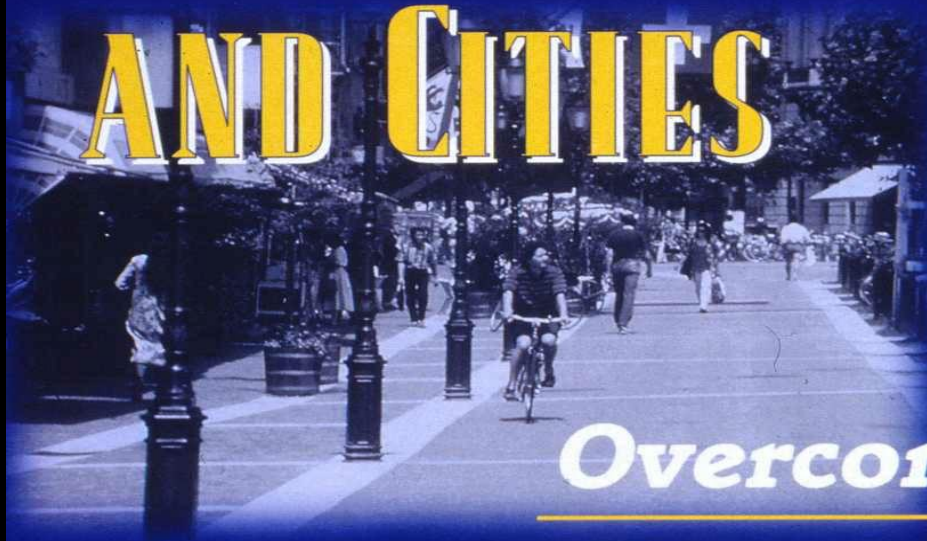
# Fuel Use Decreases as Density Increases



- US cities
- Western European cities
- Japanese cities
- Canadian cities
- Eastern European cities
- Chinese cities
- Australian cities
- Middle Eastern cities
- Asian cities

Source: Kenworthy, J. R., 2010, *Cities Data Base for 2005*, CUSP,

# SUSTAINABILITY AND CITIES



*Overcoming*

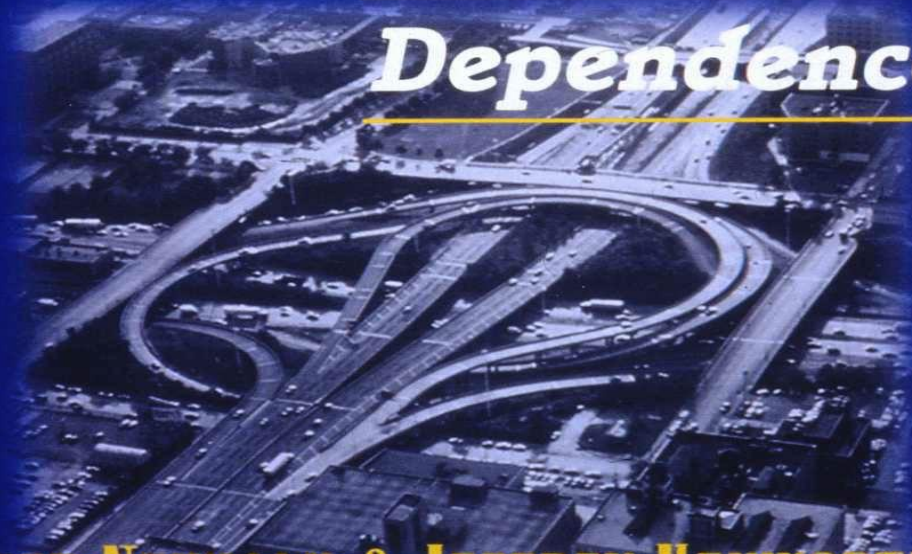
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*Automobile*

---

*Dependence*

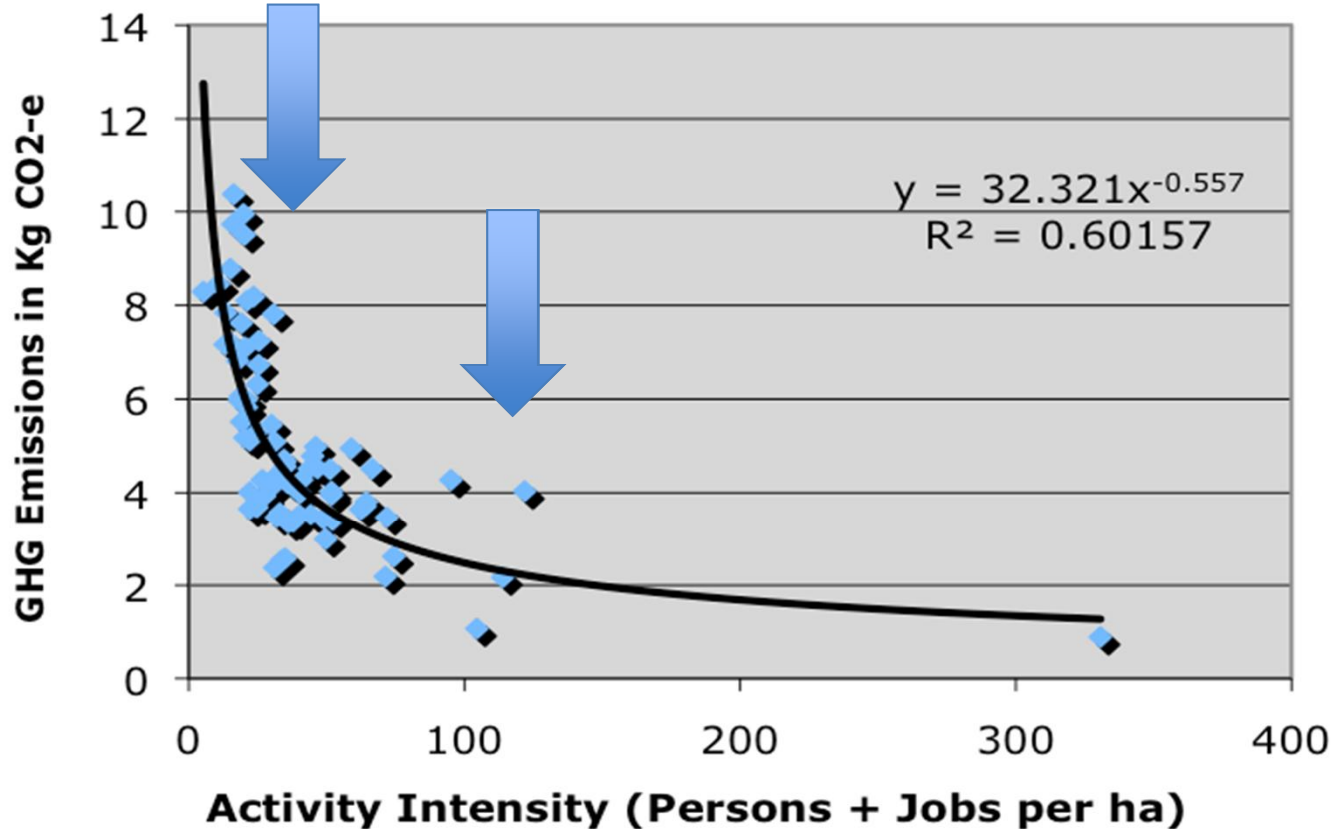
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**PETER NEWMAN & JEFFREY KENWORTHY**

# Different parts of the city have very different transport fuel use....

**Activity Intensity and Daily Per Capita GHG Emissions in Sydney and Melbourne**

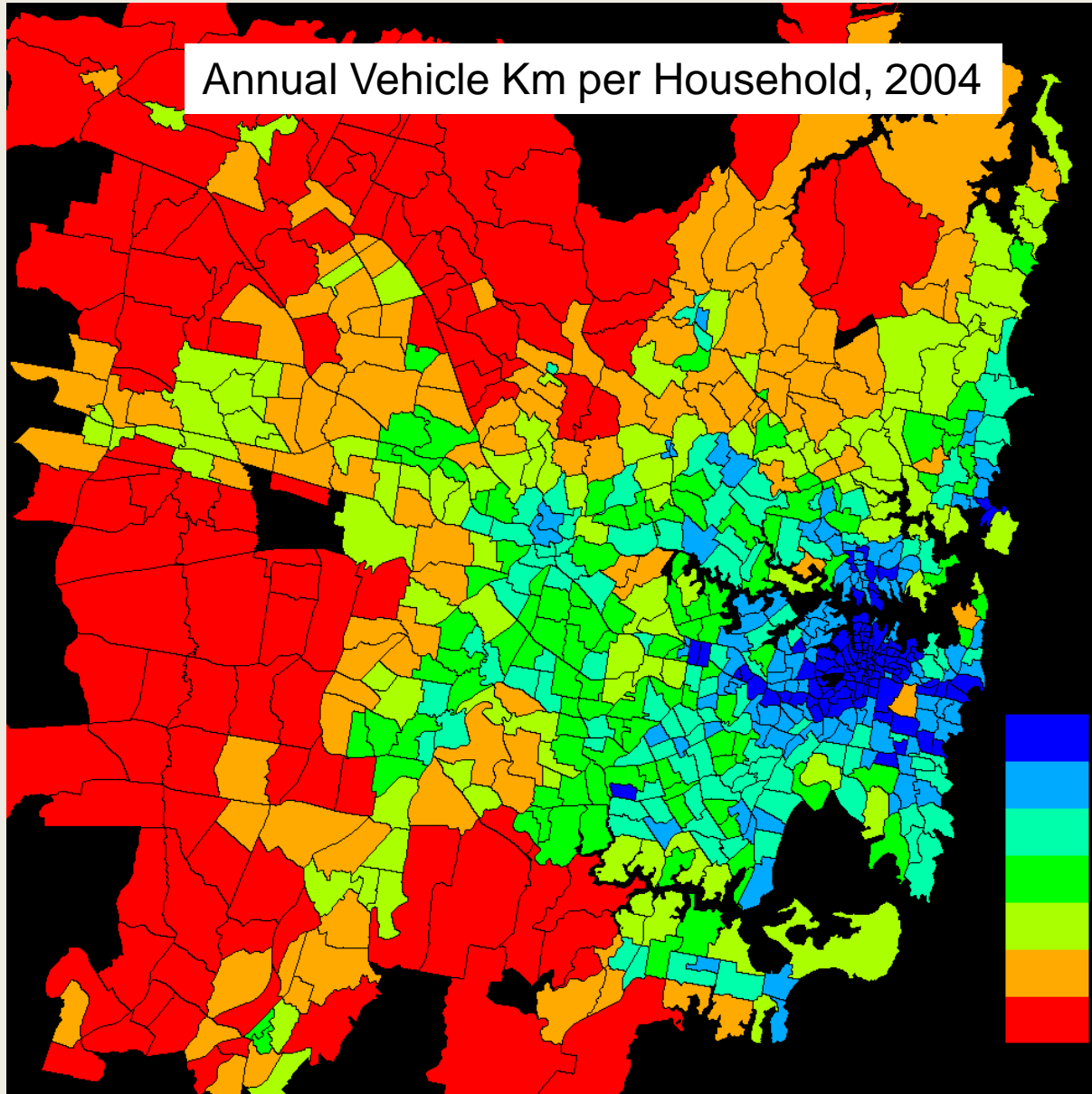


# Melbourne....wealthy use cars less, use sustainable modes more...

	<b>Core</b>	<b>Inner</b>	<b>Middle</b>	<b>Outer/ Fringe</b>
<b>% Household earning &gt;\$70,000</b>	<b>12</b>	<b>11</b>	<b>10</b>	<b>6</b>
<b>Car Use</b>	<b>2.12</b>	<b>2.52</b>	<b>2.86</b>	<b>3.92</b>
<b>Public Transport</b>	<b>0.66</b>	<b>0.46</b>	<b>0.29</b>	<b>0.21</b>
<b>Walk/bike</b>	<b>2.62</b>	<b>1.61</b>	<b>1.08</b>	<b>0.81</b>

# Sydney...three different cities

Annual Vehicle Km per Household, 2004



2.3 – 7.6  
7.6 – 10.1  
10.1 – 12.6  
12.6 – 15.0  
15.0 – 18.4  
18.4 – 24.5  
24.5 – 39.0

Outer suburbs residents, particularly those away from rail lines, drive much more than inner suburbs residents.

Perhaps there are three city types?

The development of a model...

**Why transportation priorities shape cities...**

**MARCHETTI CONSTANT**

**The average travel time budget is around one hour per person per day.... (i.e. half an hour average for the journey to work). Found to apply across the world and throughout urban history.**

**This means?**

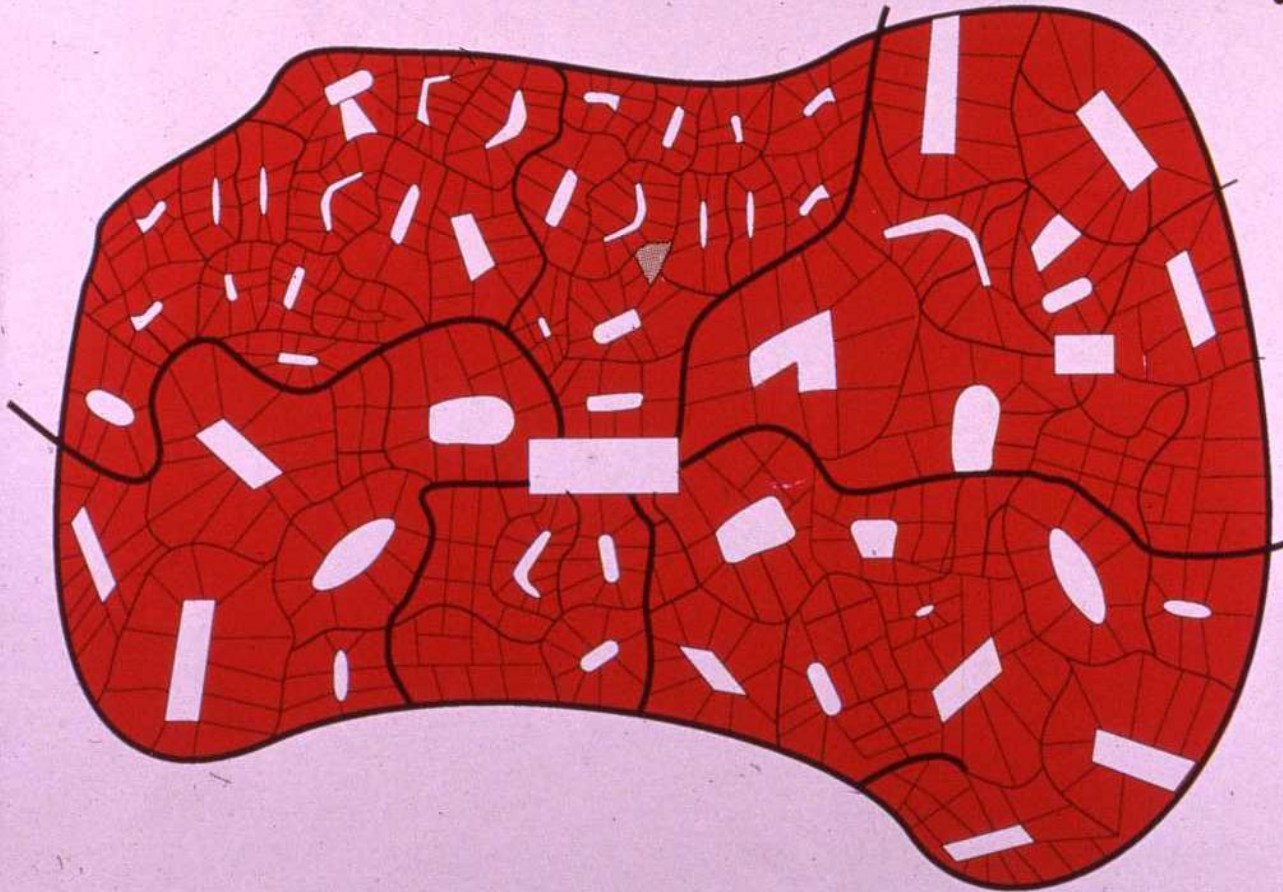
**THE CITY IS ALWAYS 'ONE HOUR WIDE'....**



# TRADITIONAL WALKING CITY

Up To 1850 In Europe

- High Density
- Mixed Use
- Organic Structure





# WALKING CITIES

6-8,000 years old, 5-8 km wide.

Densities 100-200 people /ha. Mixed.

Little other space. Squatter settlements today as well as pre-industrial city centres.







<http://www.topy-sign.jp/>

サロンパス

もんじゃ

千鳥屋

千鳥屋

千鳥屋

SUPER LISA SHIBUYA

HMV

the music master

taisei neon

auー他社ケータイ  
絵文字 OK!!

大盛堂 店

本日から  
リリース  
新曲  
あや!!

◇ 朝日の聯合ニュースは3日、北

STARBUCKS COFFEE

BU SEIBU 西武

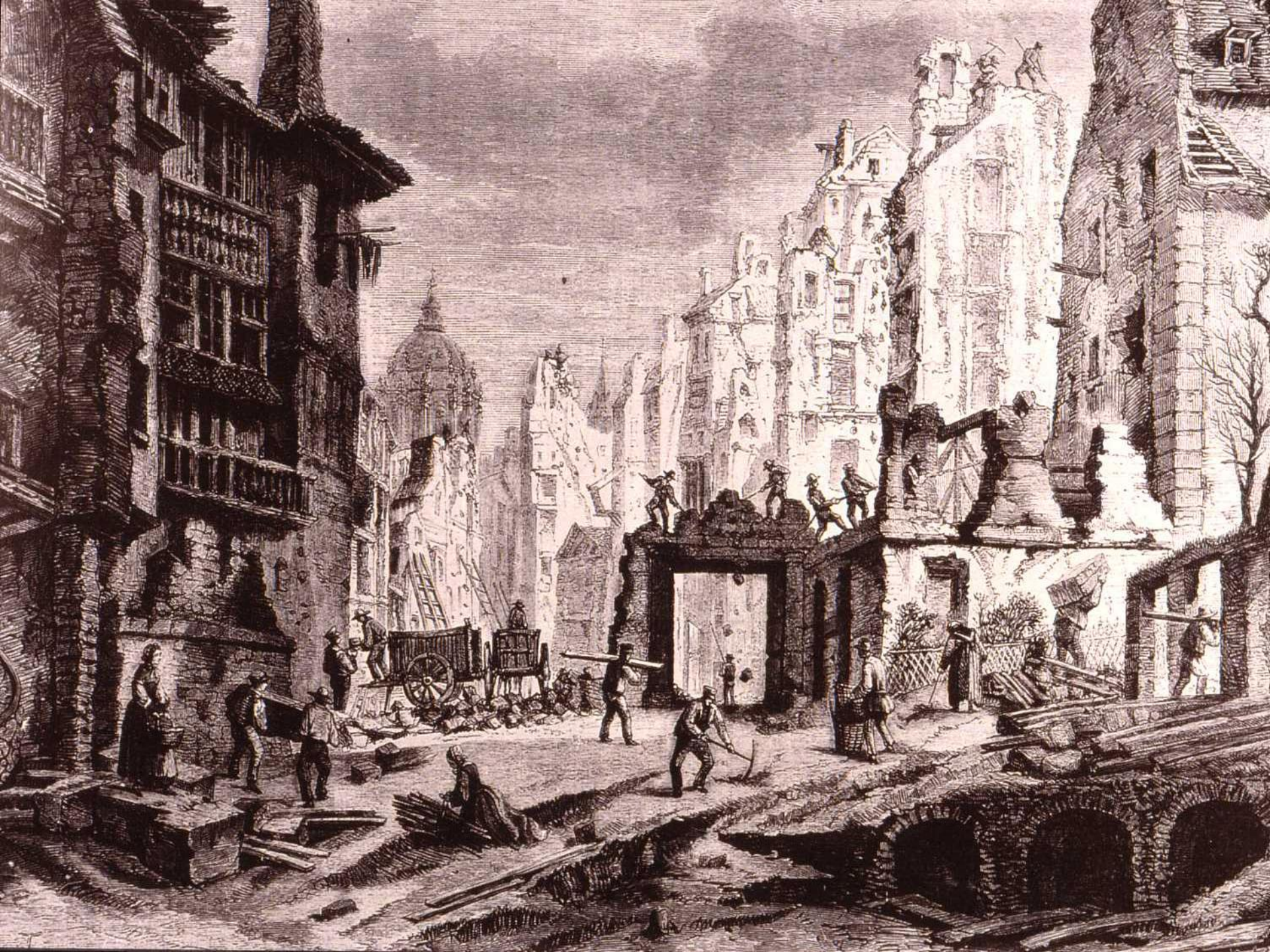
渋谷駅前  
Shibuya Sta.

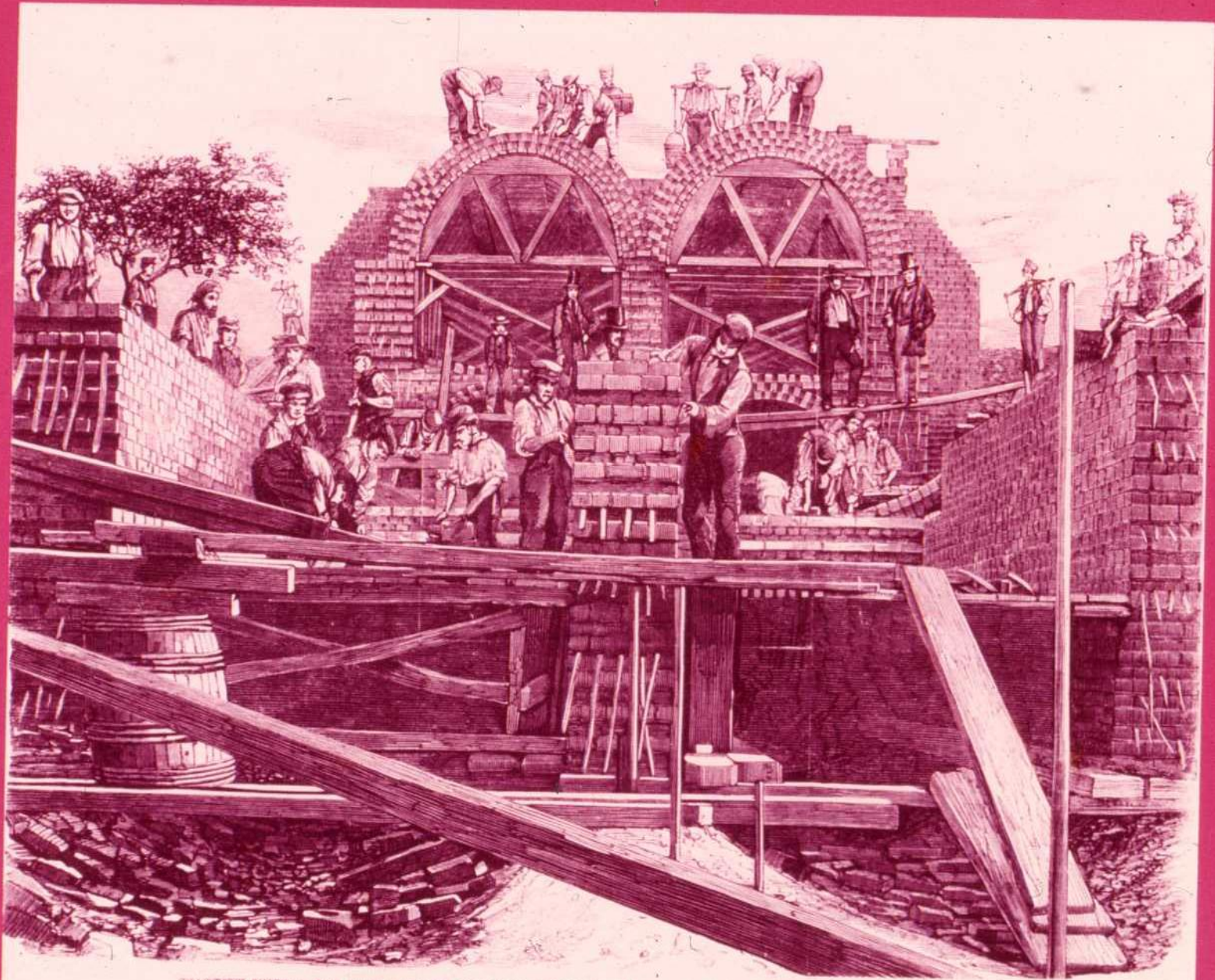








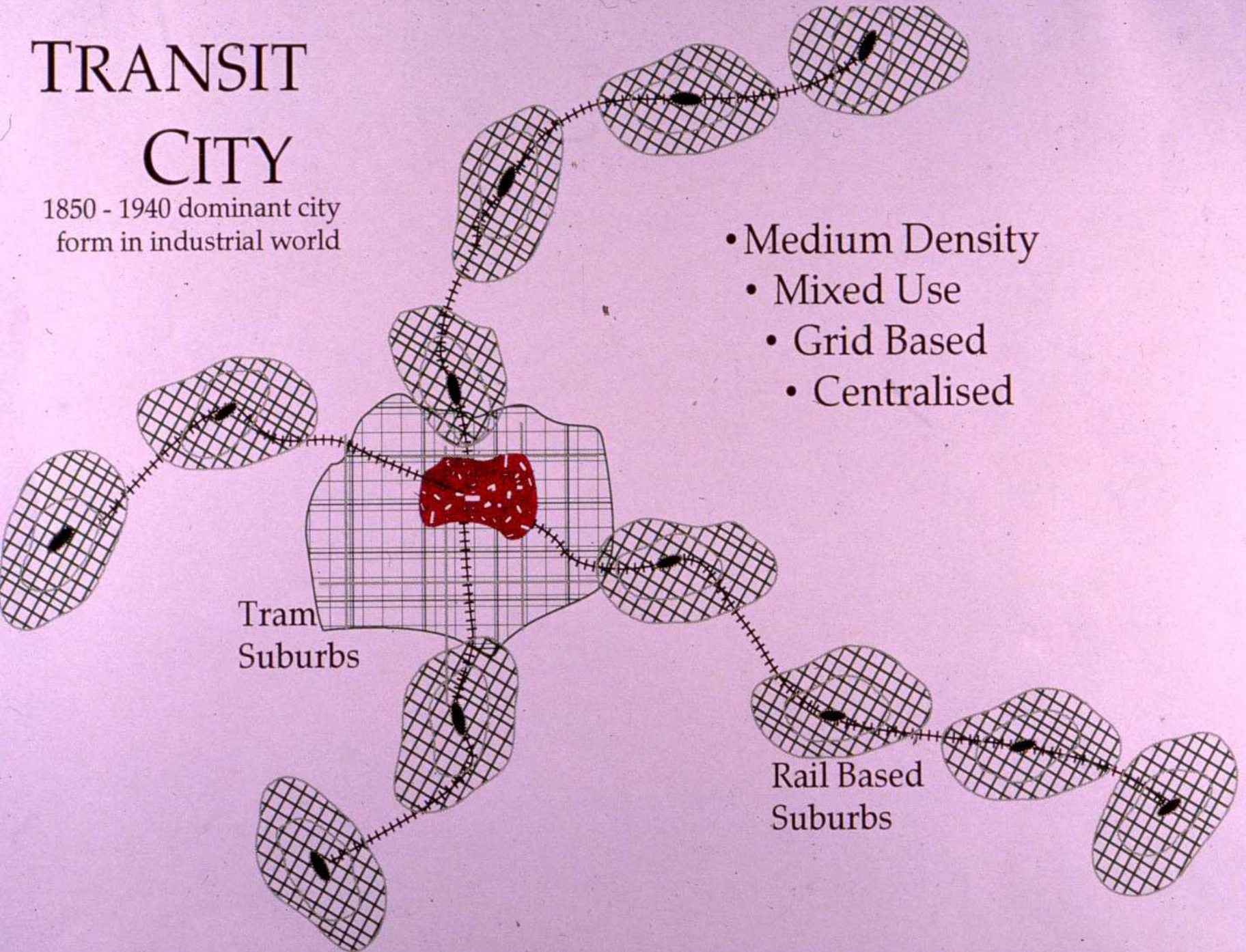




MAIN DRAINAGE OF THE METROPOLIS—SECTIONAL VIEW OF THE TUNNELS FROM WICK LANE NEAR OLD FORD, NOW, LOOKING WESTWARD

# TRANSIT CITY

1850 - 1940 dominant city  
form in industrial world



# TRANSIT CITIES

Industrial cities meant walking cities had to be rebuilt. Linear infrastructure of pipes and rails enabled city to spread in corridors. Transit city could be 20 to 30km wide. Densities 50-100/ha. Walkable centres at stations.



Tram city  
fabric









DETECTIVE NIBEL  
RECHERCHES - ENQUÊTES - INVESTIGATIONS

SMITH CLAYS

Café Bar

COIFF

COIFF

ORIBERTO

PHARM KLEI





# AUTOMOBILE CITIES

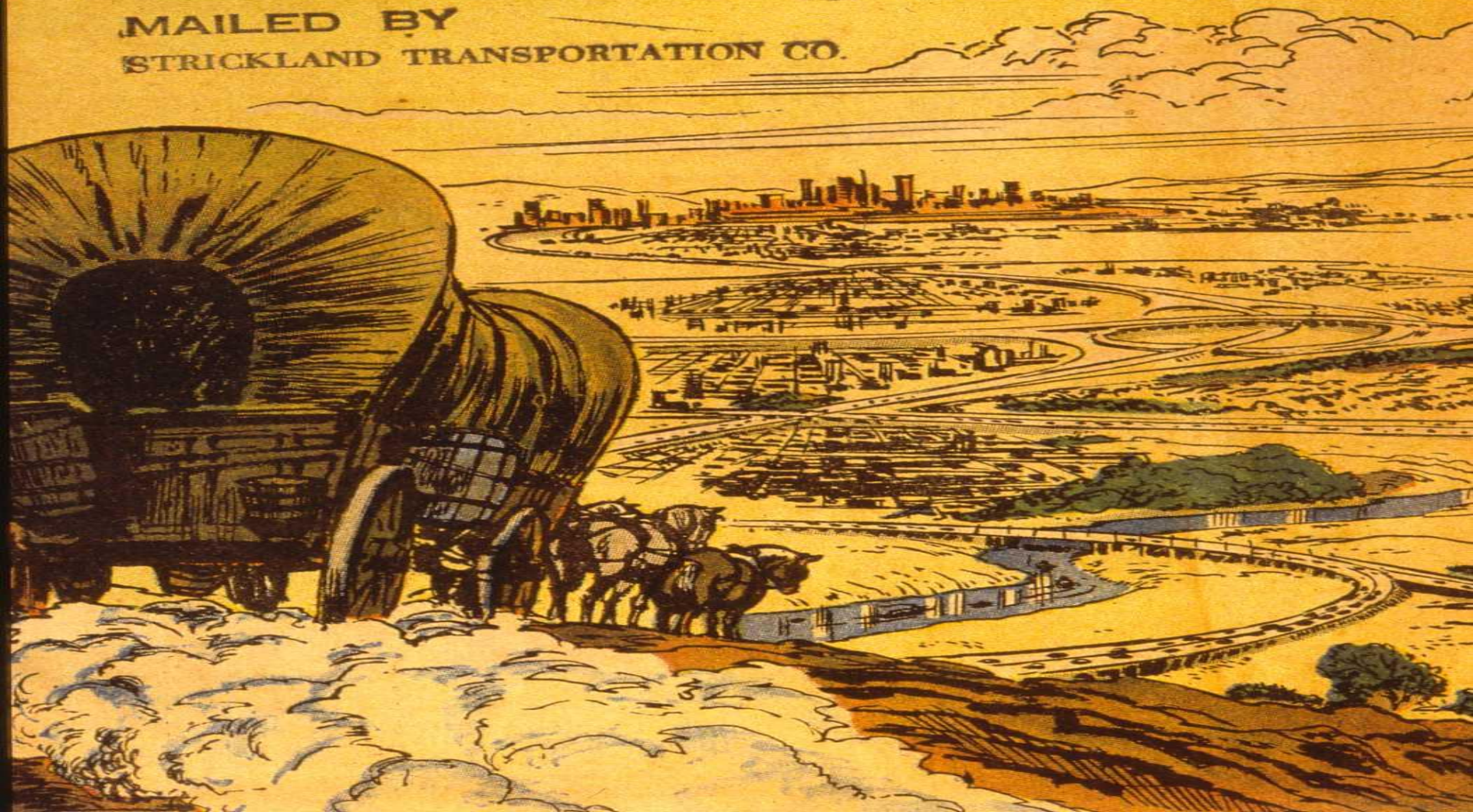
From the 1950's in America and Australia city planners opted for the new frontier of automobile dependence. Cities could now spread 50 km and in every direction, if it is assumed that automobile access is primary.

Automobile cities require the infrastructure of highways, the dispersed housing of land development and the cultural values of suburbia.

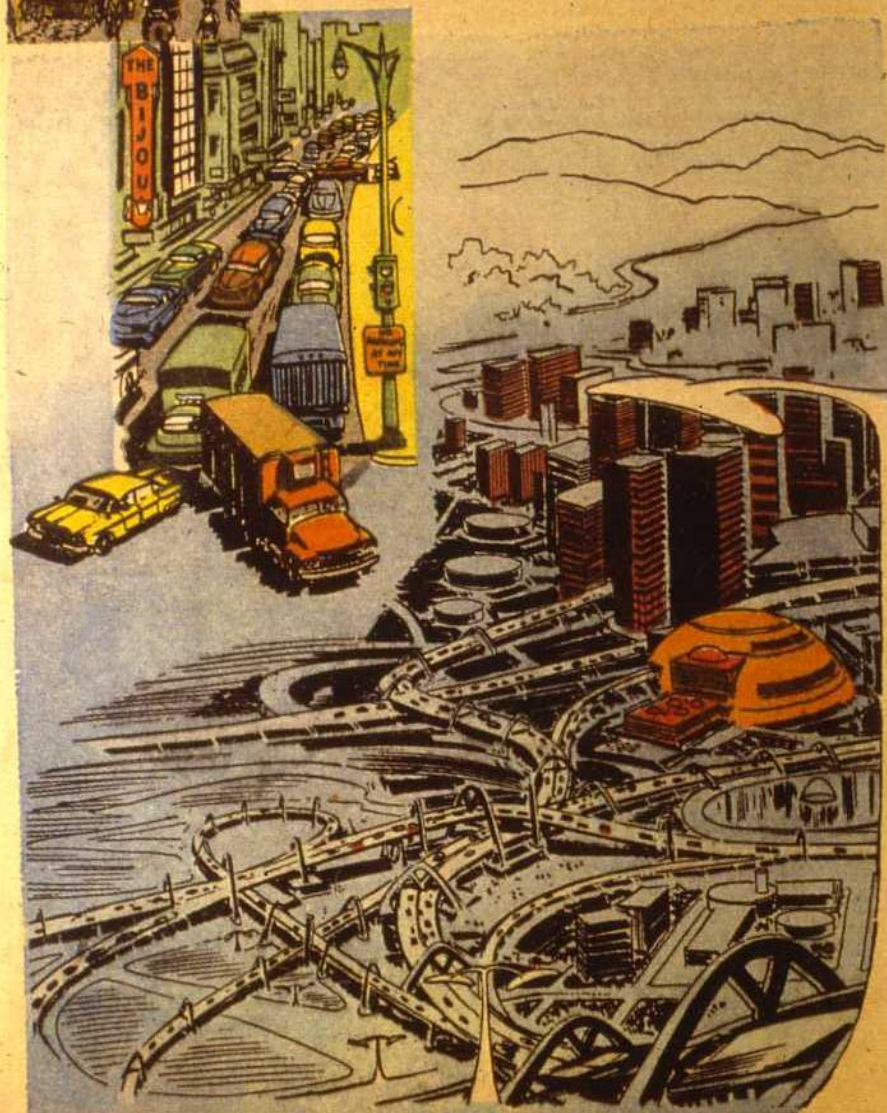
All cities are being shaped in some way by these priorities....

# FRONTIER

MAILED BY  
STRICKLAND TRANSPORTATION CO.

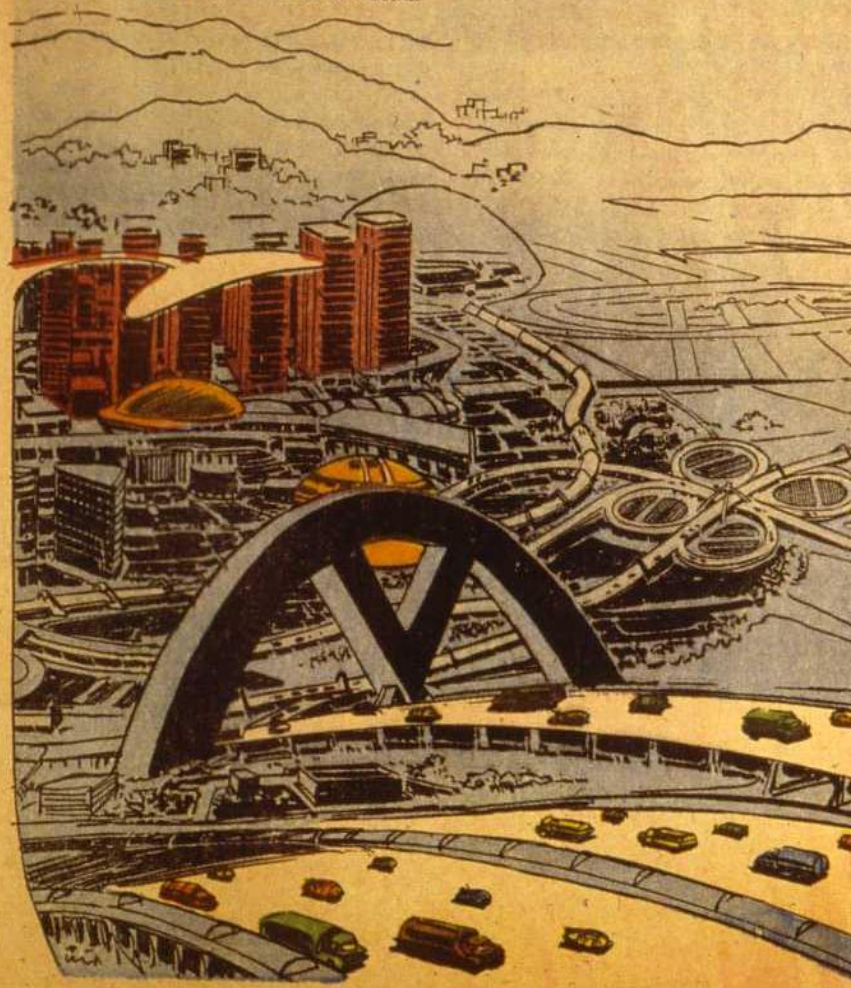


THOUGH the nation's highway system is vital to our peace-time economy and our war-time strategy, it has never been adequate. About 2 million miles of roads inherited from the horse-and-buggy age have been widened, rebuilt or just surfaced. While new highways and thruways have been added, increasing traffic volume becomes more of a problem every year. New highways will provide high-speed transport from one point to another, plus carefully integrated access roads.



BUILDING good, modern roads that combine speed with easy access, is a pressing need. Modern highway systems make it possible for America's automobiles, trucks and buses to reach every corner of the nation to carry out their vital services. The President's Highway Program recognized the importance of modern highways when they launched an expanded Federal road-building program. And the costs of the Federal government of these great new highways are being paid entirely by the taxes on the vehicles that use them.

BUT GOOD ROADS alone won't solve all of the highway problems. Today, there is more danger than there ever was on the old rutted trails. Bad and careless driving is more of a menace than the Indians ever were. Though good road design can increase highway safety to a marked degree, it cannot guarantee it. Only skill, courtesy, concentration and common good sense on the part of every driver can make our roads truly safe. Every driver should take a training course, the kind given in high schools and driving schools... the kind given by the trucking industry to its drivers to make sure that they're the safest and most courteous on the road.













## THE NEW FRONTIER

IF WE KEEP ON solving our transport problems, we can look forward to *an expanding America*. We'll move around, develop new industries, enjoy new comforts. There will be many more of us and we'll live longer, be more productive and find life easier.

WE'LL DO MORE with our leisure. We spend more time traveling and enjoy family life. We can look forward to future as the best fed, best clothed, most prosperous people in history. And as in past, our prosperity will rest on flexible, low cost, efficient transportation that adapt itself to any need or situation.



THE PURE OIL COMPANY

MEMBER OF



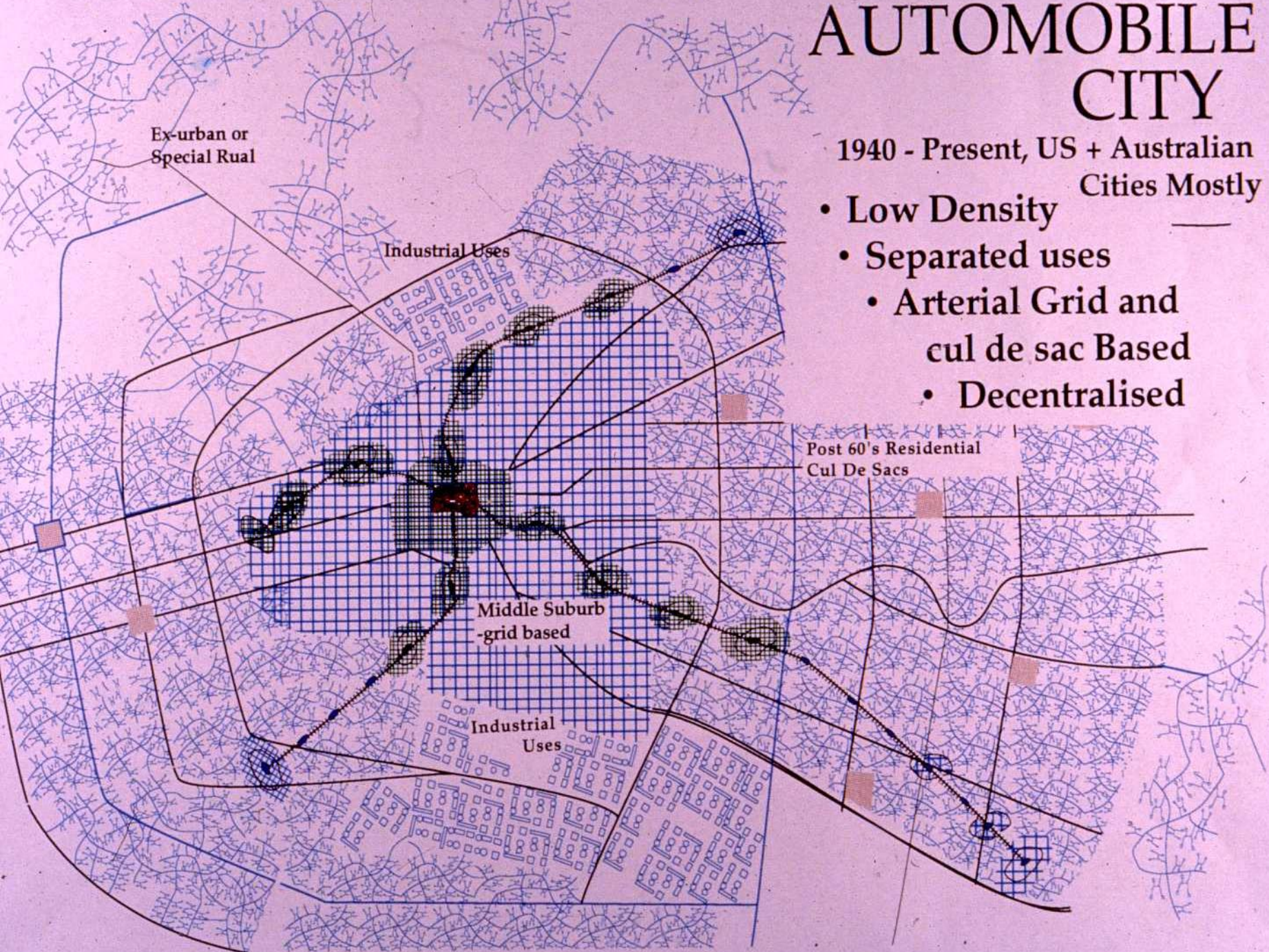
THE AMERICAN TRUCKING INDUSTRY

For additional copies, write to:  
The ATA Foundation, 1424 16th Street N.W. Washington 6, D. C.

# AUTOMOBILE CITY

1940 - Present, US + Australian  
Cities Mostly

- Low Density
- Separated uses
- Arterial Grid and cul de sac Based
- Decentralised



# Bossley Park





National City Lines removed transit in 44 cities....



Town planning then adopted the car-based city as its model....neglecting the other types and treating them as though they did not exist....

# The Theory of Urban Fabrics

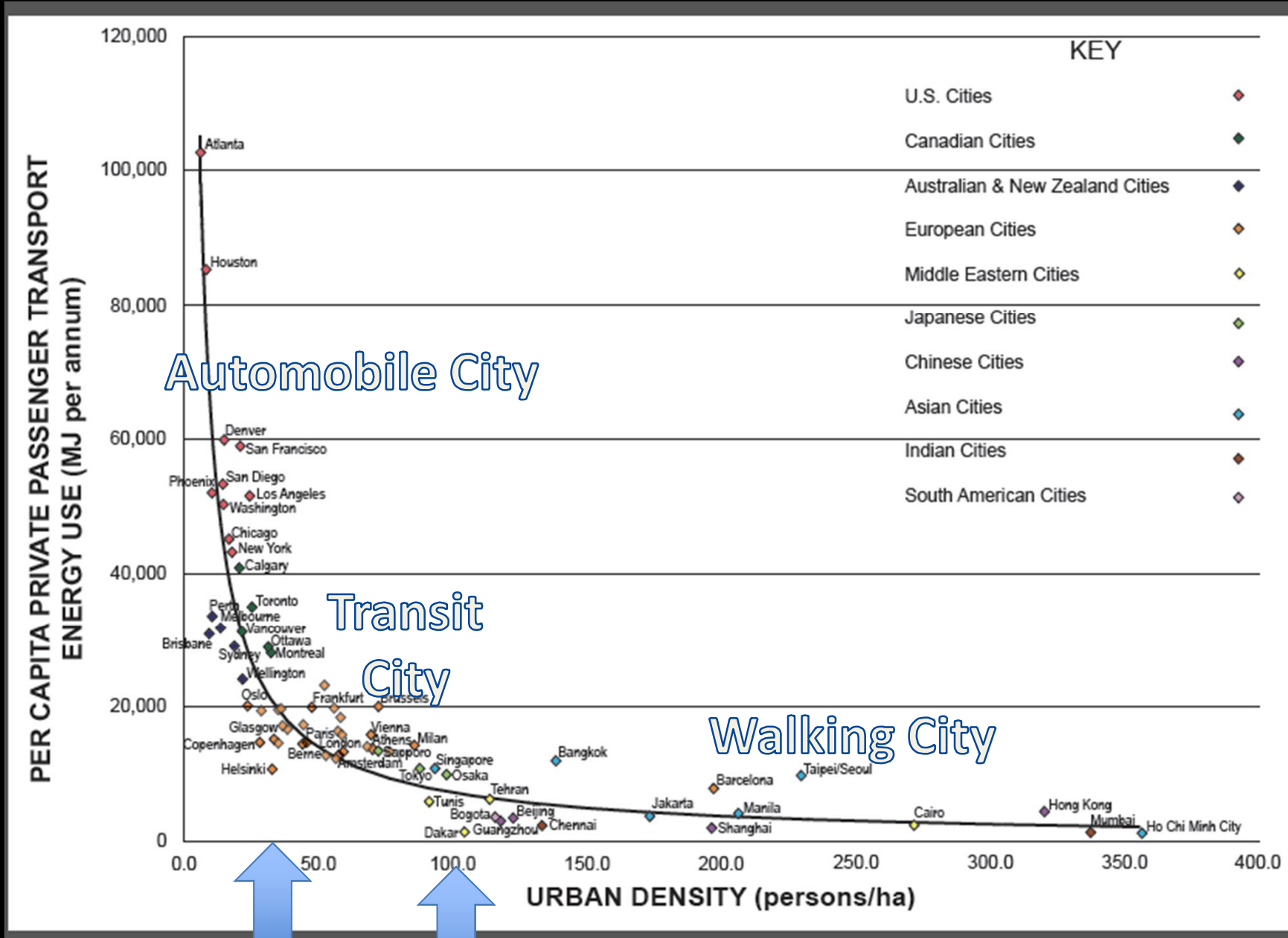
- All cities have a combination of Walking City, Transit City and Automobile City fabrics.
- The elements of the fabric consist of differences in density, mix, road widths, set backs and infrastructure that supports the modes (parking levels, stations, pedestrian and cycling spaces....)
- Understanding the city helps us manage it...

# The Theory of Urban Fabrics

- *Recognise* the three city types,
- *Respect* the functionality of the three types, and
- *Repair/Regenerate* each type in its own way...with priorities defined by the outcomes each can give.
- There is not one city but three.

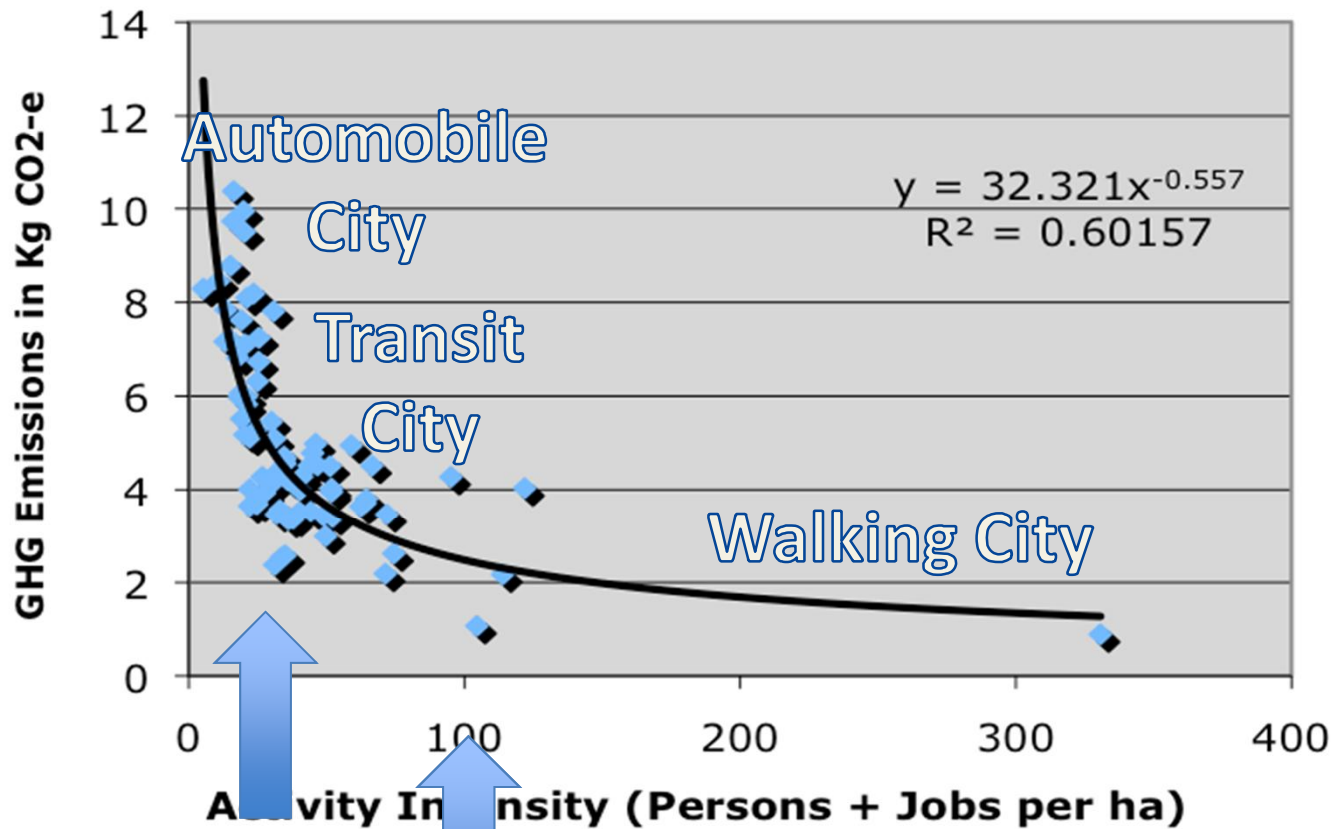


# Two inflexion points...help define the three city types



# Same can be seen within cities....not much walking city left

**Activity Intensity and Daily Per Capita GHG Emissions in Sydney and Melbourne**



# Urban Fabrics and Wave/Innovation Theory....

# Economic waves

The next era of innovation...the Green Economy

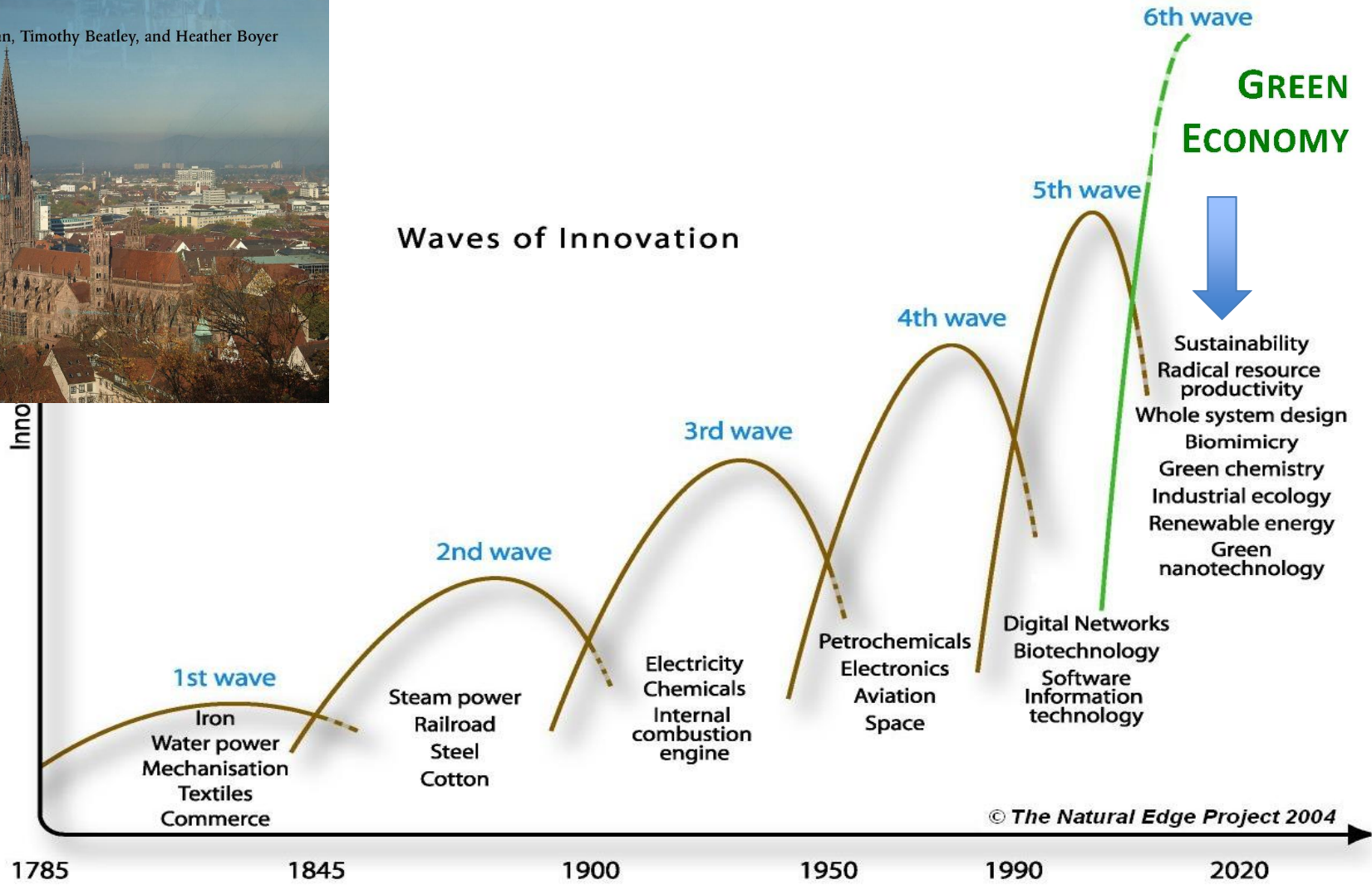
## RESILIENT CITIES

Responding to Peak Oil  
and Climate Change

Peter Newman, Timothy Beatley, and Heather Boyer

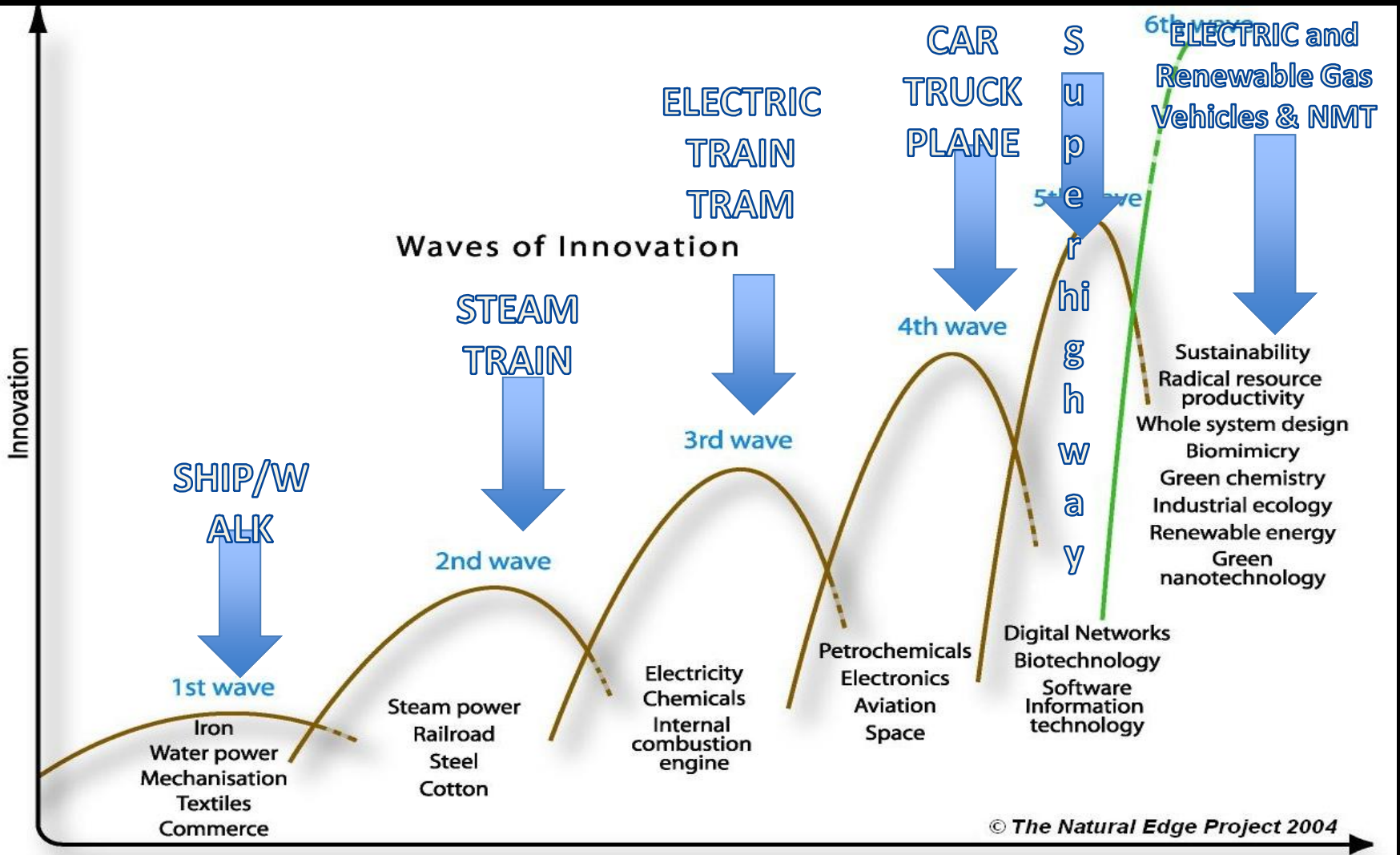


Waves of Innovation



# History of innovation and transport....

Each era changes the city form. Cities keep the best of that era and move on.  
Next era of city building is electric and renewable gas....

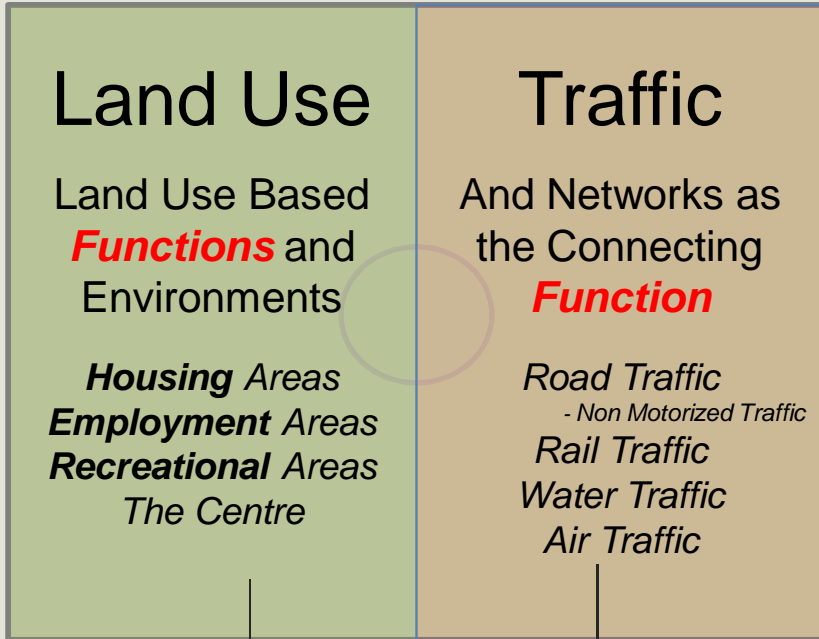


Enter the Finn.....



Paradigm 1933  
Functional City

New Models since 1990  
Walking- Transit- and Car City  
A City of **Three Main Systems**



Theories of Land Use and Urban Environment

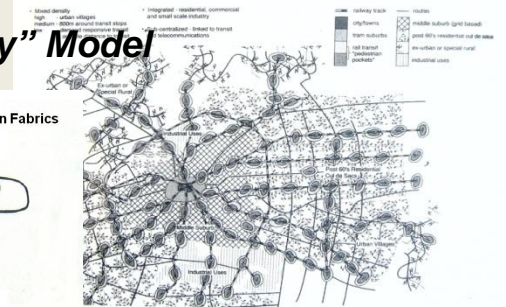
Theories of Traffic and Networks

~~Traffic Models and Land Use Models~~

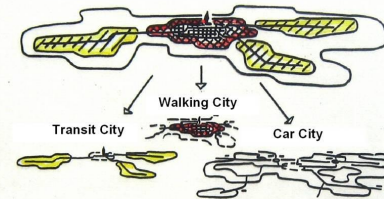
Theories of Co-operation and administration

Chapter 4. A Vision of Reduced Automobile Dependence 185

**"Future City" Model**

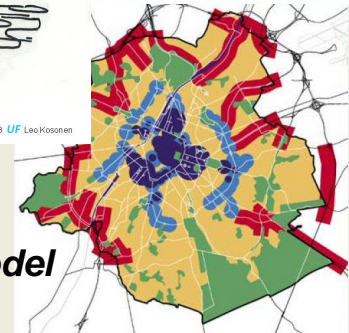


**"Kuopio Model"** Three Urban Fabrics



source: Kosonen 2005 17.4.2013 UF Leo Kosonen

**ABC Model**



**Models of Three City Systems**

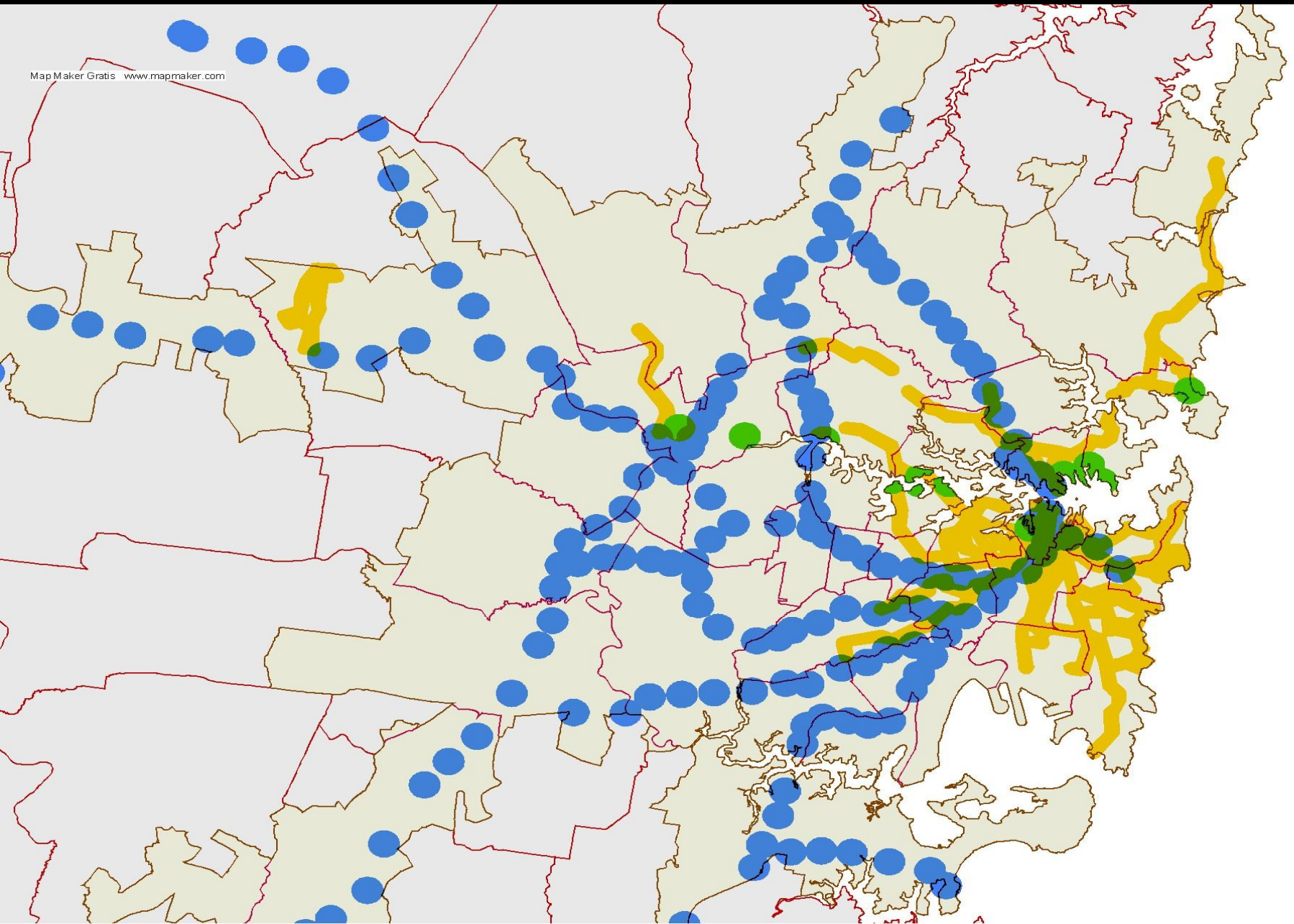
So, what does it mean in practice?



# Recognise.....

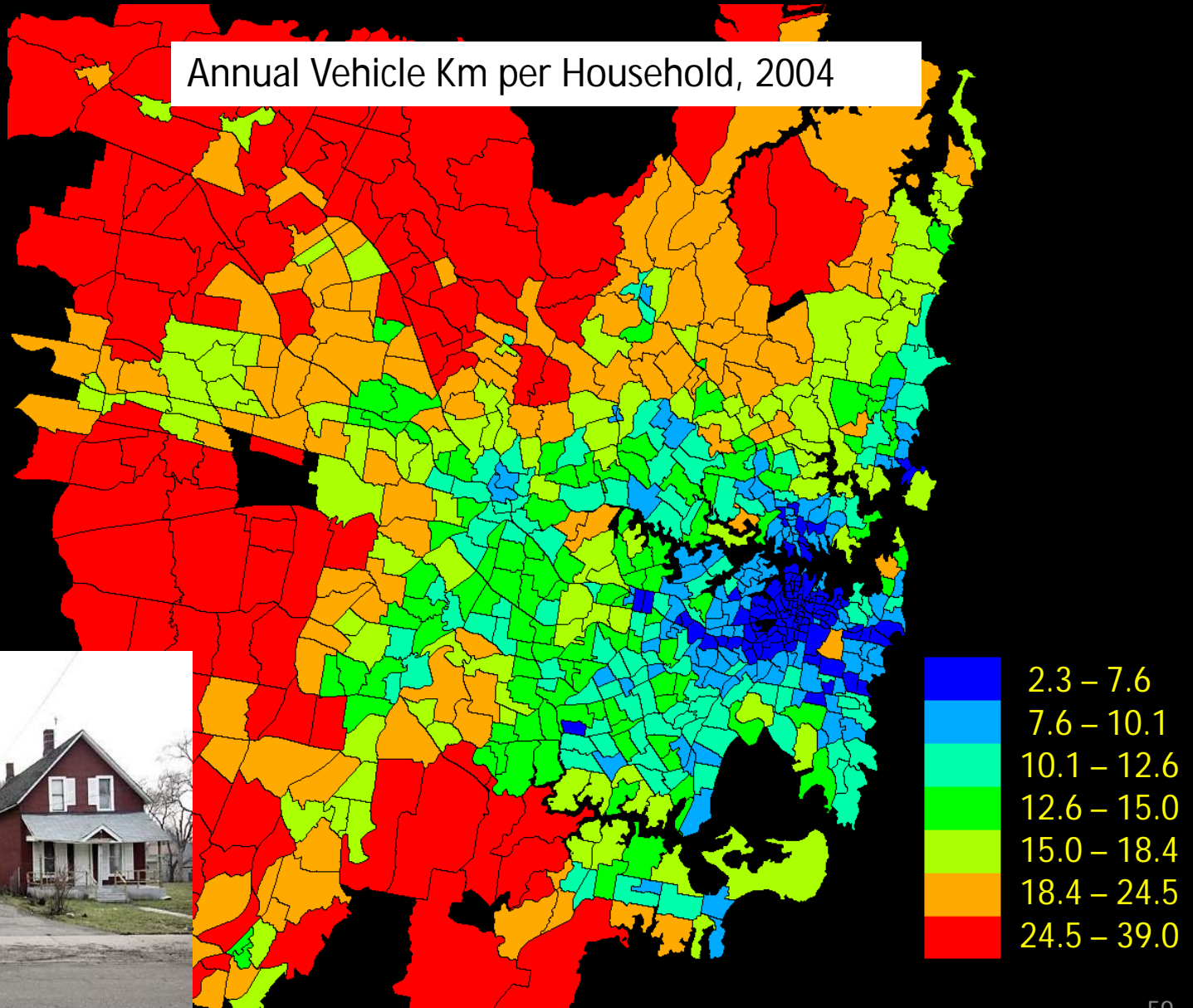
- *Recognise* the urban fabrics by careful mapping and especially where the overlaps and transitions occur.

# Access to Public Transport



## Code Red for outer areas...Sydney

Annual Vehicle Km per Household, 2004



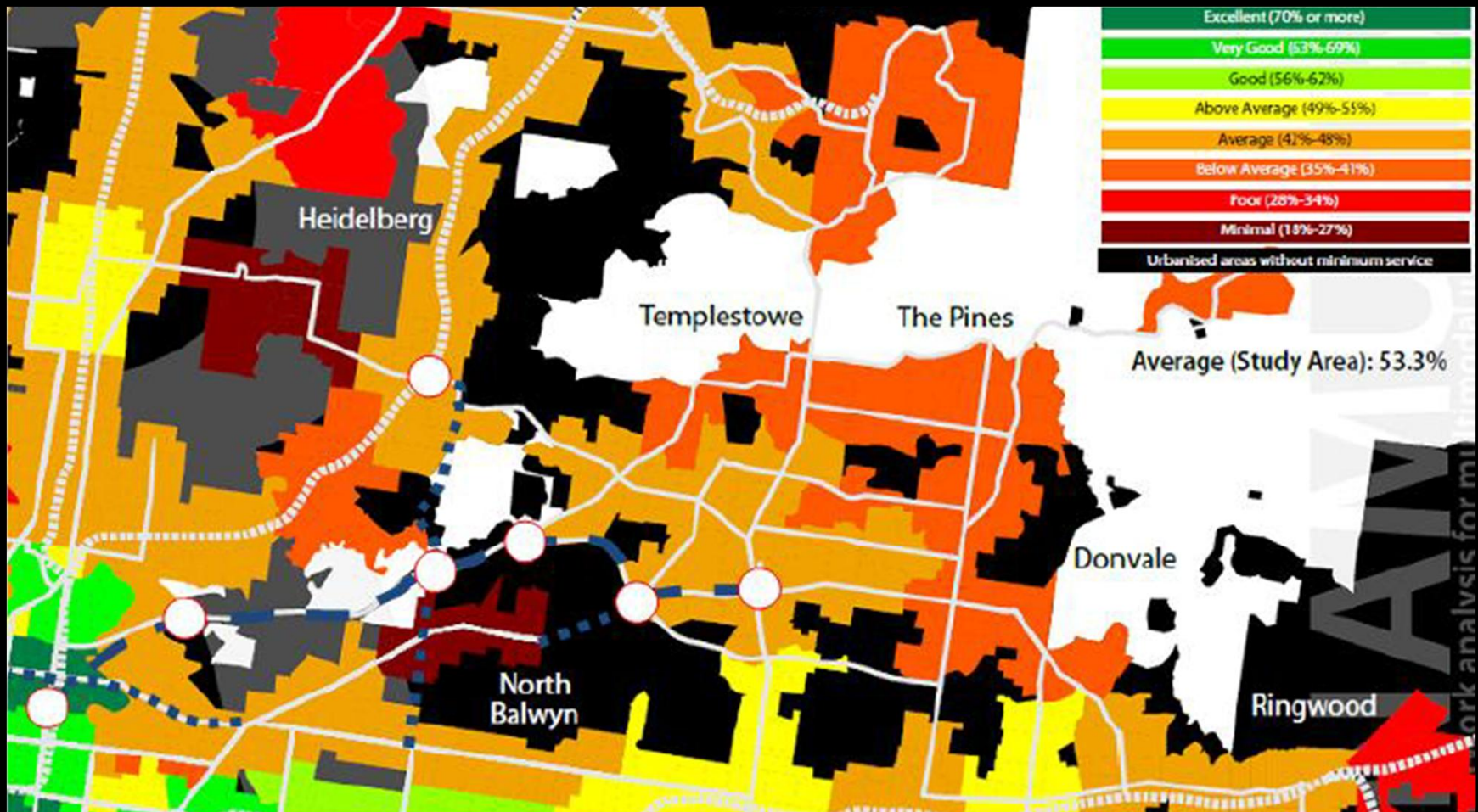
Outer suburbs residents, particularly those away from rail lines, drive much more than inner suburbs residents.



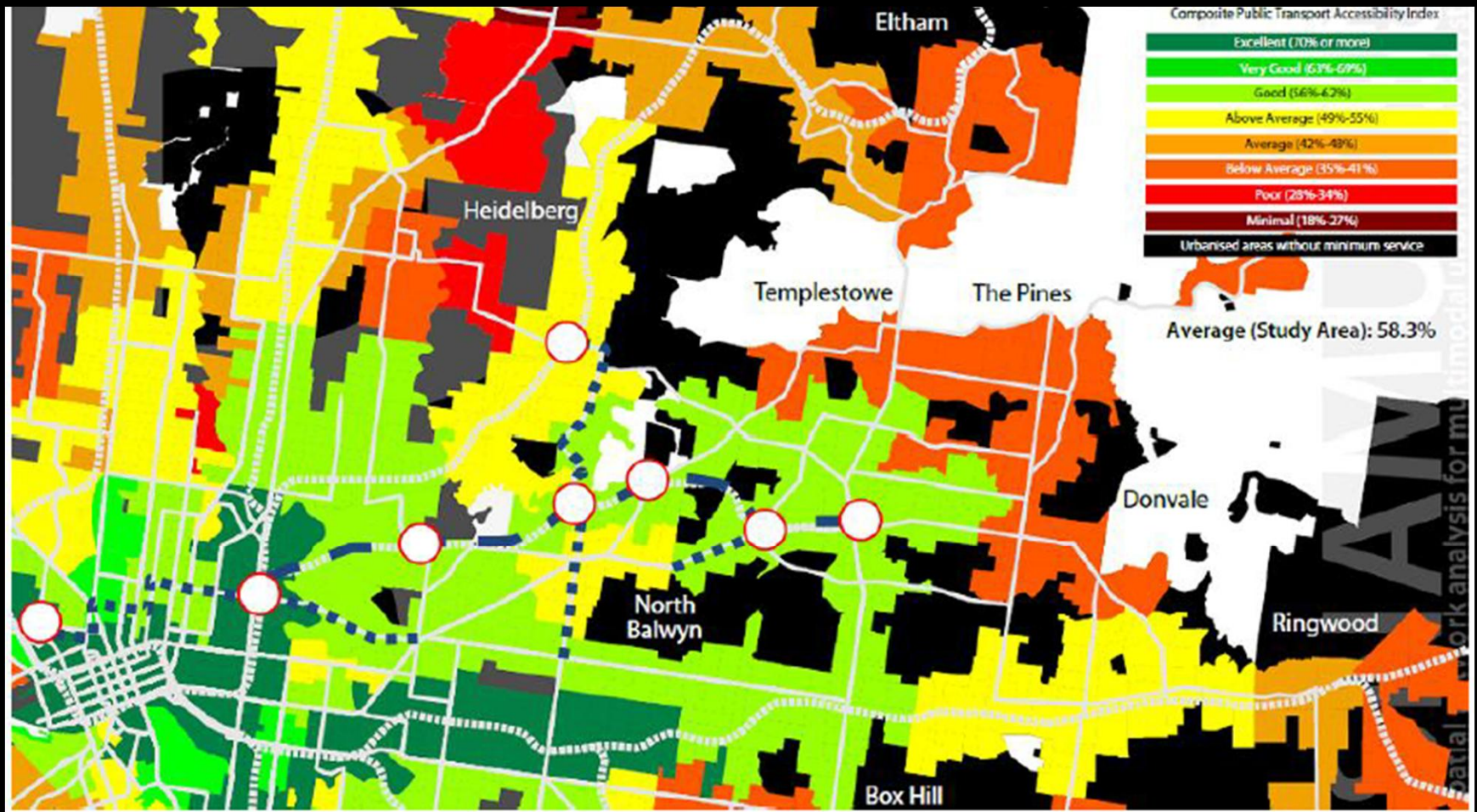
# Accessibility Mapping, SNAMUTS – Doncaster rail, Melbourne



# SNAMUTS model showing public transport accessibility - BEFORE



# SNAMUTS model showing public transport accessibility - AFTER



# Respect....

- *Respect* the urban fabrics as the basis of understanding how the city works and thus how it needs to be planned.

# Walking city fabric needs...

- Dense, mixed land use zonings
- Zero setbacks and narrow streets
- Pedestrian priority and infrastructure (plus cycling), eg zero or minimal parking.



# Transit city fabric needs...

- Medium densities and some mix in a string or corridor of centres.
- Minimal setbacks and walking city fabric in centres.
- Transit priority and infrastructure. Eg minimal parking.

# Automobile infrastructure needs...

- Low density and low mix.
- Large setbacks and space for car/truck storage and management.
- Car and truck priority (only here), eg truck routes and freeways.

*ONE LANE -  
people per hr:  
Freeway 2,500  
Busway 5000  
LRT 10-20,000  
Train 50,000*



240 Persons travel  
to work:

-- in 177 Cars

-- in 3 Busses

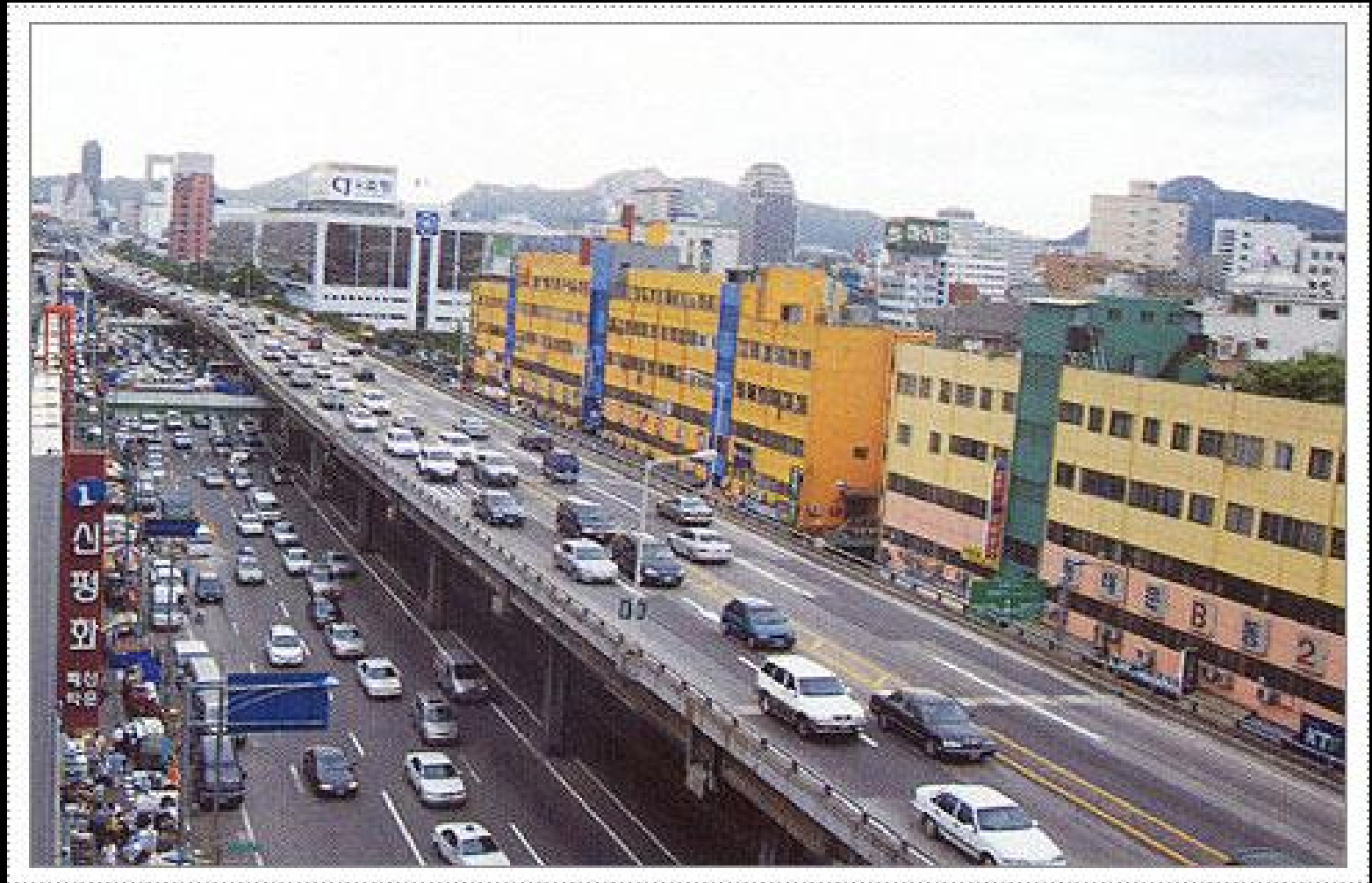
-- in 1 Tram



# Repair and Regenerate....

- *Regenerate* the urban fabrics to work more effectively in their walking, transit and car-based functions within a sustainability framework.

# Restoring a walking city, eg River in Seoul, buried under freeway



# Cheonggyecheon Area after Restoration

<http://www.metro.seoul.kr/kor2000/chungaehome/en/seoul/2sub.htm/>





# Shanghai 1990 and 2010





# 1990's - Flirting with the American model...



It didn't work...

So what can be done?



Shanghai Metro... 12 lines, 273 stations,  
420km covering 80% of metro area...

Built mostly since 2000; carries 8 million per day



# Jan Gehl the walkability magician...

**GOP GIVES DEMS FLOOR ON CHENEY OUSTER** p/04

Sports

The world's largest global newspaper

**GMs claim no A-Rod interest**  
p/19

**metr**

Entertainment

**Winter arts guide**  
p/12

NEW YORK • WEDNESDAY, NOVEMBER 7, 2007

In the news



**Political donor probed in false identifications**

**AMINO ACIDS** There was a time when it paid to be friends with Maurizio Celis, who rustled up clients for Texas' swaggering trial lawyers and contributed generously to Democratic candidates, including Hillary Clinton. But now, Celis' friends are running for cover.

The luxury-loving Corpus Christi businessman is under investigation on suspicion of impersonating a lawyer and a sheriff's deputy.

The Republican state attorney general is suing Celis, claiming he has practiced law without a license.

## Walk this way



"Every city I start working in says, 'This won't work here. People are more attached to their automobiles. And there's always a reason — it's too cold, it's too hot, it's too steep,'" Gehl said. But 10 years down the road, cities can't even remember how things were before. "If you want to change it back, people say no. They'll have a revolution."

**Planner points city, groups toward an unclogged New York**



**ARMY ZIMMER**  
army.zimmer@metr.com

**UPPER WEST SIDE** Jan Gehl isn't a household name, but the 73-year-old Danish urban planner is the go-to person for cities looking to calm traffic and create more livable streets.

He's been working with the Dept. of Transportation to design streets that are safer, easier and more enjoyable for pedestrians and cyclists. But yesterday Gehl gave a media tour here for another project: he's working on with the Upper West Side Streets Renaissance Campaign to make the neighborhood the most walkable and bike-friendly in the nation.

"Everyone wants to have a more lively, attractive, healthy and sustainable city," Gehl said. New York has "traffic ideas that



**It should cost a fortune because (avenue) are the best public space you have and you rent it out."**

Barbara Adler, president of the Columbus Avenue Business Improvement District, would like sidewalks with more greenery, bike racks, benches and even water fountains.

Will it happen?

"A lot of it depends on whether the DOT wants to have Columbus Avenue as a model," Adler said. Gehl would not comment on his work with the BICD, but his teams have been counting pedestrians.

"We look at places where people think they must stop here, to look in a window, talk to a friend or sit on a bench," he said. "When they stop walking, [it] is a signal of good public space. In New York, it's about getting from A to B and not enjoying the space so much."



**He snapped photos of cars double-parked on 76th Street between Amsterdam and Columbus — averages he envisions as Parisian boulevards with medians, benches and a canopy of trees.**

"We noticed in New York, a number of parking meters, but there are many streets where it's free to park. One should be more careful with parking," Gehl said.

New York page 02

**MTA readies for text alerts**



**Your guide to York, U.K.**

Voices page 10

**Eltahavy: Thank you, Musharraf (yeah, right)**

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# Transformation of Broadway



© NYC Department of Transportation



© NYC Department of Transportation



Melbourne.



Next Network  
Telstra

funny business just got serious  
you vote, they choose  
Telstra

JOHN

Swanston St

NO TRUCKS  
TRUCKS EXCEPT

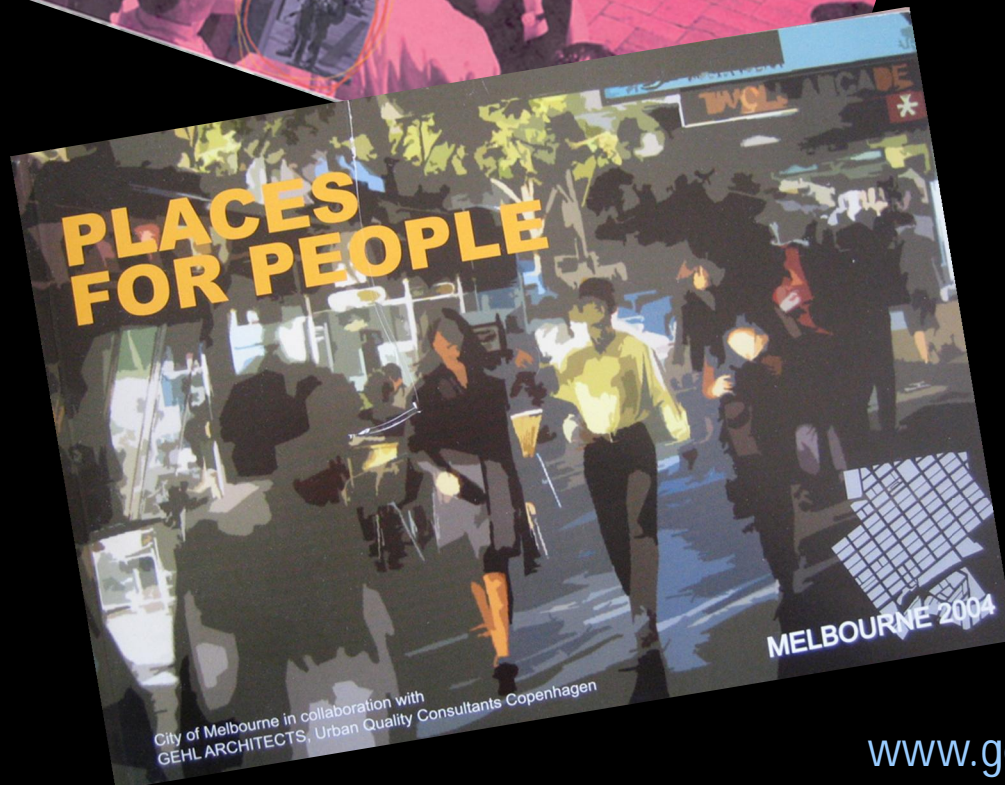
CRAZY JOHN

Target Centre



Places for People  
1994

Report by Jan Gehl



Places for People  
2004

Report Gehl  
Architects

[www.gehlarchitects.dk](http://www.gehlarchitects.dk)





Extention and modernization of the Streetcar System

# More People living downtown



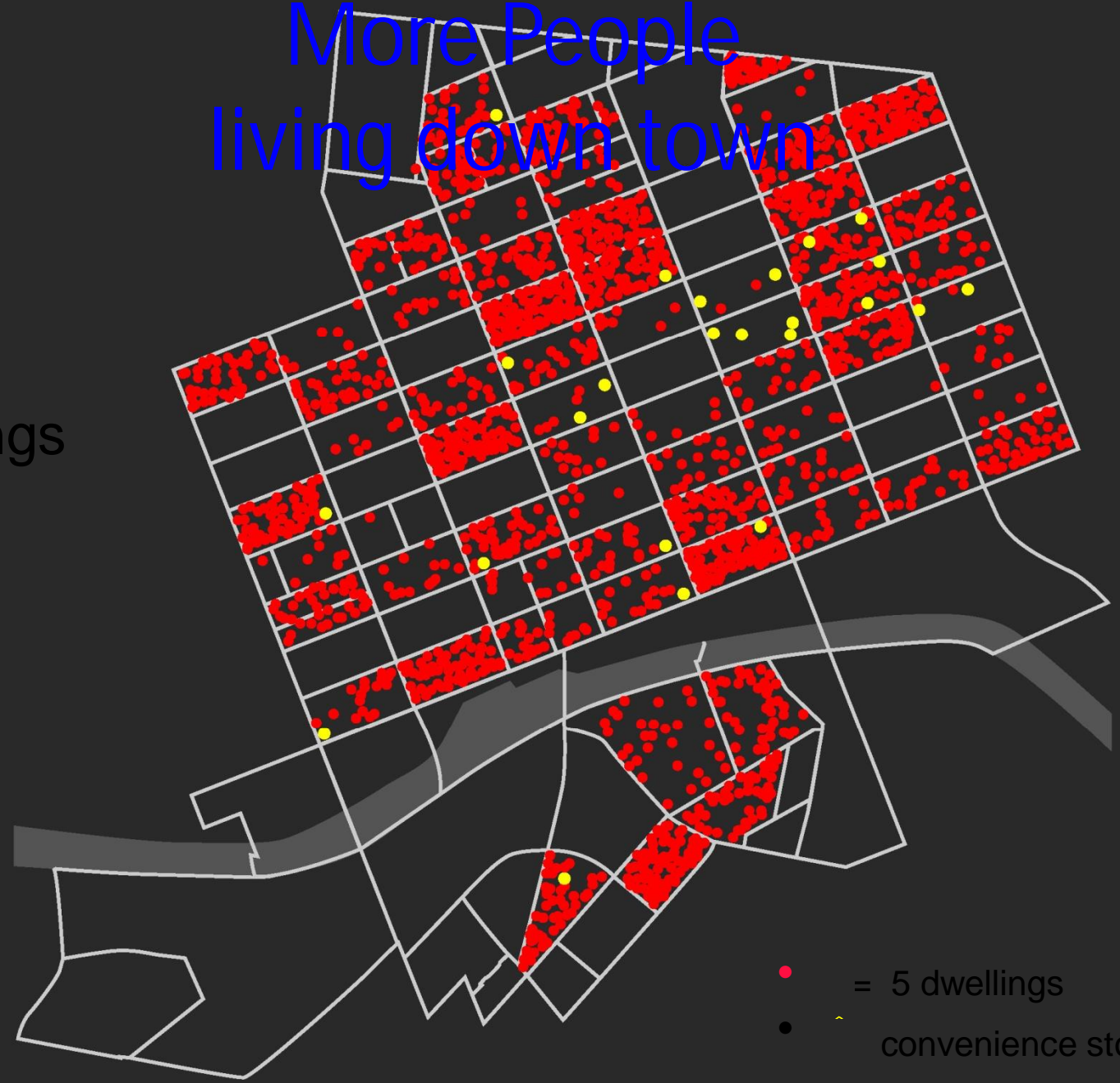
# More People living downtown

wellings



More People  
living downtown

ings



● = 5 dwellings  
● convenience store

# New Street trees





1992



2005



pre 1992



1992



2005



1992



2005



2005

# Outdoor Cafes



curbside cafes in 1980

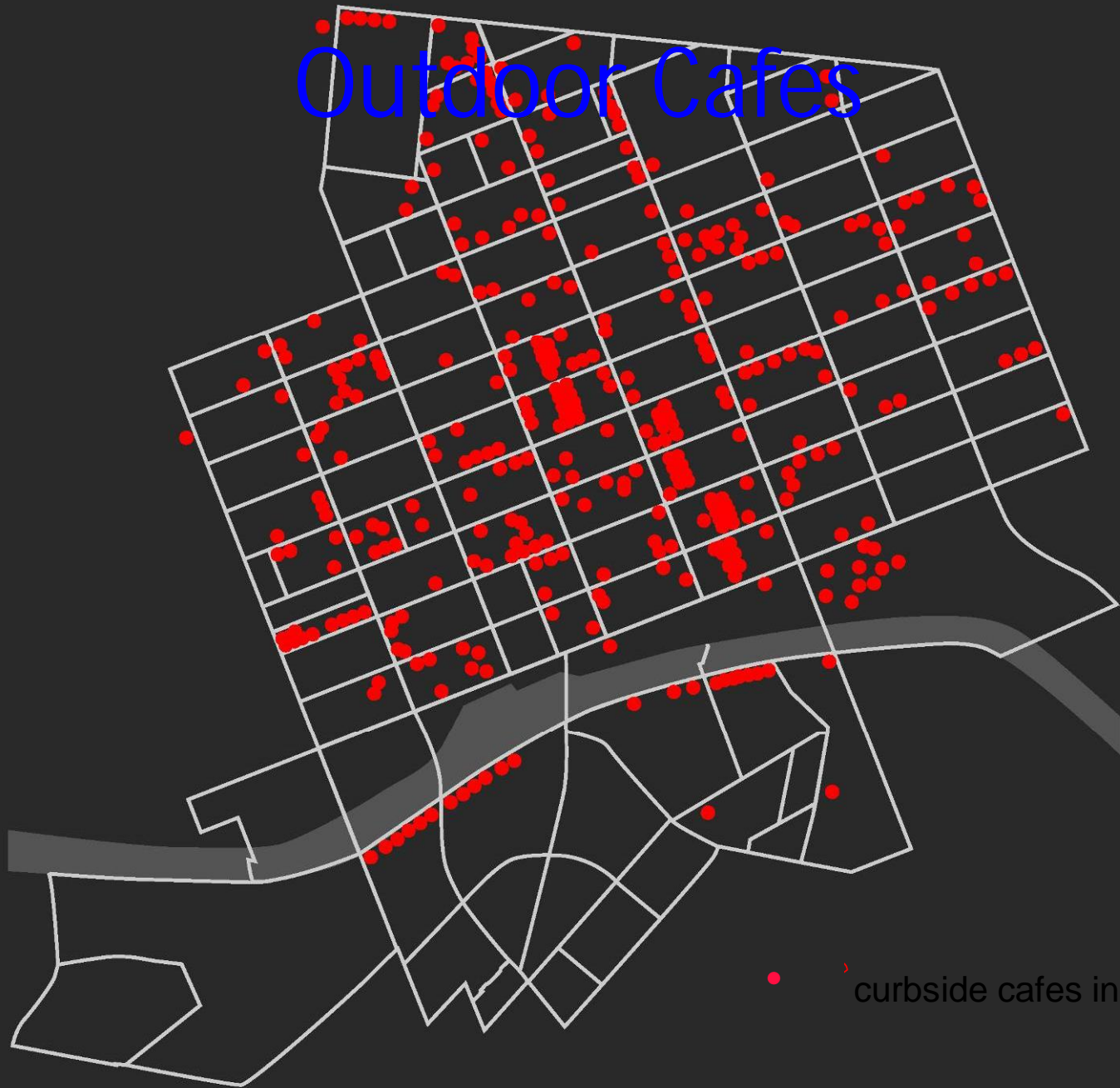
# Outdoor Cafes



• curbside cafes in 1999



# Outdoor Cafes



• curbside cafes in 2000

# New life in the lane ways



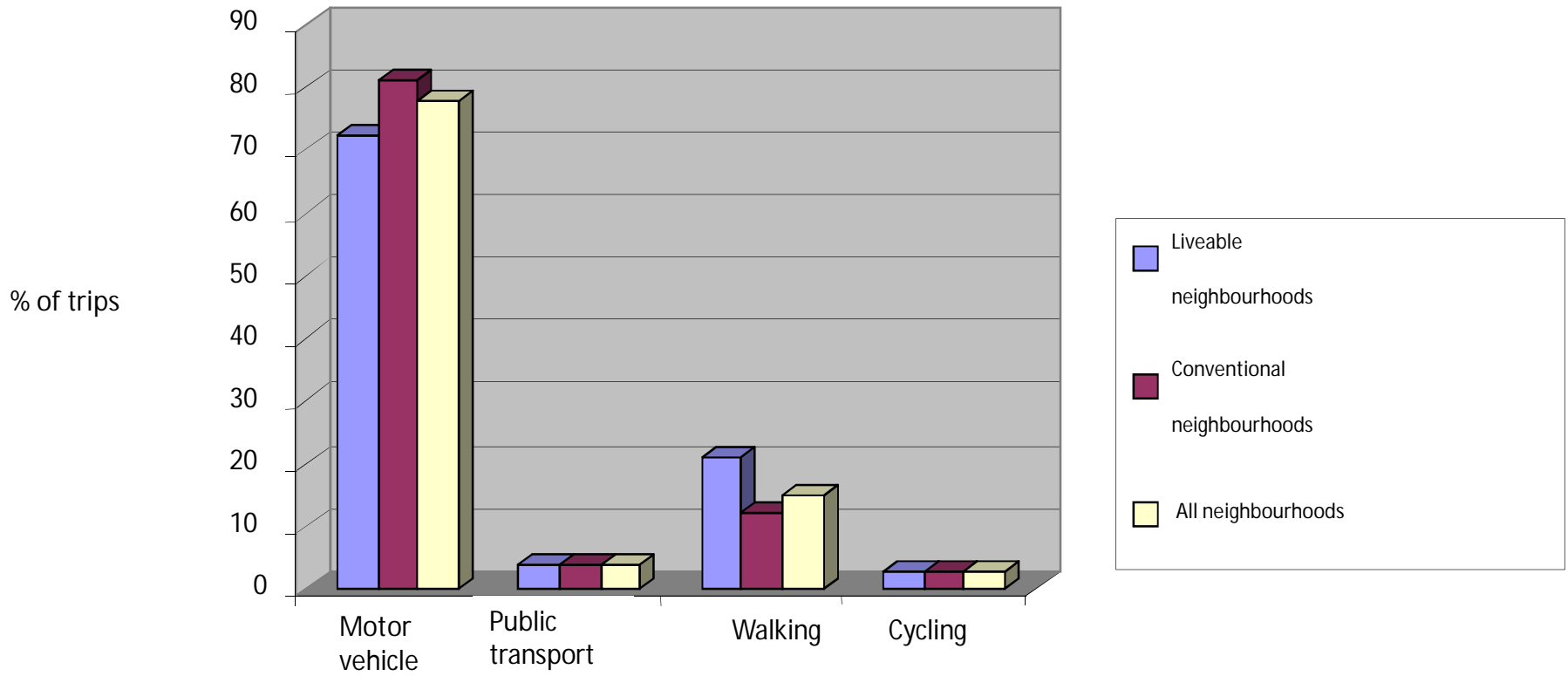
Pedestrian traffic weekdays daytime: +40%  
Pedestrian traffic evening: +100 %  
Stationary activities +200-300%



What about the Automobile City?

# New Urbanism experiments in Perth....





- Frankland Springs LN  
– Brighton LN





Even with permeable streets and footpaths, the car remains king.

Beaumaris

Landsdale Gdns



So can you do anything?





Year	Route Km
1982	42km
1983	63km
1993	92km
2004	96km
2005	100km
2006	172km
<b>Total</b>	<b>172km</b>



# Southern Rail

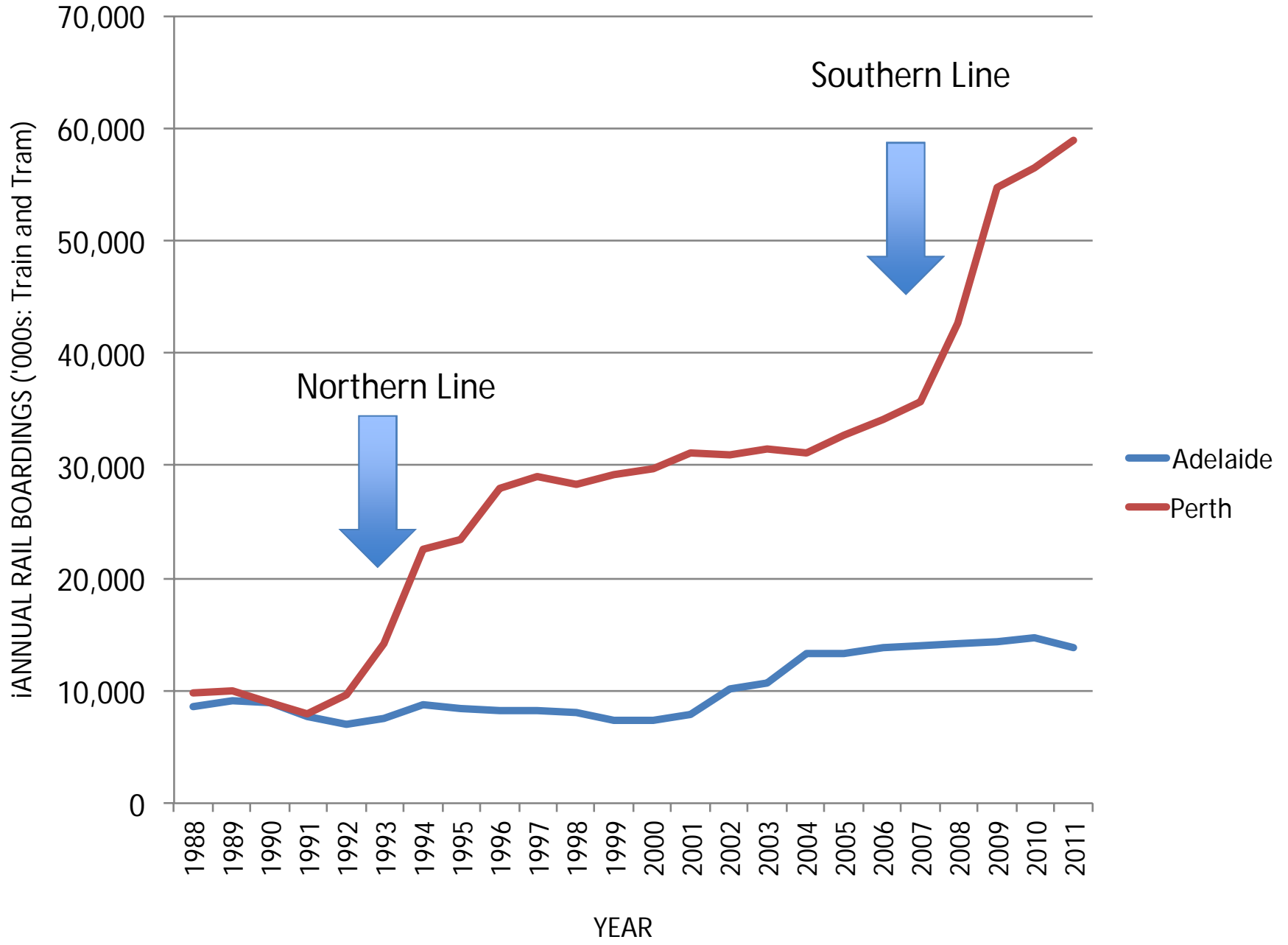
– built deep into automobile city fabric

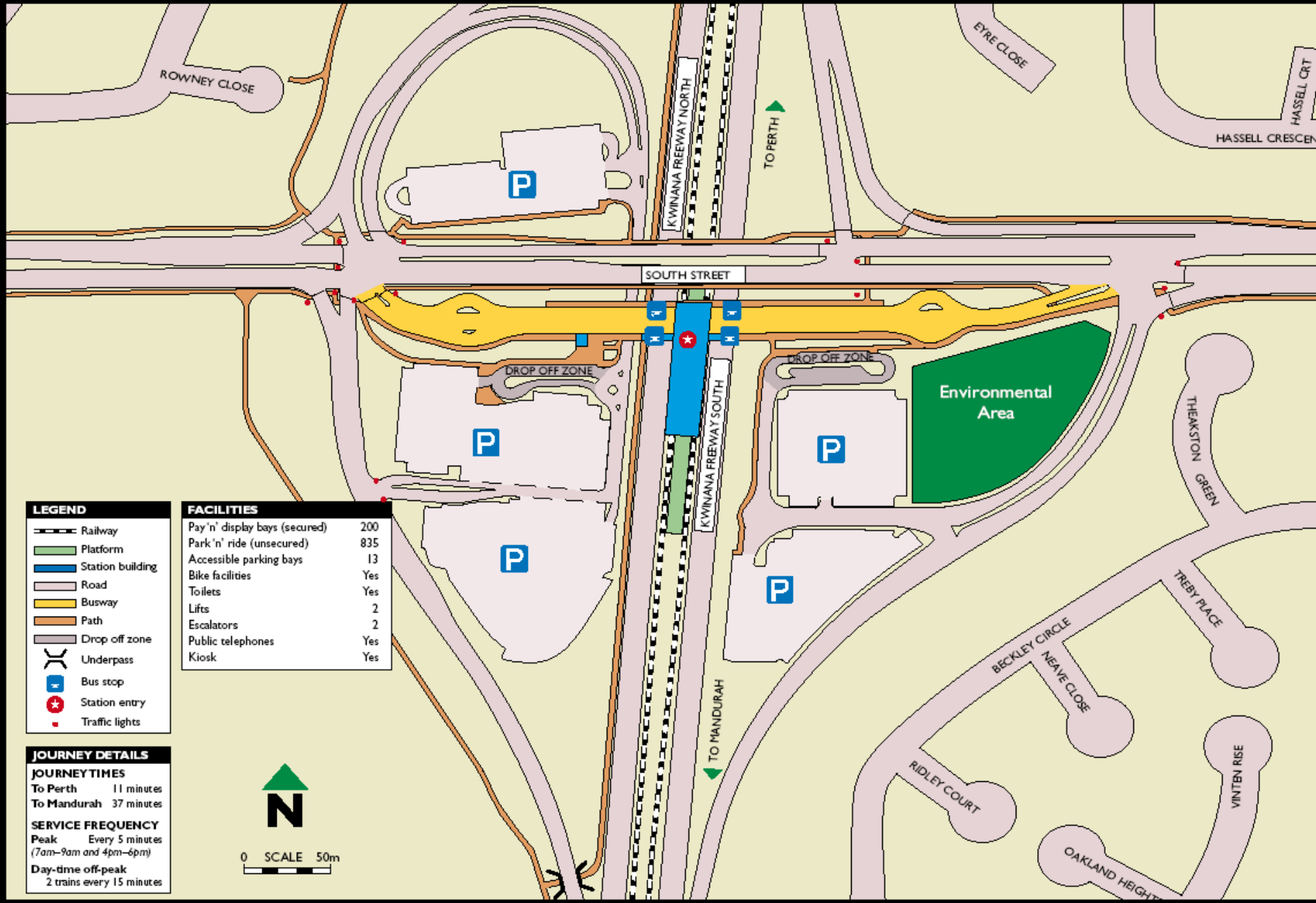
78,000 passengers a day, cf 14,000 on buses, 16% growth pa



National and global model...  
\$17-22 mill per km. Carrying 8 lanes of traffic.







**LEGEND**

- Railway
- Platform
- Station building
- Road
- Busway
- Path
- Drop off zone
- Underpass
- Bus stop
- Station entry
- Traffic lights

**FACILITIES**

Pay 'n' display bays (secured)	200
Park 'n' ride (unsecured)	835
Accessible parking bays	13
Bike facilities	Yes
Toilets	Yes
Lifts	2
Escalators	2
Public telephones	Yes
Kiosk	Yes

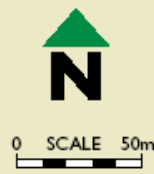
**JOURNEY DETAILS**

**JOURNEY TIMES**

- To Perth 11 minutes
- To Mandurah 37 minutes

**SERVICE FREQUENCY**

- Peak Every 5 minutes (7am-9am and 4pm-6pm)
- Day-time off-peak 2 trains every 15 minutes







Clearance 3.7m

transport





Perth  
Platform 1

Will it help build transit city fabric?

# New Central Station under government building...



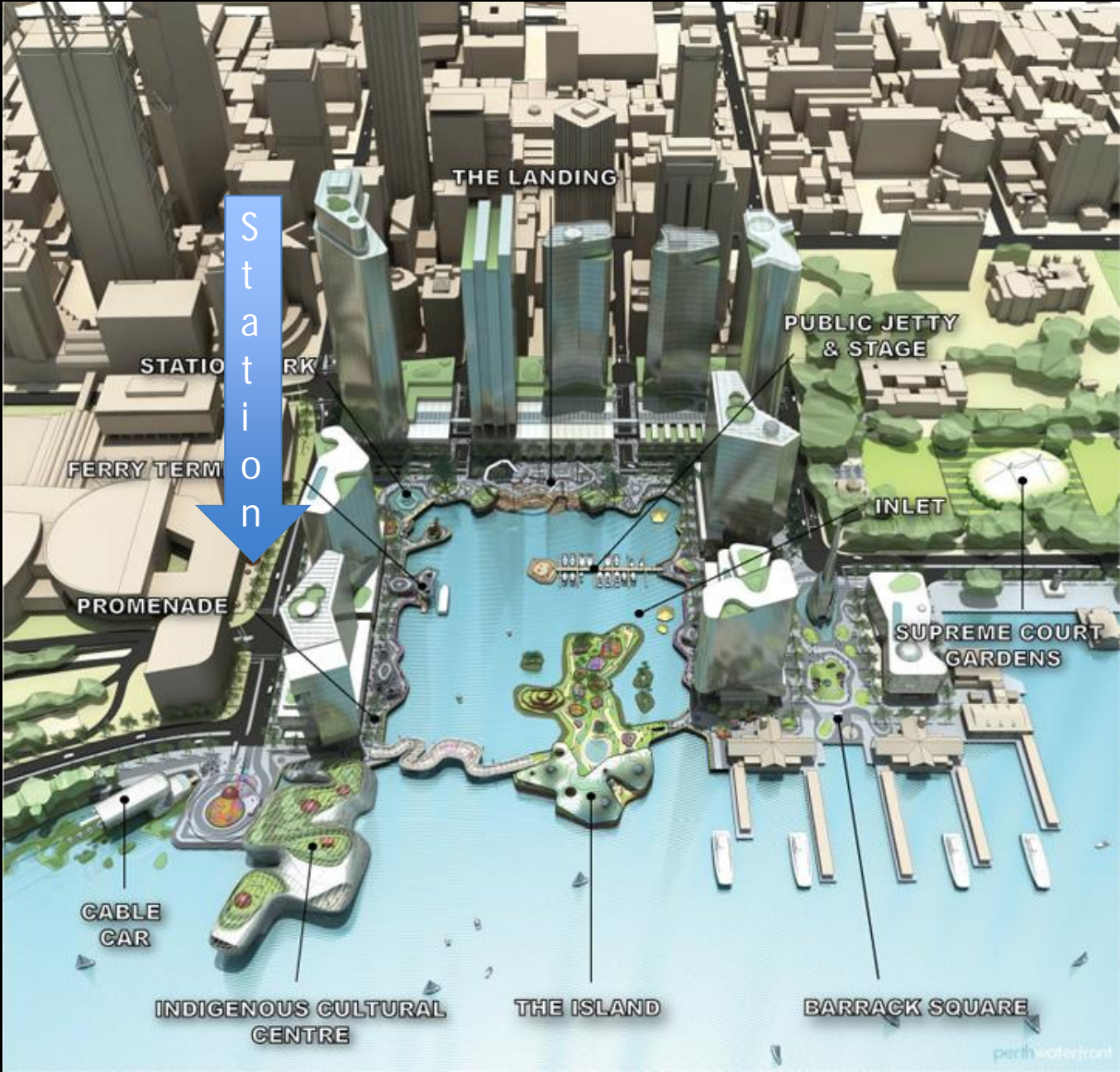
Next development over the sunken rail line



# Esplanade Station



# New Perth waterfront TOD



# New sub centre 33 kms out...





Clarkson



Perth

-  You must have a valid ticket to travel
-  SmartRider patrons must tag on and off
-  For your safety, video cameras are in use
-  Riding of bicycles or skateboards etc. is prohibited on this station
-  Smoking is prohibited at this station

The land value near rail stations on the Southern Rail increased by 42% in 5 years....thus beginning to create transit city fabric....

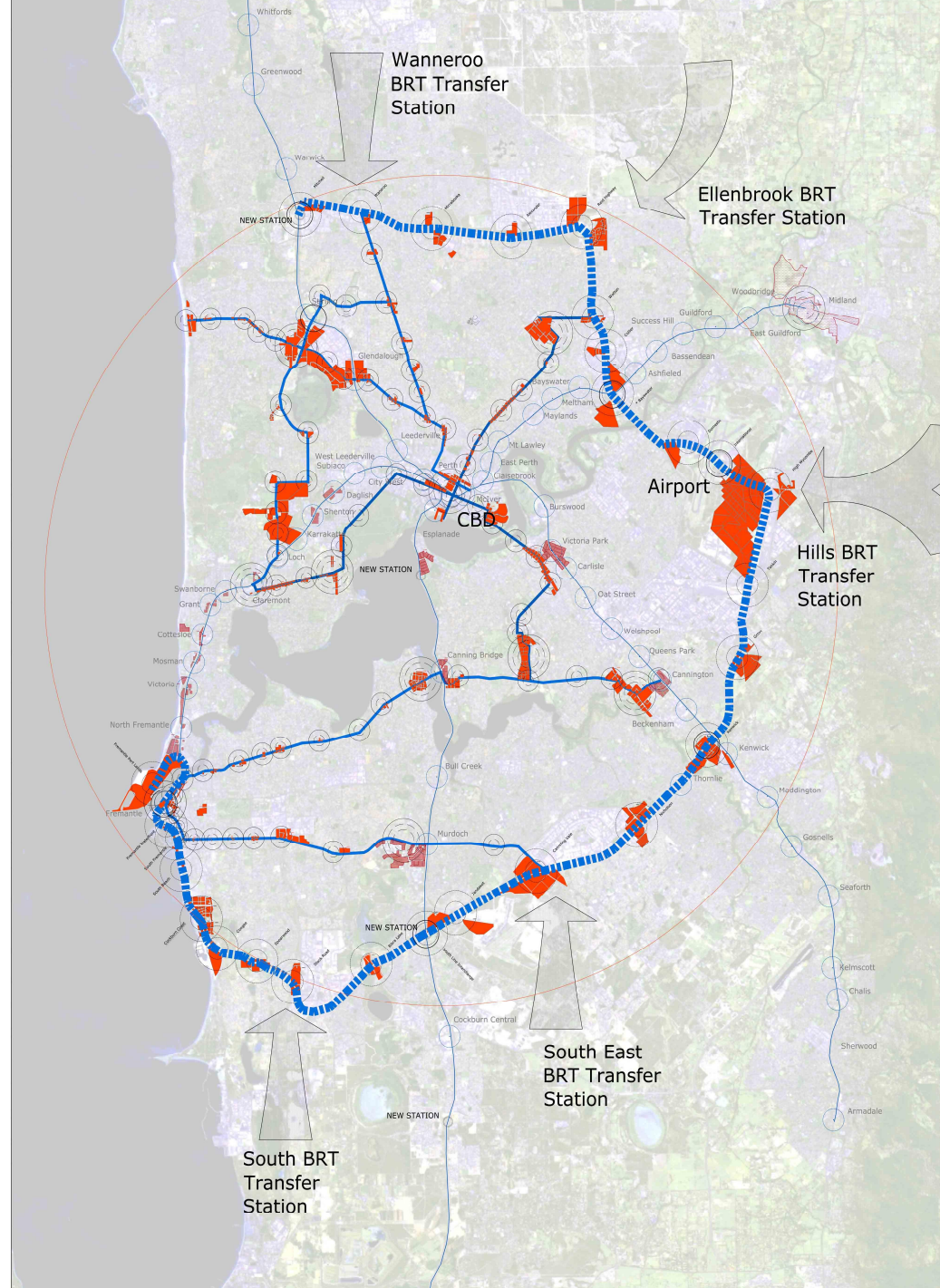


perth  
Central



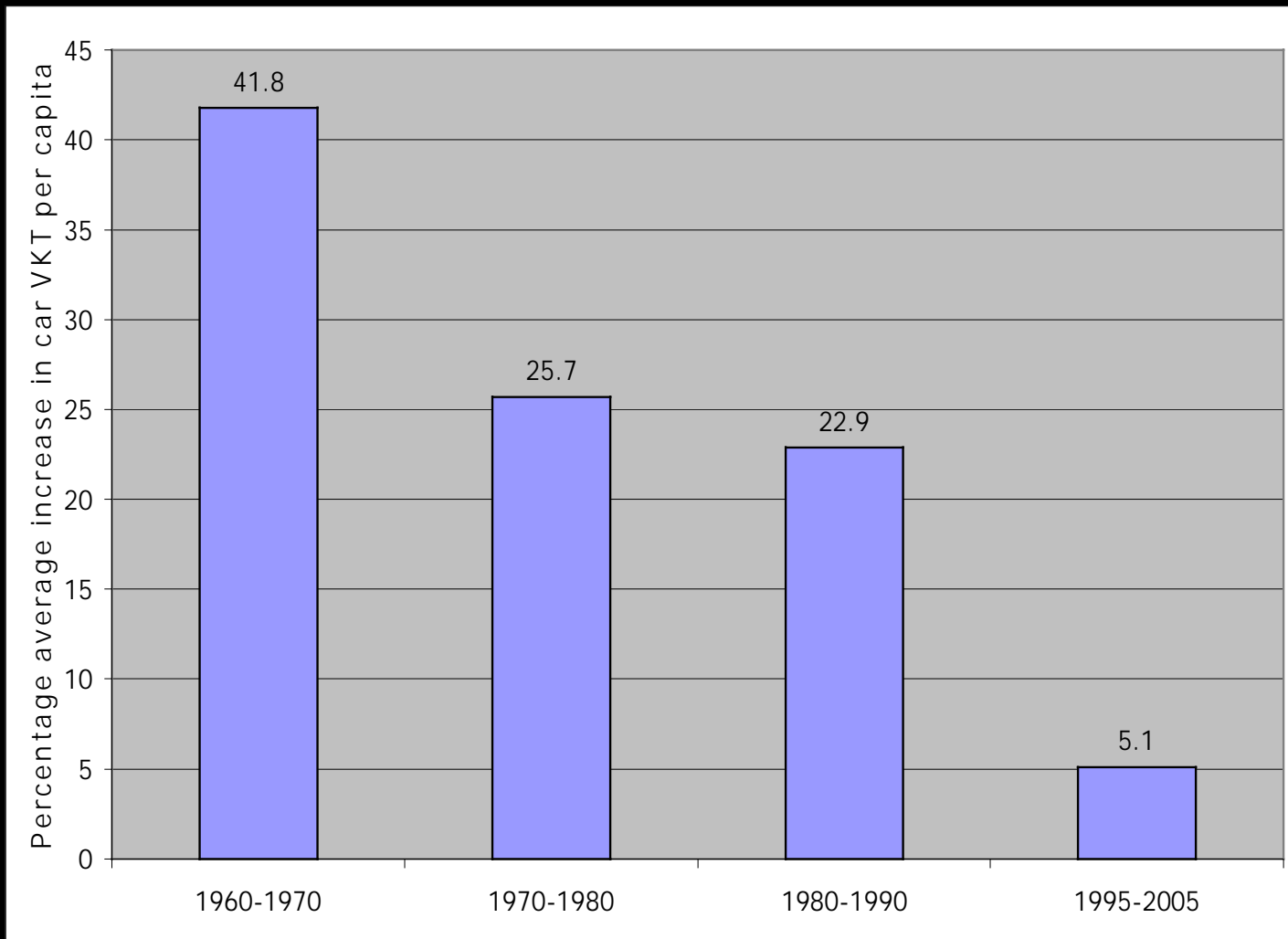


The Ring Rail,  
LRT and BRT  
plus  
development  
sites for the  
next 30 years  
growth in  
Perth – all in  
transit fabric



The growing global demand for walking and transit city fabric....

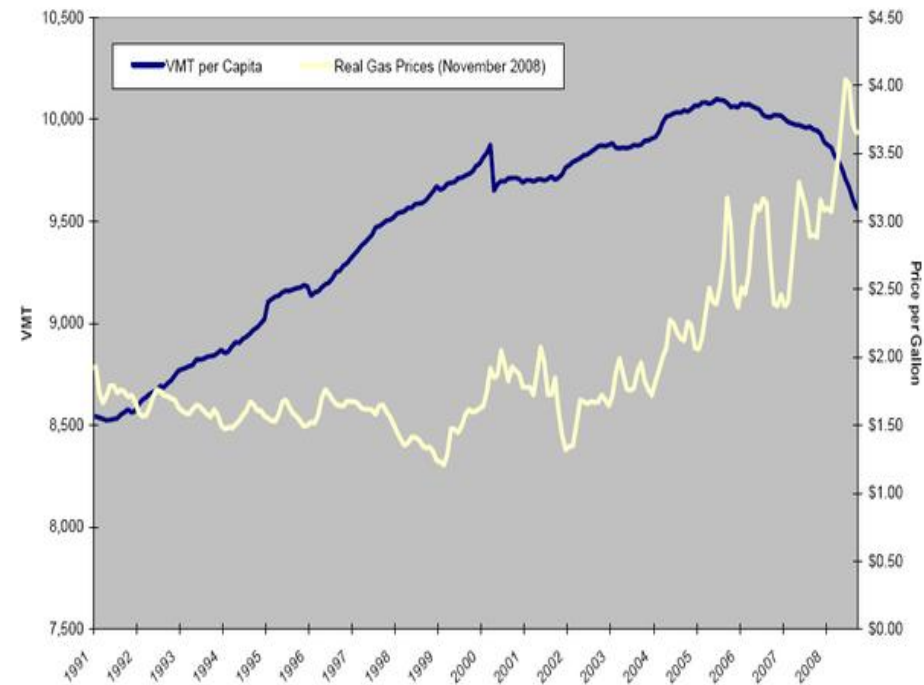
# Car use growth trends in developed cities from 1960 to 2005 using Global Cities Database.



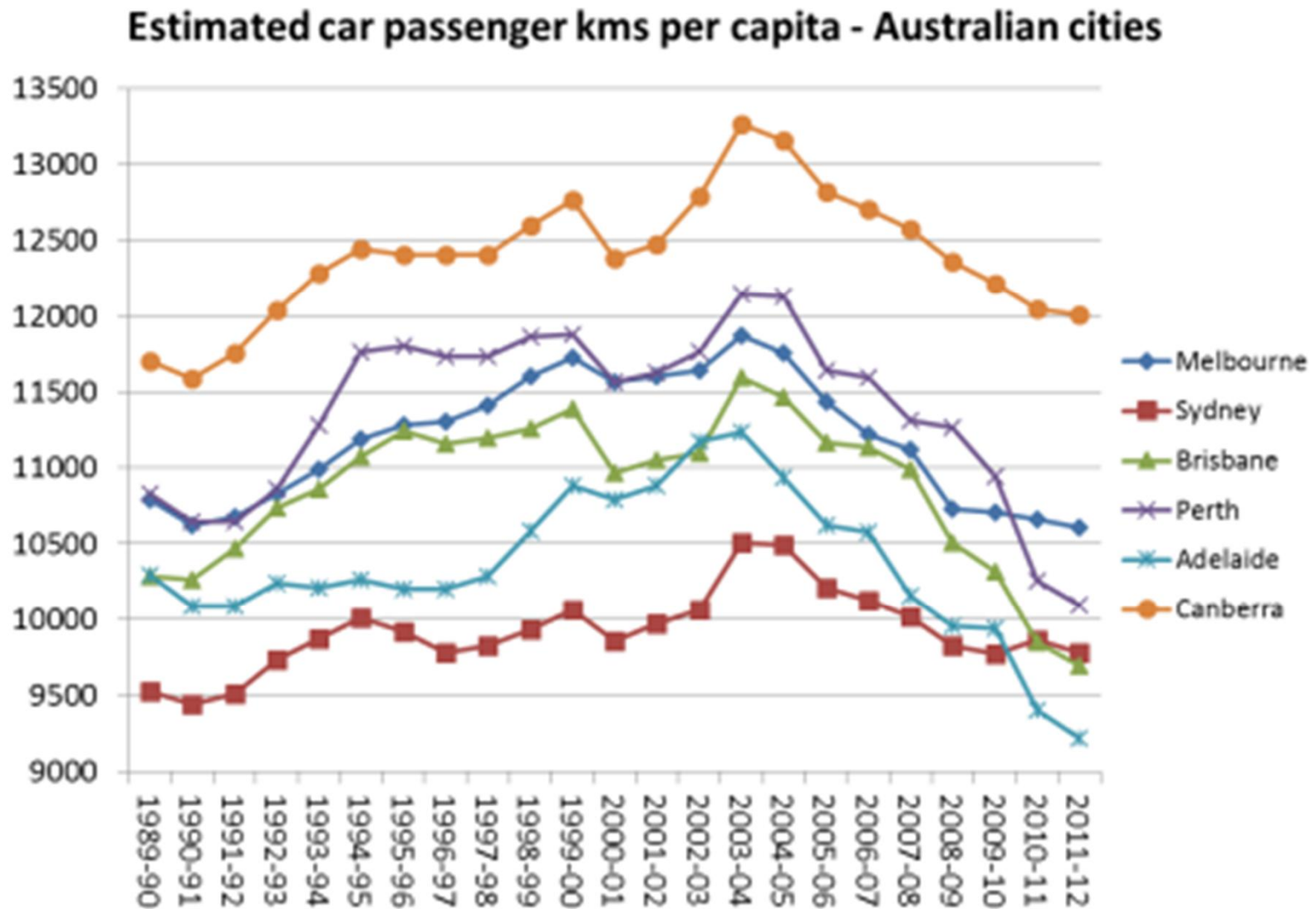
# Peak Car Use - US cities...

- Declining in car use – 4.3% in past year, plateau over the past 5 years.
- Increasing transit use – 6.5% in past year.
- Cities coming back in.

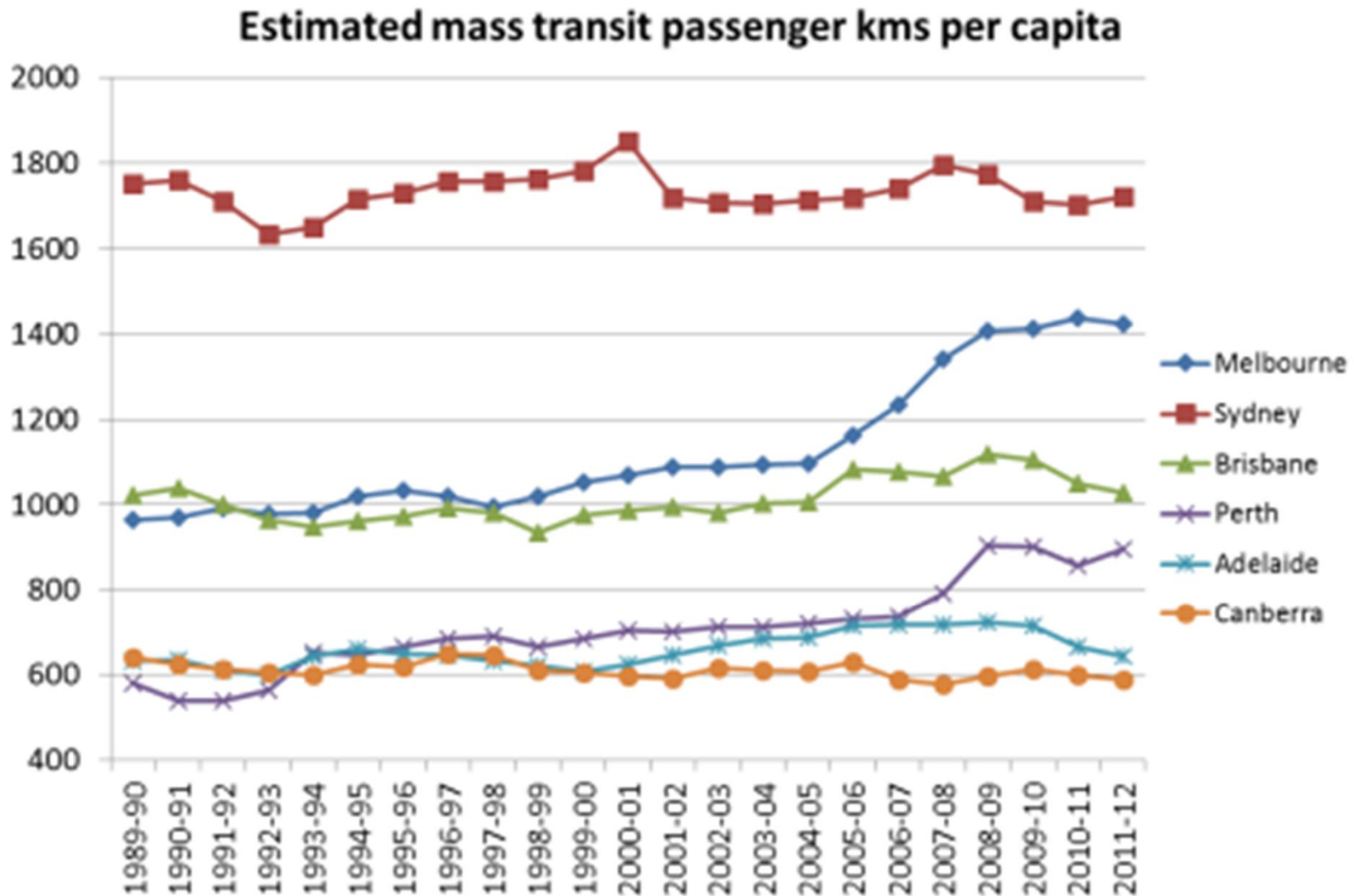
U.S. Vehicle Miles Traveled Per Capita, Annualized and Real Gasoline Pump Prices  
January 1991–September 2008



# Australian city car use peaked the same year...

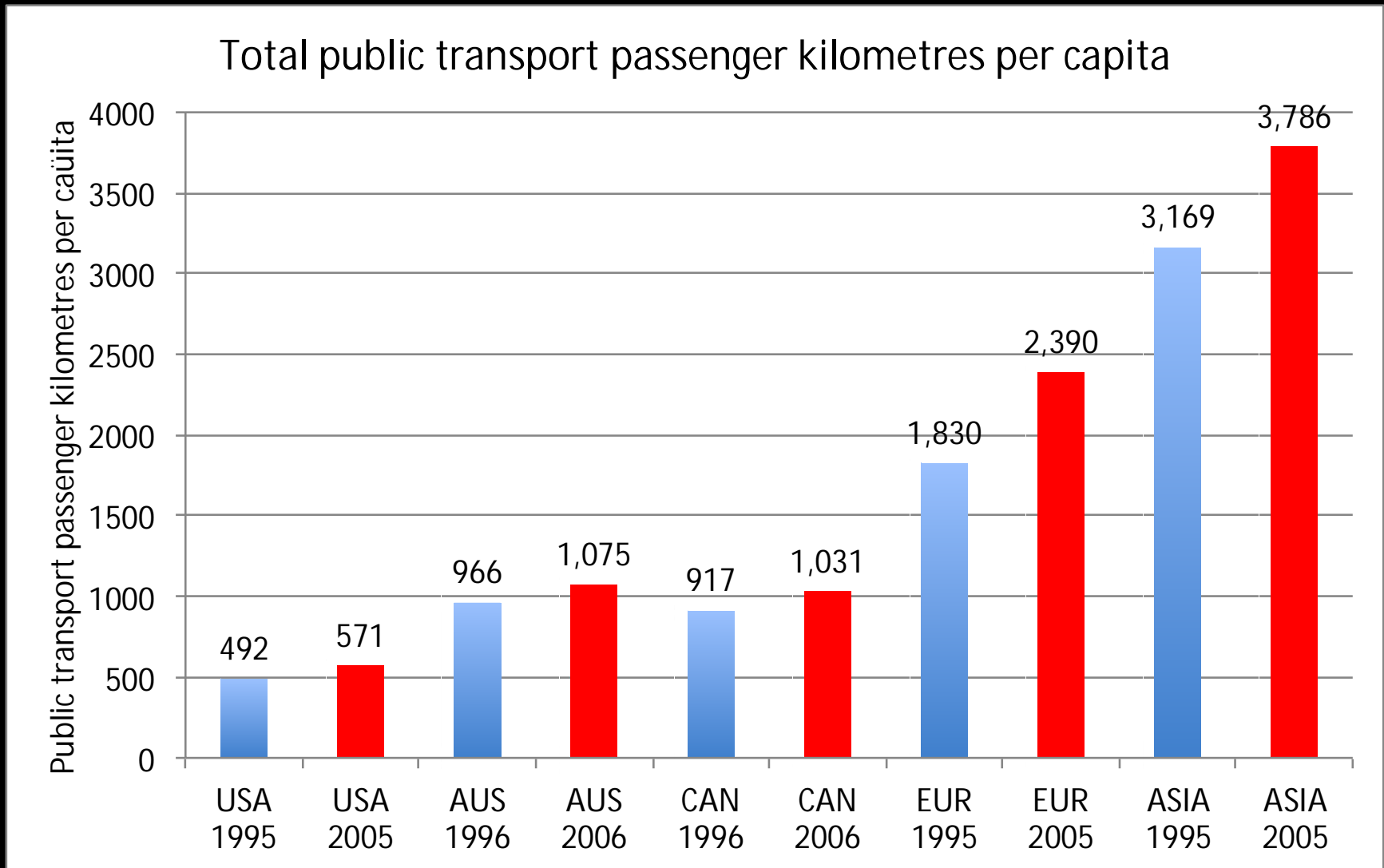


# Australian city transit use grew where rail was built...





# Public transport – especially rail – is now booming everywhere



# Global growth now in rail...

- 82 Chinese cities building metros and high speed rail between cities
- 16 Indian cities building metros
- Middle east cities building rail for first time



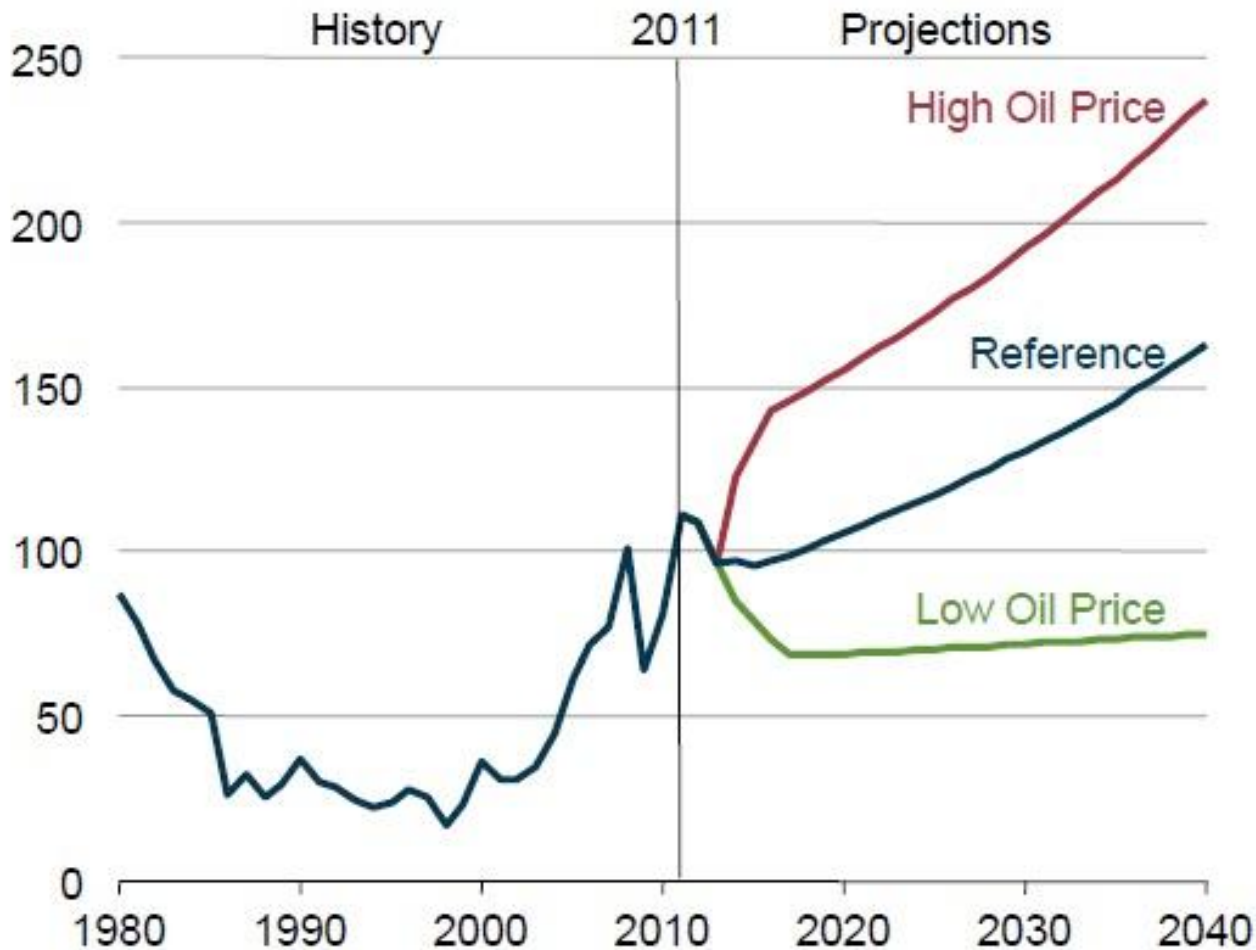
Global demand is now for walking  
city and transit city fabric with less  
automobile city fabric...

Why?

# 1. Price of oil....

0383er(2013).pdf - Adobe Reader

**Figure 5. Average annual Brent spot crude oil prices in three cases, 1980-2040 (2011 dollars per barrel)**



## 2. Density is going up after 100 years of decline....

Cities	1960 Urban density persons/h a	1970 Urban density persons/ ha	1980 Urban density persons/ ha	1990 Urban density persons/h a	1995 Urban density persons/h a	2005 Urban density persons/h a
Brisbane	21.0	11.3	10.2	9.8	9.6	9.7
Melbourne	20.3	18.1	16.4	14.9	13.7	15.6
Perth	15.6	12.2	10.8	10.6	10.9	11.3
Sydney	21.3	19.2	17.6	16.8	18.9	19.5
Chicago	24.0	20.3	17.5	16.6	16.8	16.9
Denver	18.6	13.8	11.9	12.8	15.1	14.7
Houston	10.2	12.0	8.9	9.5	8.8	9.6
Los Angeles	22.3	25.0	24.4	23.9	24.1	27.6
New York	22.5	22.6	19.8	19.2	18.0	19.2
Phoenix	8.6	8.6	8.5	10.5	10.4	10.9
San Diego	11.7	12.1	10.8	13.1	14.5	14.6
San Francisco	16.5	16.9	15.5	16.0	20.5	19.8
Vancouver	24.9	21.6	18.4	20.8	21.6	25.2
Frankfurt	87.2	74.6	54.0	47.6	47.6	45.9
Hamburg	68.3	57.5	41.7	39.8	38.4	38.0
Munich	56.6	68.2	56.9	53.6	55.7	55.0
Zurich	60.0	58.3	53.7	47.1	44.3	43.0

Table 2. Trends in urban density in some US, Canadian, Australian and European cities, 1960-2005

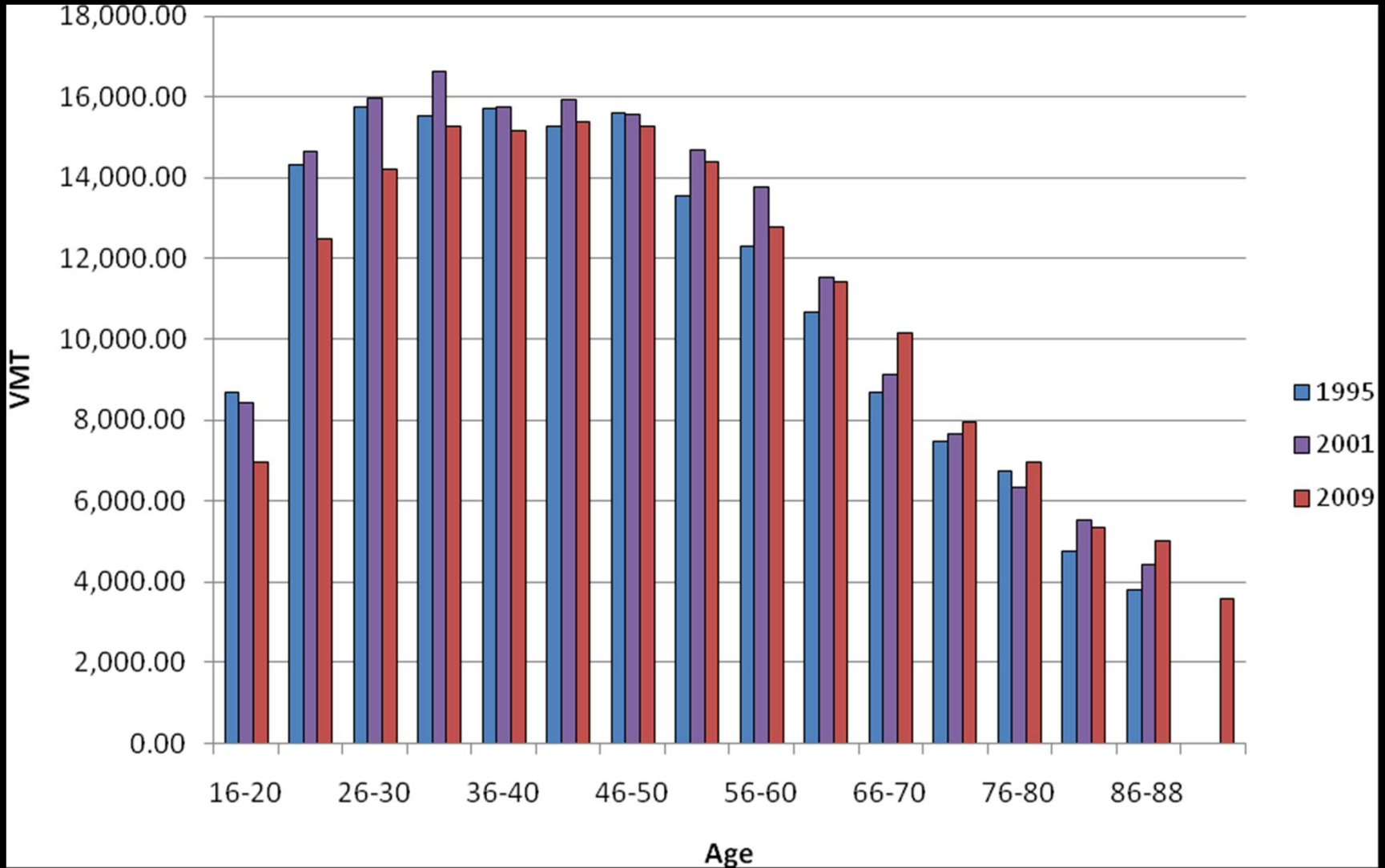
# Sydney is coming back in after a century of going out

**Table 1: Population Change in Sydney, 2001 - 2011**

	Population ('000)			% Change
	2001	2011 (provisional)	Change	
Inner Sydney	991	1144	+152	+15.4%
Middle Sydney	2289	2559	270	+11.8%
Far outer Sydney	848	903	55	+6.5%

*Inner Sydney is defined here as Waverley, Woollahra, Randwick, Botany Bay, City of Sydney, North Sydney, Mosman, Lane Cove, Manly, Willoughby, Ryde, Canada Bay, Strathfield, Ashfield, Marrickville and Leichhardt; Far outer Sydney is defined here as Camden, Campbelltown, Wollondilly, Penrith, Blue Mountains, Hawkesbury, Gosford and Wyong. Middle Sydney is defined as the remaining SLA's. Source: ABS.*

# 3. Cultural change, especially in the young...









**CAR-FREE  
COMMERCIAL DRIVE  
FESTIVAL**

**Better Transit  
Not Freeways**

**STOP**  
Highway 1  
Expansion

**STOP**  
Highway 1  
Expansion  
[www.spec.bc.ca](http://www.spec.bc.ca)

[www.spec.bc.ca](http://www.spec.bc.ca)



 **oneday...**

[onedayvancouver.ca](http://onedayvancouver.ca)

# 'Cars are so yesterday: young and rich leave guzzlers behind'



From 2001 to 2009, car use by 16 to 34 year olds decreased from 10,300 miles to 7900 miles per capita – a drop of *23 per cent*.

And increased:  
*Public transit 100%*  
*Biking 122%, and*  
*Walking by 37%*  
**AND MOVING BACK  
INTO CITIES**

In Central London, traffic fell by 19 per cent between 2000 and 2009.

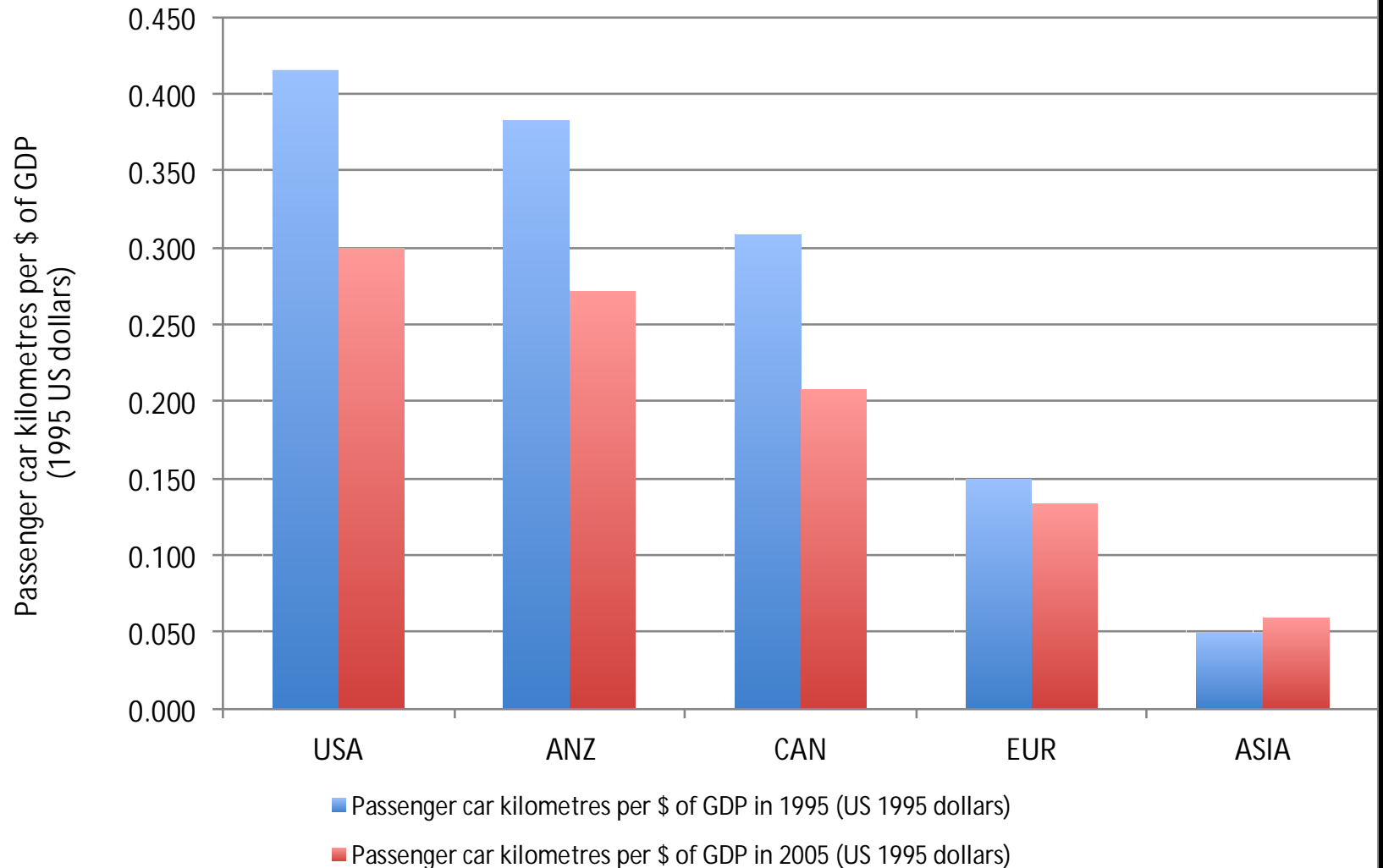
The Times Nov 6, 2012

'café culture replaces car culture ....'



# 4. Its economically more efficient

We have turned the corner on the car...Decoupling car use and GDP – new paper from Jeff Kenworthy, WTPP

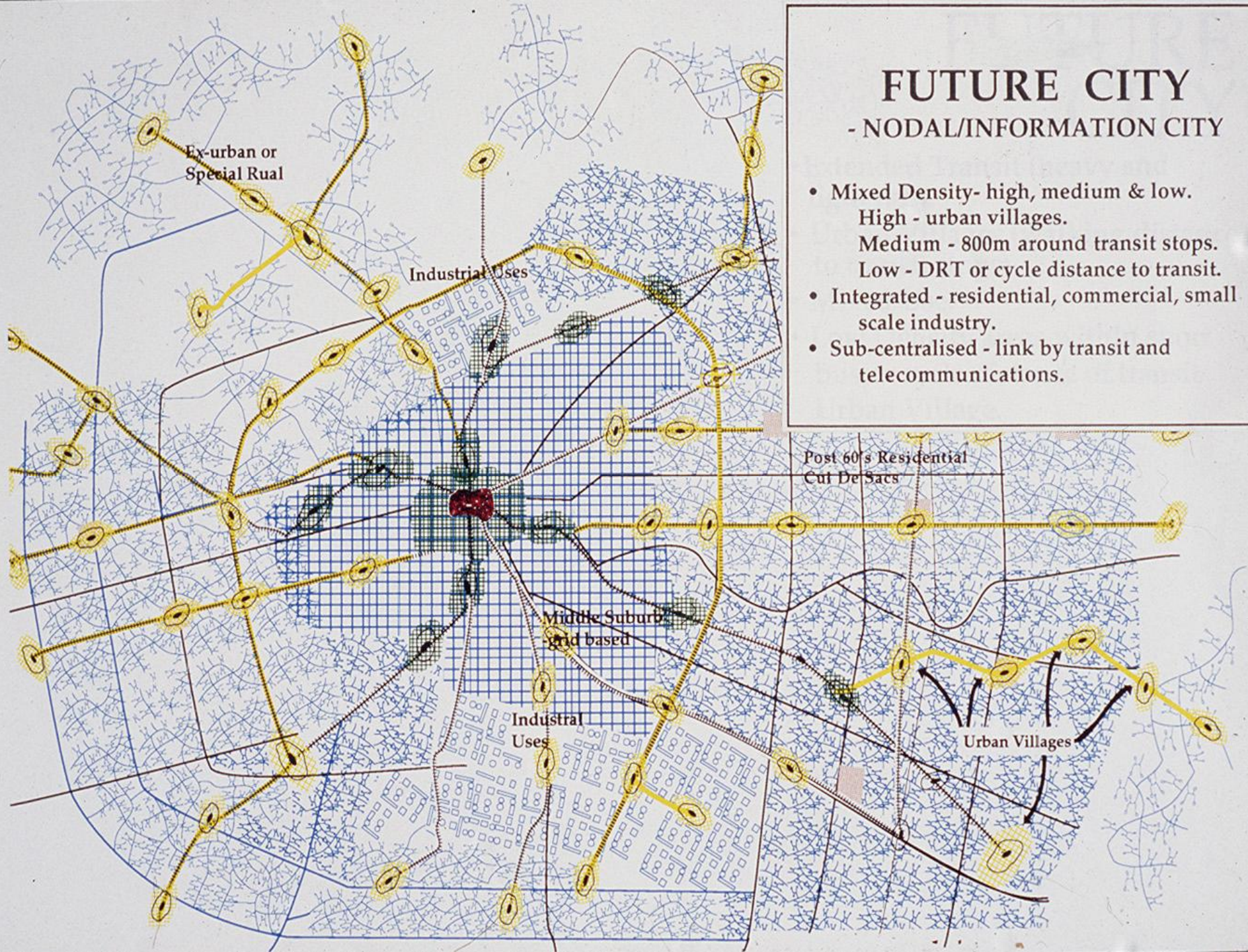


New urban form emerging?

# FUTURE CITY

## - NODAL/INFORMATION CITY

- Mixed Density- high, medium & low.  
High - urban villages.  
Medium - 800m around transit stops.  
Low - DRT or cycle distance to transit.
- Integrated - residential, commercial, small scale industry.
- Sub-centralised - link by transit and telecommunications.



Ex-urban or  
Special Rural

Industrial Uses

Post 60's Residential  
Cut De Sacs

Middle Suburb  
- grid based

Industrial  
Uses

Urban Villages



All cities indicate the three city  
fabrics...



समर्थ प्लाज़ा  
लॉजिस्टिक्स सर्विस

SAMART  
PROF. DR. SAMART TRADING

AMBICA MOBILE

Advertisement for Ambika Mobile featuring various mobile phones and accessories. Text includes "AMBICA MOBILE" and "ING FOR MEMBER'S ONLY".

Advertisement for "श्री एजन्सी" (Shri Agency) with text "ING FOR MEMBER'S ONLY" and "रक्तिम फक्त समिपदामारी".

Advertisement for "OLYMPUS" featuring a camera and other electronic products.

Advertisement for "पल्सटेक" (Pulstec) with text "पल्सटेक" and "पल्सटेक" in Hindi.

ROX

DAAY

HARO HONDA

Splendor





रमेश डेअरि  
सुपारी अन्वली इन्डस्ट्री  
हाल्समन भावांग मिल्स मिल्स  
Ramesh Dairy  
• ट्रेडींग बॅन्क  
• ट्रेडींग सेक्स, टोप्य  
• स्विमिंग कोट्सयुम  
• 3/4 कागो, सनक्रेट  
• ट्रेडींग पन्ट, शार्ट्स  
महाराष्ट्र रोड | कोल्हापूर | अहमदाबाद | दिल्लीक पुरा | और | राजस्थान रोड

बँक ऑफ इंडिया  
Bank of India

PRAKASH  
DEPARTMENTAL STORES.

POONA TVAN  
पुना टि वी एन

MAHESH  
PUN 12-11  
4955

# Do pedestrians need some help in cities like Pune?





सेवास्त  
अभ्यासिका विद्यालय  
स्थापना १९६४

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OPTIC RANGE  
EXCLUSIVE DESIGNS  
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Contamend  
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संस्थापक पेट. प्रकाश चौधरी

9930  
६.१.११ खाजूर

9930

MH12AK1955  
MH12AK1955

MH12EQ277

GOODS CARRIER  
ape  
MH12 EF 2121  
PAGGIO  
ape

GOODS CARRIER  
ape  
MH12EQ 536

# Old Jaipur where streets are for people



मा महोत्सव  
ऑक्टोबर २०१७  
२०१७-१८ साय ३४३  
संस्थापक अध्यक्ष पं. म. म. म.







Agarwal  
अग्रवाल स्वीट्स

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सस्ता वॉटर

Biggest Store





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