

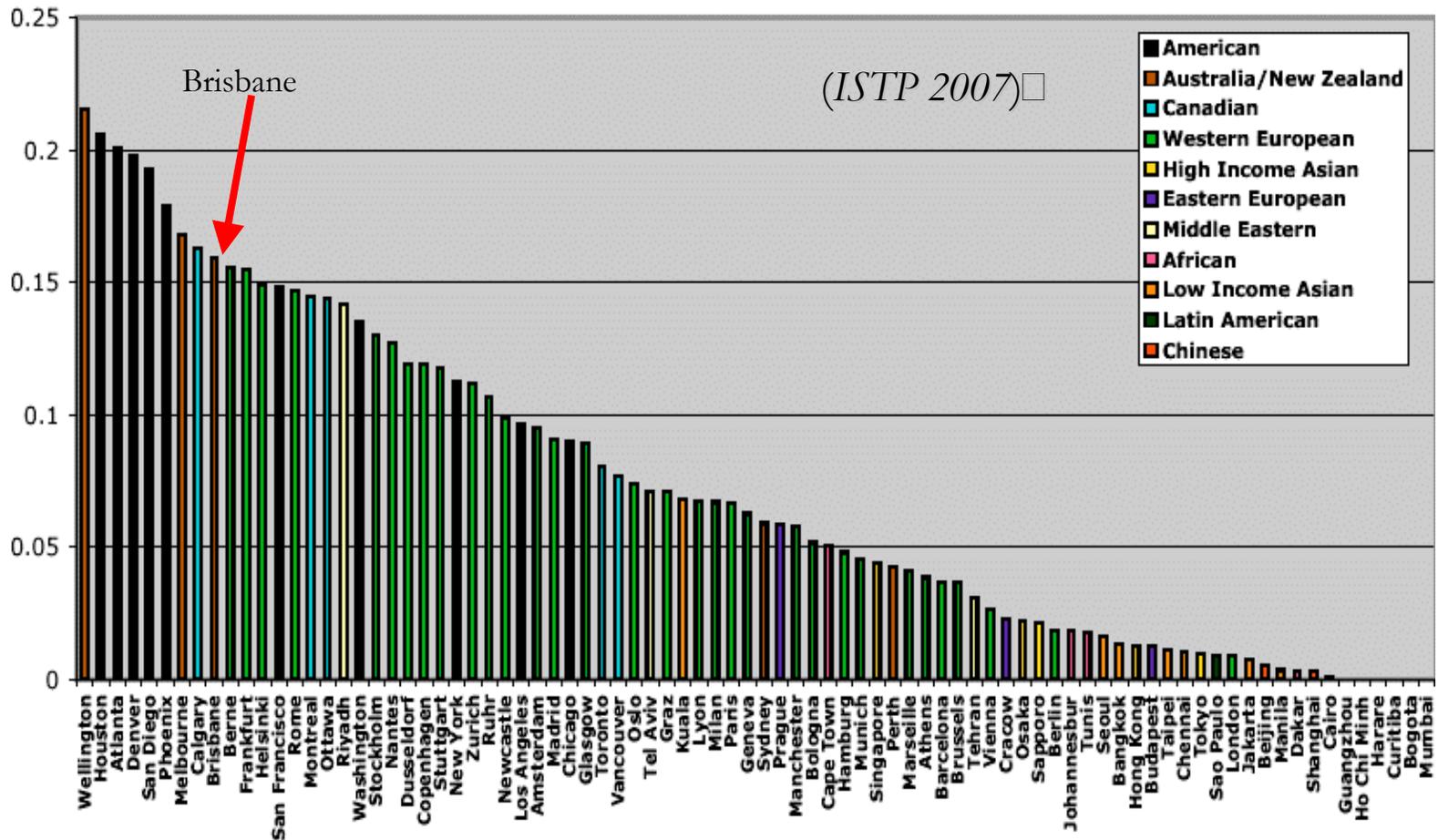
Urban transport solutions for a scarce oil future



Tristan Peach

Current “Mega Infrastructure” approach

- Building and expanding roads
- The main funding focus of the SEQ infrastructure plan and program



Mega infrastructure approach

Inner-Brisbane focused

- Airport Link, North South Bypass Tunnel, Hale Street Bridge, Northern Link Tunnel
- Inner-city rail capacity enhancements budgeted for \$7.3 billion while rail extensions e.g. Petrie to Kippa-Ring/Redcliffe remain unfunded

High cost and long time frame for service improvement

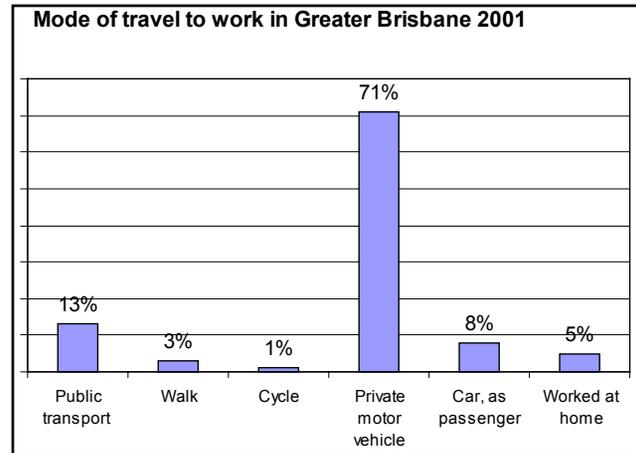
- Northern Busway tunnel (\$2.5 billion / \$140 million per km) *versus*
- Network of transit lanes across north Brisbane, traffic light priority and massive investment in actual public transport services (rather than infrastructure)
- Benefits more people sooner

Mega infrastructure approach

- Limited attention to low-cost, low-energy approaches
 - Transit, cycling and car pooling lanes across the city
 - Support for car sharing to reduce car ownership and use
 - Lack of progressive parking policies
 - Developing tracts of land in far north and far west Brisbane next to highways
 - Tidal flow systems on main roads to provide more space for peak flow traffic without building more roads
 - Advertising campaign to encourage preservation of oil (just like the 'Save Water' campaign)

Mega infrastructure approach

- Government aims to continue trends of car dependence



(Australian Bureau of Statistics 2001a table X30)

- Table 8-2 The Motorised Travel Task with Improved Public Transport within the Brisbane Metropolitan Area

Parameter	2004	2012	2016	2022	2026
Person Trips by Motorised Travel Modes ⁽¹⁾ (million)	5.52	6.53	6.99	7.66	8.09
Estimated Public Transport Person Trips (million)	0.42	0.61	0.68	0.81	0.90
% PT Trips	7.5%	9.3%	9.7%	10.5%	11.1%
Car/Light Vehicle Trips (million)	3.61	4.24	4.53	4.94	5.22
Commercial Vehicle Trips (million)	0.18	0.23	0.25	0.27	0.29
Total Vehicle Trips	3.79	4.47	4.78	5.21	5.51
% increase in total vehicle travel compared to 2004	N/a	18%	26%	37%	45%

Table Note: (1) Includes travel to and from locations outside the BSD

(Airport Link Environmental Impact Statement - Traffic and Transport Technical Paper)

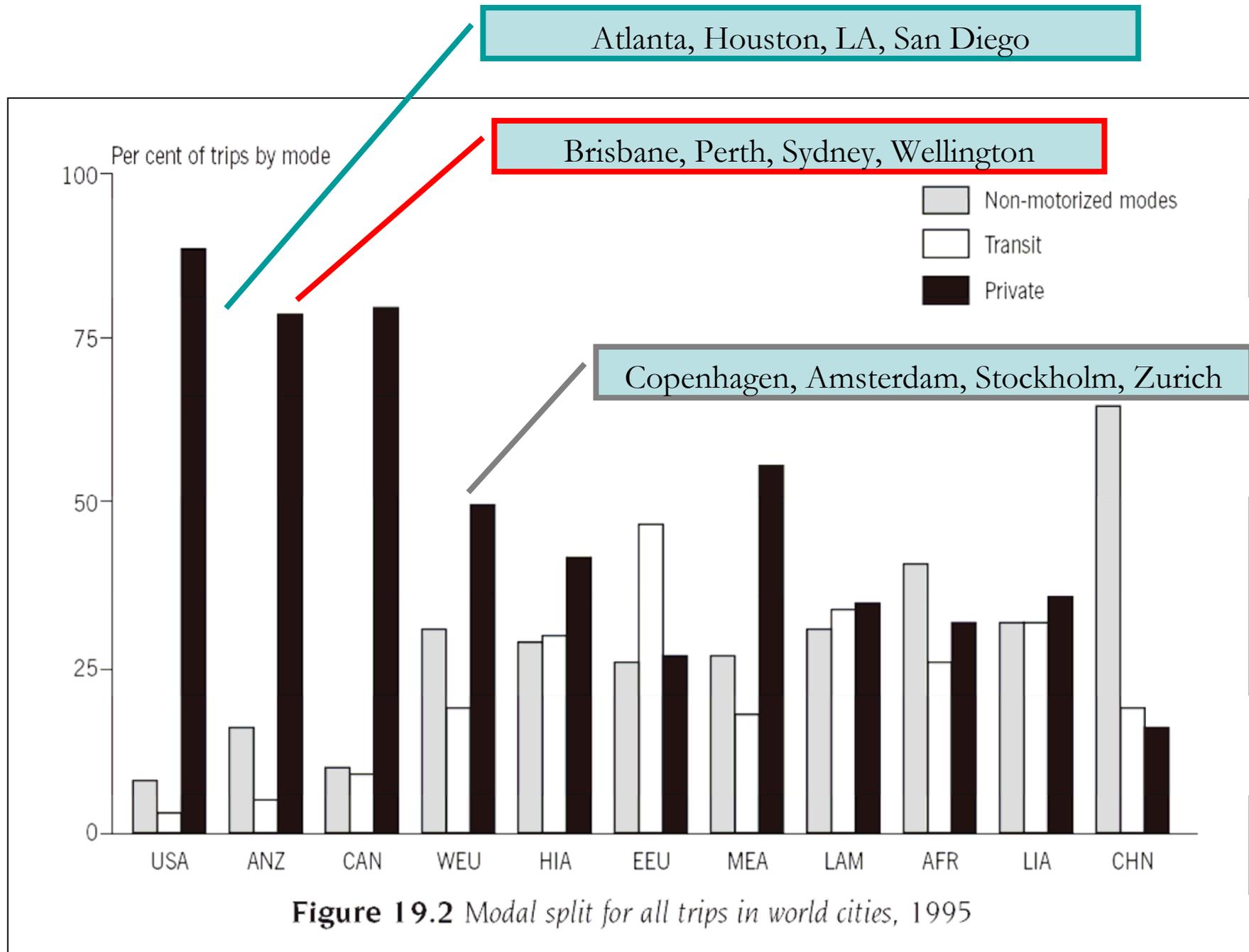
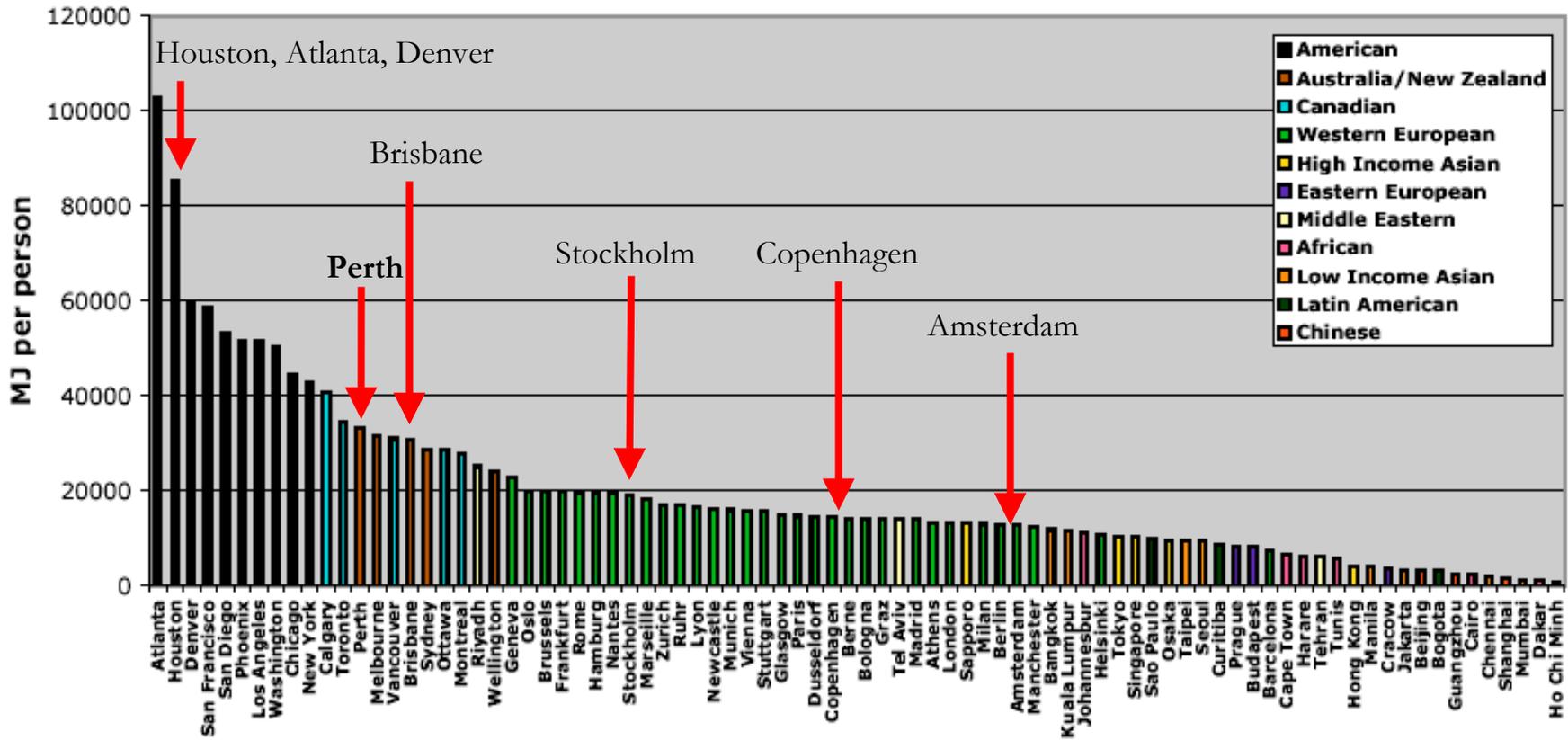


Figure 19.2 Modal split for all trips in world cities, 1995

Car dependence

High levels of fuel burnt versus cities with more balanced systems



(ISTP 2007)

Mega infrastructure approach

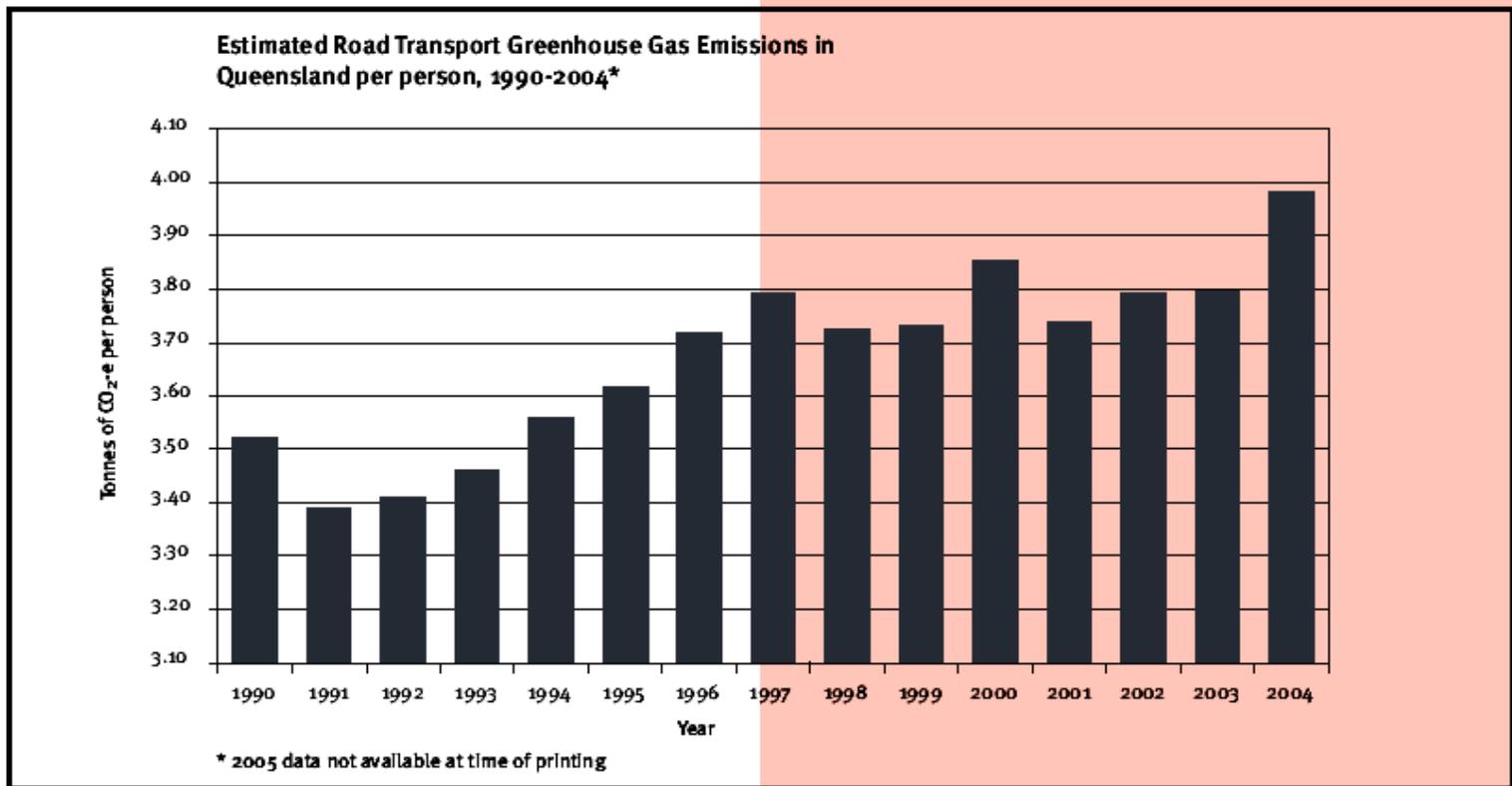
- Passenger car emissions are **primarily related to vehicle kilometres travelled [VKT]**. (AGO 2006, 20)
- Based on current plans for Brisbane VKT in cars will increase to 55 million on an average weekday in 2012, 66 million in 2022 and 71 million in 2026
- Daily car/light vehicle trips to increase from 3.6 million in 2004 to 5.2 mil in 2026

(Airport Link Environmental Impact Statement - Traffic and Transport Technical Paper)

	<i>Houston</i>	<i>Brisbane</i>	<i>Zurich</i>
Road supply (metres per person)	11.7	8.2	4.0
Annual travel in private cars (passenger KM per capita)	19004	11188	7692
Average speed (km/h) for cars	61.2	50.1	36
Total per capita transport energy use	71624	39277	25244

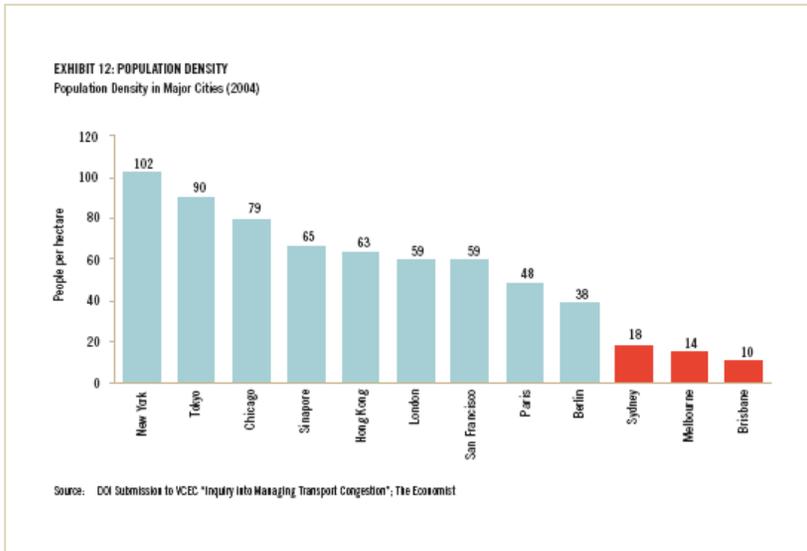
Newman and Kenworthy 'tables 1999, 3.2 (p. 70-71) 3.9 (p. 82-83) and 3.10 (p. 85) N.B. Data is for 1990

All this road building in QLD to “keep the traffic flowing” yet our per capita GHG emissions from road transport continue to rise...

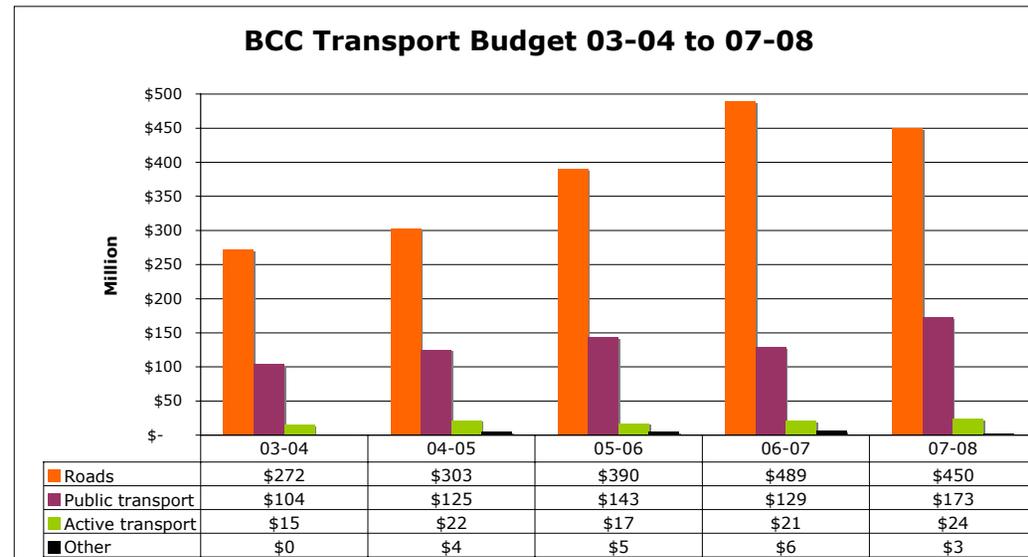


Density

- Used as an argument for why Brisbane can never have good public transport
- Not suggesting we could suddenly have a transport system like Tokyo where majority of trips are by public or active transport
- But can do a lot better in Brisbane e.g. increase mode share from 10 to 20%
- Also need to start focusing future development around public transport



(Various in ARA 2006, 10)

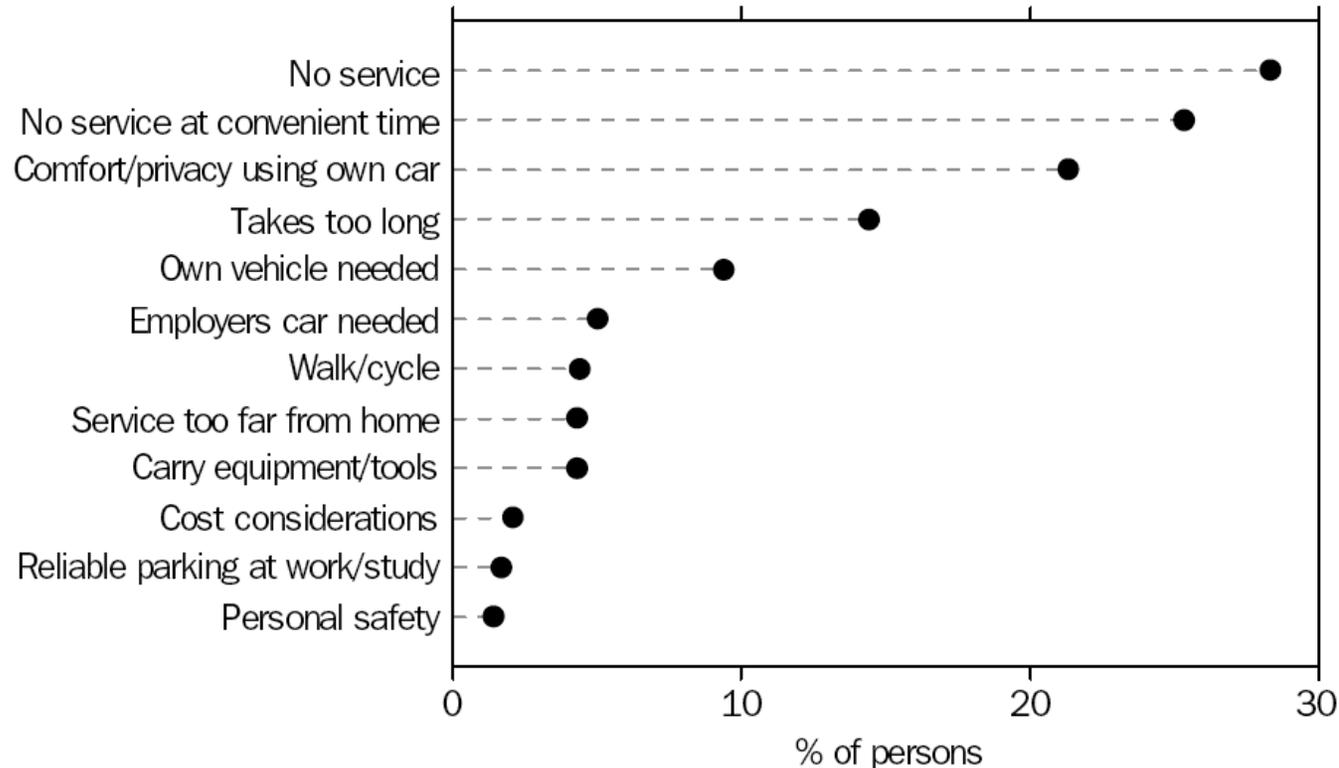


(Analysis of BCC budgets 2003-2008 by author)

“We love our cars”

- Love or coercion? More than 40 years of local, state and federal government funding focused on roads
- 10% of people may actually love their cars and would never consider using public transport, walking or cycling

4.7 REASONS FOR NOT TAKING PUBLIC TRANSPORT TO WORK OR STUDY—March 2006



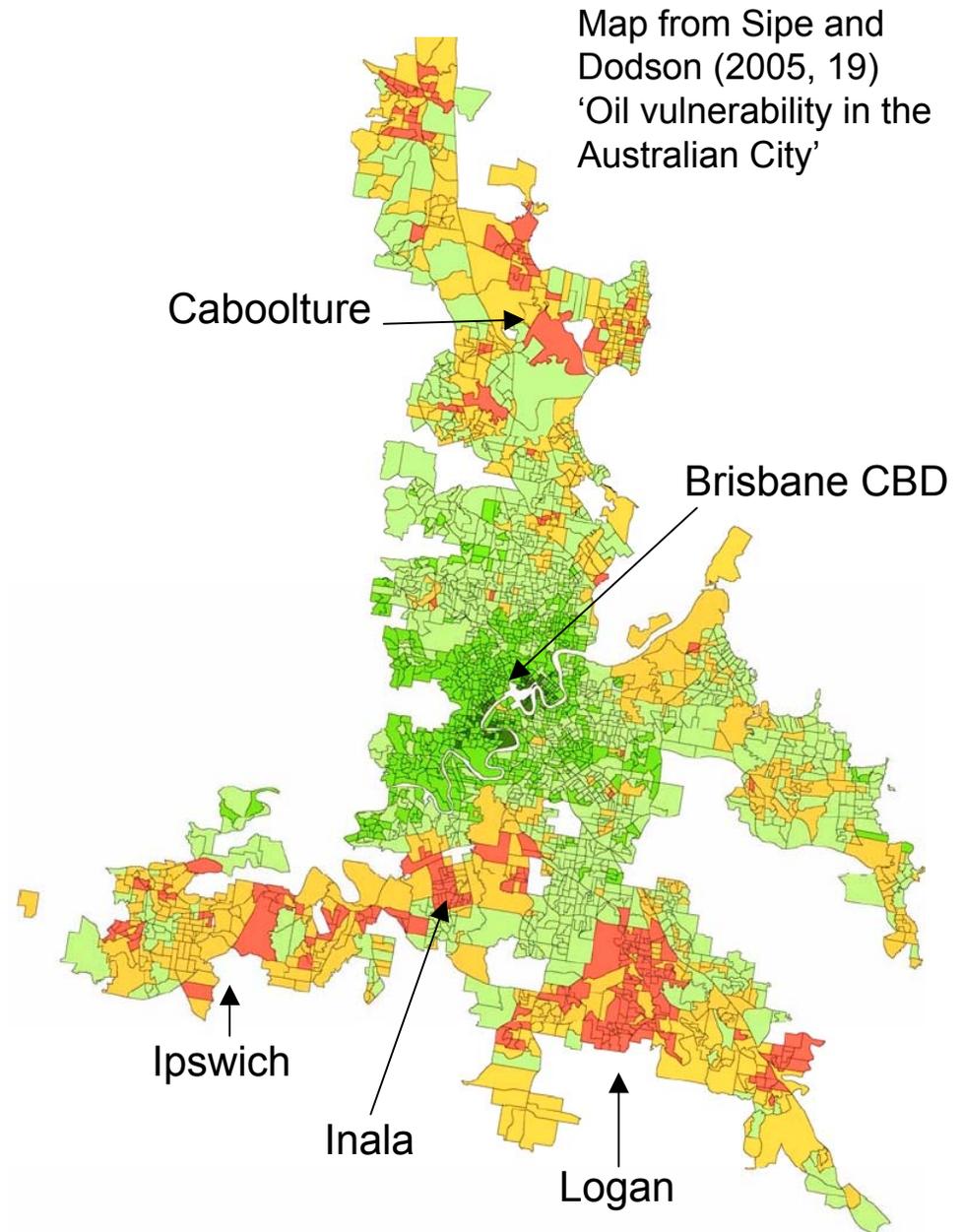
(ABS People and the environment survey 2006, 64)

Rising price of oil

- Year 2000 - barrel of crude oil US\$30
- Mid 2006 - US\$75
- June 2008 US\$137

Vulnerability to rising oil prices

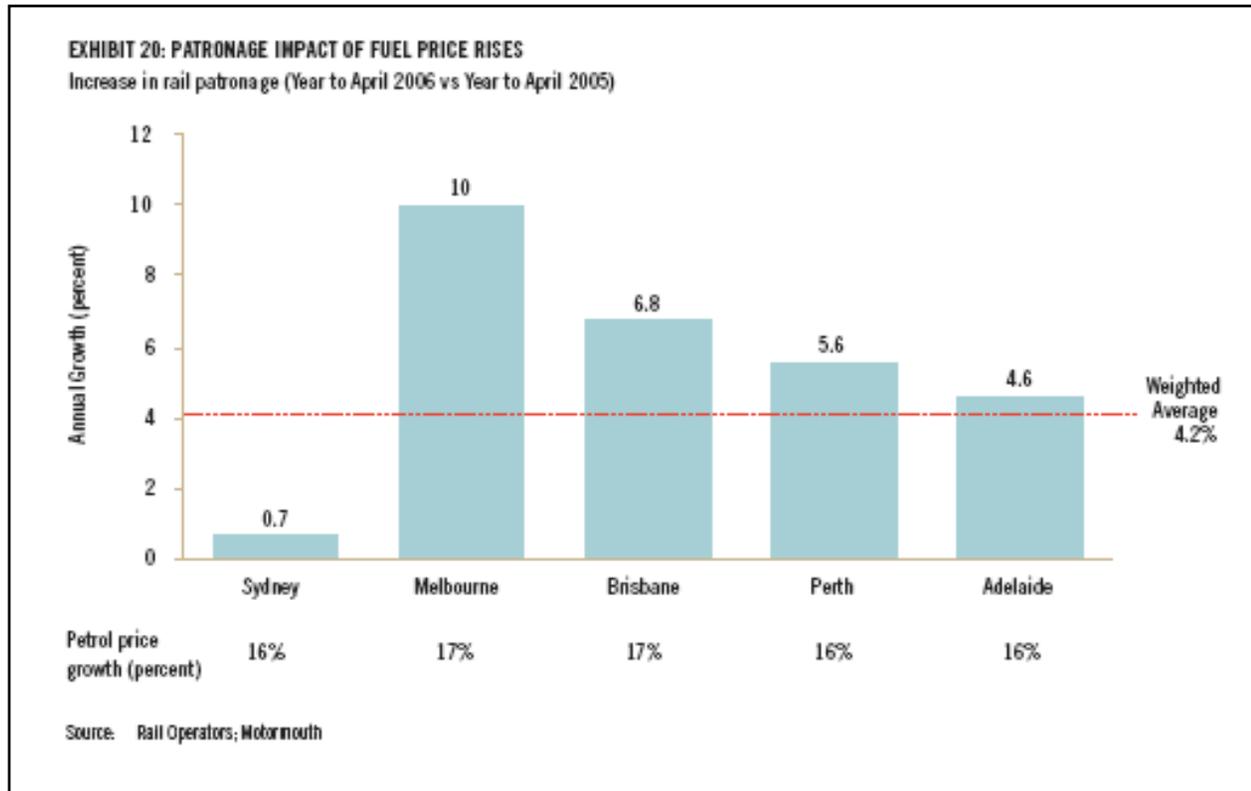
- Which areas are most vulnerable to rising oil prices?
- Socio-economic status
- Household car ownership
- Car-dependence for work journeys



Rising fuel prices

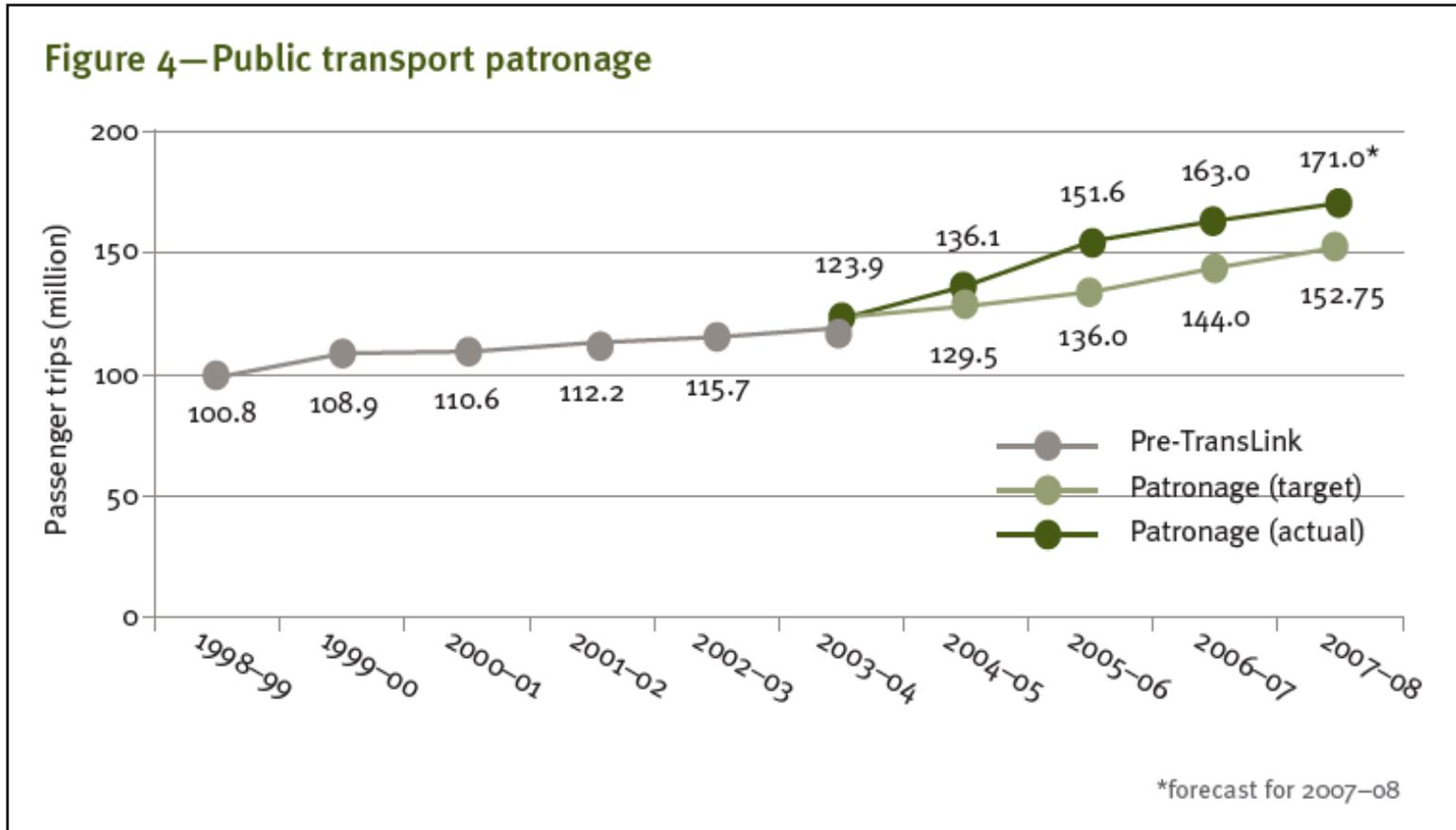
- 5-10c reduction in the federal excise will be overwhelmed by ongoing price increases
- Reducing the price will increase demand, reduce supply and further exacerbate price increases
- A government interested in providing cost-effective travel for people will invest heavily in public transport, walking and cycling
- 7 days of unlimited public transport travel anywhere between Brisbane and Ipswich = \$40
- Just need a public transport system that takes people where they need to go

Peak oil and transport demand



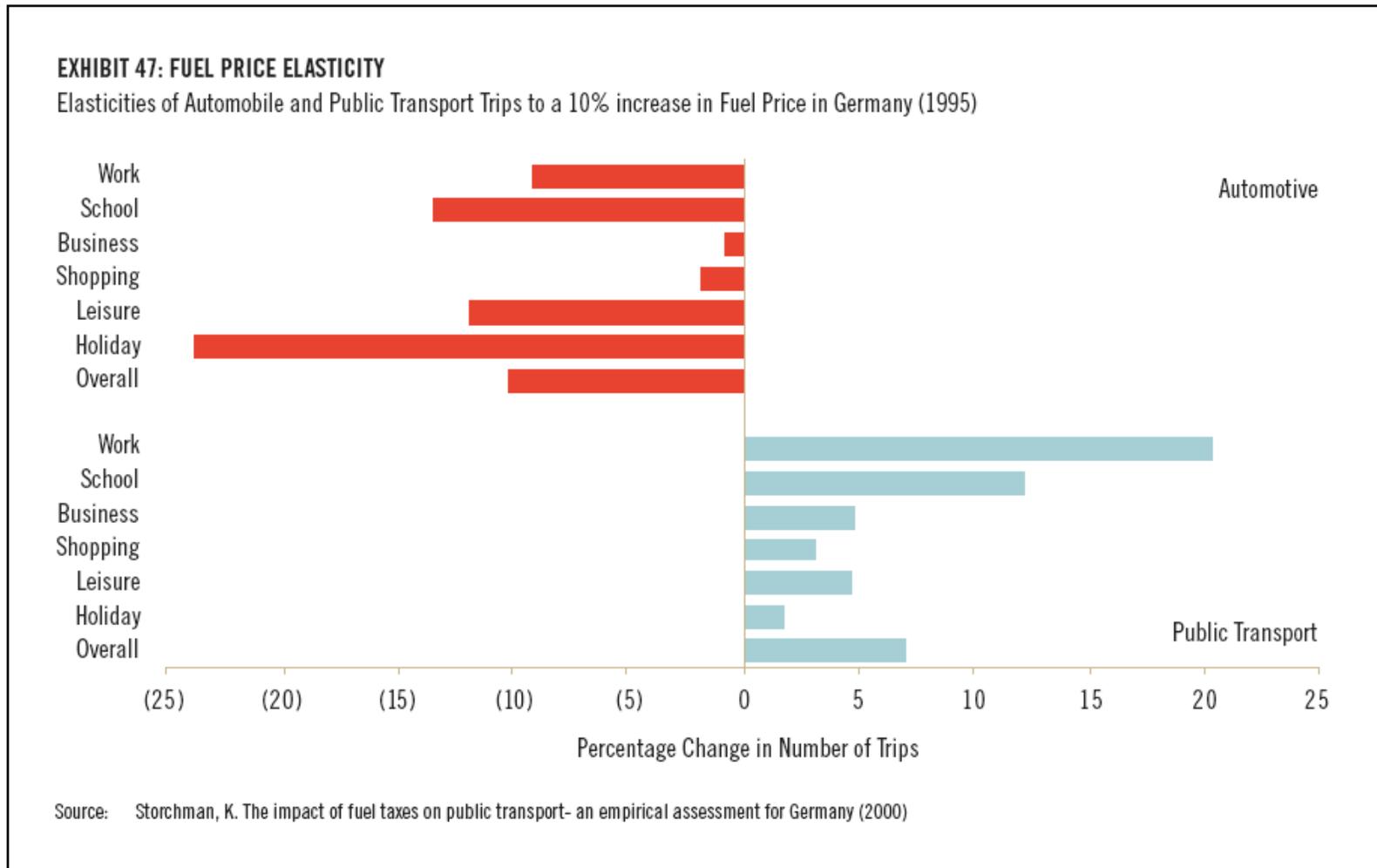
(Rail operators and Motormouth in ARA 2006, 17)

SEQ PT demand



(QLD Government 2008 SEQIPP, 22)

10% reduction in car use, 7% increase in PT usage



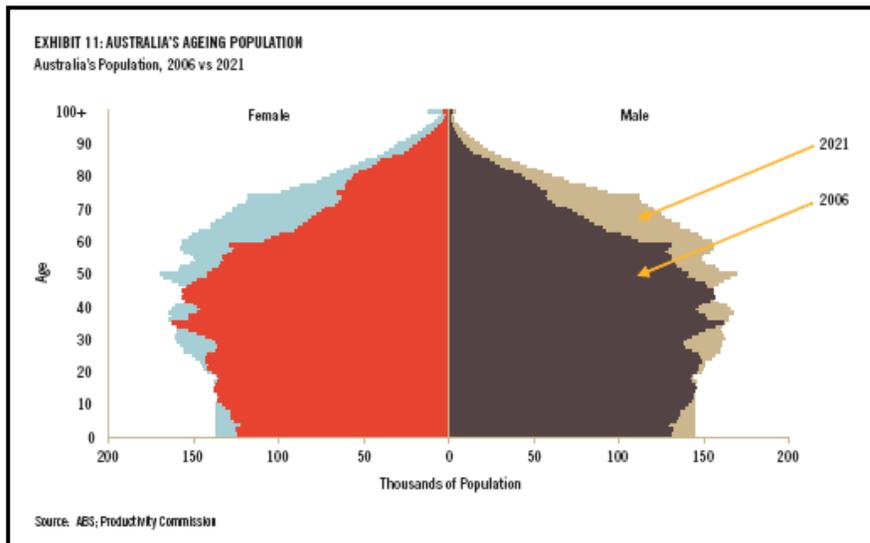
(Storchman in ARA 2006, 49)

Alternative fuels

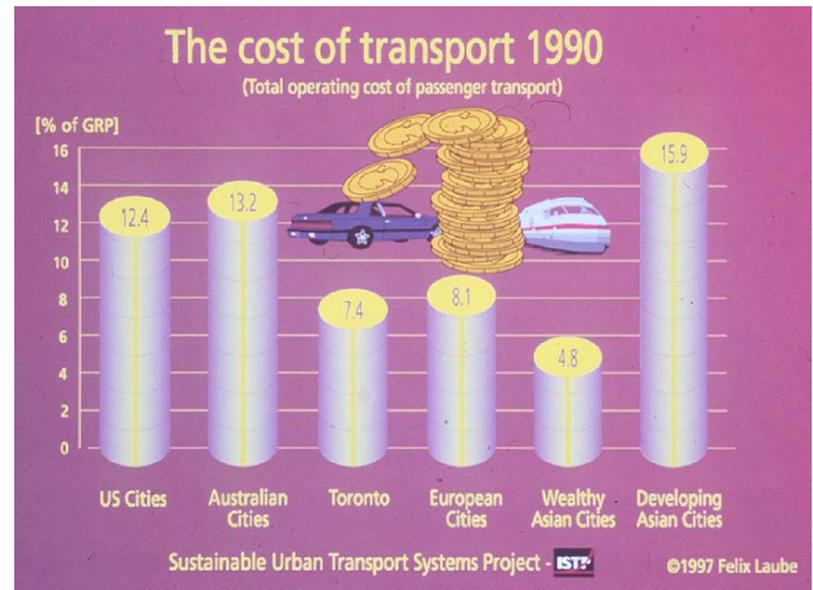
- Alternative fuels will be used and will be essential
- Cannot replace existing demand for oil, let alone predicted future demand
- No comparable alternative available
- Biofuels - how much of the earth's arable land will we devote to the car?
- No need to wait for new technology - we have what we need - bicycles, shoes, trains, trams and buses

Positive opportunity

- Reducing our car and oil dependence
- Reduce trade deficit due to purchasing foreign oil
- Reduce air pollution (and associated health problems)
- Reduce greenhouse emissions
- Reduce obesity
- Reduce road accidents
- Increase social equity (address ageing population issue)
- Improve economic prosperity (reduce % of GRP spent on transport)



(ABS and Productivity commission in ARA 2006, 10)

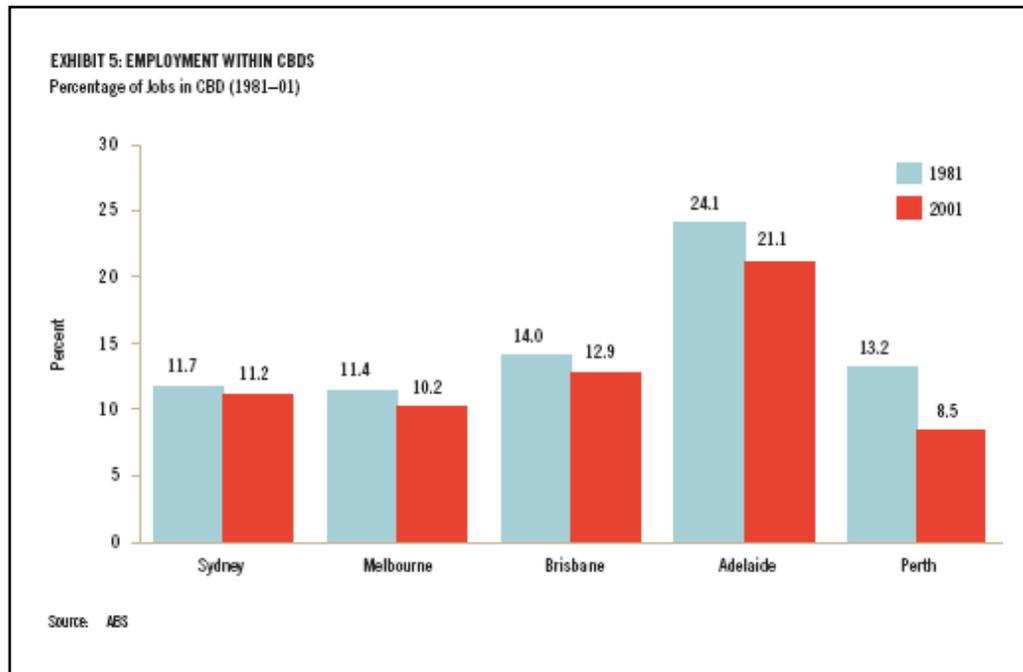


New approach

- Reduce need for travel
 - More complimentary land use configurations
 - More work from home incentives
 - Revive local shopping strips
 - More local employment options
 - Increase local goods production
- Manage demand - e.g. varying work hours
- Consolidate land uses in existing urban areas around heavy rail stations
- Enforce a tight urban growth boundary
- Reward responsible travel choices rather than continually providing incentives to drive
- Make public transport, walking and cycling a comparable alternative to the car for full range of trips
- Priority on walking and cycling for trips under 5km

Public transport *around* the city

- Majority of work and other destinations are NOT in the CBD, yet our public transport system is focused on it
- Need public transport options going across the city using existing road infrastructure to form a fully comprehensive network



(ABS in ARA 2006, 6)