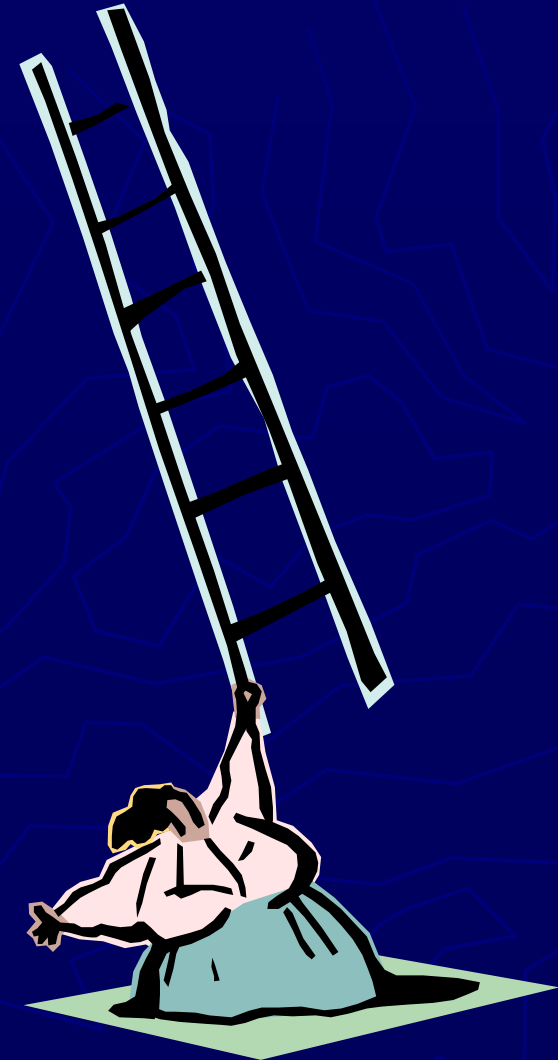


Changing imperatives for land transport in Singapore: challenges and opportunities looking ahead towards 2020

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Themes for this session

- A. Emerging imperatives and related challenges
- B. Opportunities and selected suggestions



A. Emerging imperatives?

- ▶ Some old priorities remain important, if not more so
 - space efficient development
 - competitive economy (cost; strategic infrastructure)
- ▶ But emerging imperatives call for new priorities
- ▶ Singapore's changing priorities as a nation and as a community:
 - Changing competitive pressures (eg need to be an attractive place to live for people with choices, not just a good place to invest)
 - Increasingly affluent society (changing aspirations; 'from quantity to quality'; Future responsibilities as a 'developed' nation?)
 - Emerging social, demographic, health trends (which heighten calls for more inclusive, gentle society, etc.)

Emerging imperatives for land transport in Singapore

1. Aspirations

- Challenges for demand management
- Challenges for public transport

2. Liveable Singapore

3. Health and safety

4. Participation and inclusive society

5. Sustainability

6. Institutional imperatives



1. 'Aspirations' imperatives

- ▶ It is often said we need to meet aspirations to own cars
- ▶ People want easy access to widening range of goods, contacts, services, experiences
 - increasingly expect convenient and rapid mobility in order to gain such access
 - Such aspirations are often focused on the desire for a private car
- ▶ However, universal car ownership is unrealistic
- ▶ This presents challenges for both demand management and public transport

Challenges for demand management

- ▶ Pressure to increase access to cars (or car-like services)
 - but without excessive congestion
 - nor excessive impacts on urban liveability



Problems with current approach to demand management reform

Which is for a gradual shift from purchase/ownership taxes to usage basis

- ▶ Phase in difficulties (necessitate gradualism)
- ▶ How high will ERP/parking go?
- ▶ Equity concerns (taxis, goods vehicles; lose equity features of ARF)
- ▶ Losing full power of very important policy lever: VQS
- ▶ Fixed taxes to remain significant so bluntness problems remain
- ▶ Congestion contained by ERP but also need mechanisms to prevent traffic growth eroding liveability over wide areas
- ▶ Not enough focus on improving, marketing car alternatives
- ▶ Too much focus on new road capacity?

Challenges for public transport

- ▶ Public transport operators seem to assume most customers have few choices
- ▶ Little effort into marketing or seeking to expand customer base
- ▶ Seems rational now perhaps ... but not in future:
 - access to cars or car-like services will increase further
 - car pricing more usage based, so more will consider alternatives sometimes
 - Enhanced TDM politically problematic unless alternatives keep improving



2. Liveable Singapore

- ▶ Not just mobility aspirations but rising aspirations for quality of urban life (when not moving)
- ▶ Growing proportion of workforce have choices and could move elsewhere
- ▶ More planning priority on quality public spaces
- ▶ Land Transport will be expected to do its part
- ▶ Traffic increasingly threatens liveable urban places – in conflict with mobility aspirations above!!



3. Health and safety

Affluence and rising expectations resulting in ...

- ▶ increasing safety consciousness
 - pressure to do ever better on road safety (despite relatively good and improving record)
 - road danger reduction (not just numbers of casualties but places and roads that FEEL safer)
- ▶ increasing health consciousness
 - worry about pollution and noise
 - more interest in exercise and healthy lifestyles
- ▶ lifestyles actually increasingly sedentary
 - private motorised transport is one of the causes
 - obesity and lifestyle diseases epidemic

4. Participation and inclusive society

- ▶ Increasing pressures to engage in meaningful public participation processes over urban transport
 - Push is coming from both top and bottom...
 - Land Transport not immune ...
 - No alternative? eg Bangkok experience
 - A nuisance or part of achieving better policy?
 - Better outcomes, processes and ownership of decisions
- ▶ 'Inclusive society' appeals are increasing as well
 - demographic and other social changes ...
 - more awareness of social disparities, vulnerable groups

5. Sustainability imperatives

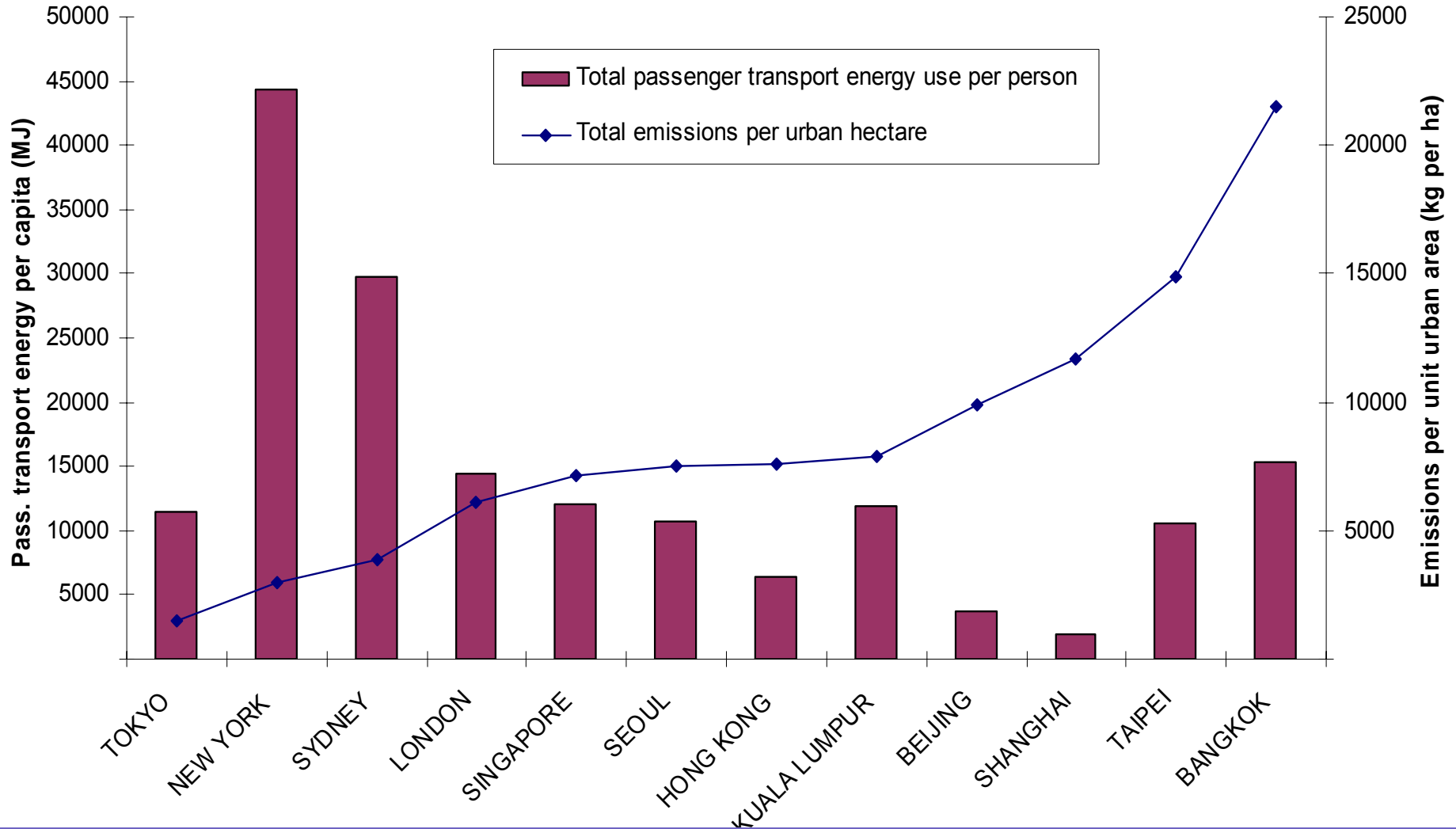
- ▶ 'Sustainable development' expresses our HOPE that we can organise a global society that will not destroy its own environmental basis!
- ▶ One operational version of the idea ...
 - seek to minimise material flows per unit of economic output in the economy (as a proxy for environmental impacts and as test of progress towards sustainability)

Sustainability challenges ahead

- ▶ Key issue relevant to transport is energy
 - climate change concern is heightening
 - energy security concern heightening
 - technological options changing
- ▶ Pressure to make significant sustainable development commitments is likely to increase
 - pressure on affluent Singapore to do its part
 - small country yes, but impacts per capita is the relevant measure
 - local awareness may rise
 - security concerns provide additional spur to action

Singapore passenger transport energy use in perspective

Energy use per person versus local transport noxious emissions per unit of urban area



This is 1995 data from Kenworthy and Laube, 2001

6. Institutional imperatives

▶ New imperatives increasingly raise cross-cutting issues

- increased need for cooperation & coordination: inter-agency, with private sector, with civil society

▶ Institutional mission and goals?

- With basic transport needs met, where now?
- Emerging imperatives challenge old priorities?
- ... with apparently contradictory pressures?
- Need refocused mission?

B. Opportunities and suggestions to address emerging imperatives

- ▶ This section presents selected policy suggestions that relate to some of the imperatives above
- ▶ Looking for opportunities that arise from the challenge of emerging imperatives ...



Perspectives on Mission

- ▶ Three perspectives on defining success in urban transport (based on Litman's framework):
 - **'Traffic'**: vehicle movement and speed beneficial; congestion as the problem; traffic reduction seems crazy
 - **'Mobility'**: movement of people and goods beneficial; traffic reduction OK only if movement enhanced
 - **'Accessibility'**: ability to REACH opportunities is beneficial; may be enhanced while reducing traffic or even while reducing mobility ('reducing the need to travel')
- ▶ Accessibility perspective may offer ways to reconcile seemingly contradictory pressures (eg rising transport aspirations versus liveable urban environment)

Address aspirations: but as much as possible with private car alternatives

- ▶ Need to meet rising aspirations without causing a traffic impacts crisis ...
- ▶ Encourage car owners to consider alternatives for some trips
- ▶ Encourage all car alternatives to see private car as their main competitor
- ▶ and other alternatives as allies – together can aim to compete with car convenience; alone none of them can ever hope to do so



Better way to shift to usage based charging? Variabilise taxes and COE!

- ▶ Vehicle taxes and COE paid at time of purchase/renewal pay for usage allowance, that runs down as the vehicle is driven (usage allowance instead of current 10-year COE time allowance)
- ▶ Usage allowance could just run down with distance driven
- ▶ Or, if integrated with positioning-based ERP, the tax-paid allowance could run down according to distance times an ERP 'impact factor'
 - ERP impact factor varies from place to place and time to time
 - information could be simple – single impact factor for each stretch of road (or zone) and each time period
 - calculations internal to IVU
- ▶ See handout and paper due out late in 2005 in journal 'Transport Policy'

Variabilising VQS and vehicle taxes

- ▶ Benefits of keeping VQS but 'variabilise' using 'usage limits'
 - Can 'variabilise' ALL fixed vehicle taxes
 - A more complete shift to usage charging ...
 - so stronger incentives for car owners to consider alternatives
 - but we can still keep the important ability to fully control vehicle fleet
 - Keeps useful aspects of COE, ARF; but eliminates most problems
 - Potential to charge for wide range of externalities

Benefits of retaining ownership control during transition to usage-based charging

- ▶ Offers the potential to control total traffic levels and not just localised congestion (difficult with existing policy trend)
- ▶ So greater opportunities to protect liveability of city, enhance public transport priority, environmental benefits, pedestrian realm, quality of life improvements



Private sector usage-based charging

- ▶ Also find ways to encourage PRIVATE sector usage-based charging:
 - Encourage further development of the car co-op industry – great potential social benefits
 - Incentives for distance-based vehicle insurance
 - Study distance-based car leasing option
 - Further improve taxi industry health (and fairness)



Public transport suggestions

- ▶ Meeting rising aspirations without facing a traffic crisis ... public transport needs to improve faster!
- ▶ Public transport operators need to be encouraged to treat:
 - privately owned vehicles as primary competitor
 - car owning households as potential customers
 - existing public transport users as having choices
 - other non-private car travel options as allies (eg car co-ops, bicycles, taxis, etc)

Public Transport suggestions

- ▶ Try harder to unleash benefits of 'Network Effect':
 - More effort to speed and ease transfers generally
 - Free transfers instead of penalty
 - Trip planning assistance/information services
- ▶ Marketing and information:
 - Expand TransitLink ambitions to market system aggressively to all, not just existing users
 - Information aimed also at occasional users
 - Rainbow (customer loyalty) tickets, annual passes
 - mobility packages with 'allies' (eg HannoverMobile)

Public Transport suggestions

- ▶ Swiss and German innovation since 1990 in marketing of public transport and car alternatives generally. Example: HannoverMobile (<http://www.gvh.de/eng/1453.htm>)

| HANNOVERmobile | |
|---|--|
| <ul style="list-style-type: none">• Public Transport Annual Pass included Timetable + Transit-Map for free | <ul style="list-style-type: none">• Public Car Carsharing-access included Car-Rental discount rates |
| <ul style="list-style-type: none">• Taxi Discounted tariff, cashless-payment | <ul style="list-style-type: none">• Long Distance Rail BahnCard 25 (German Rail discount card) included |
| <ul style="list-style-type: none">• Bicycle Various discounts and special services at bicycle stores and bicycle parking spots | <ul style="list-style-type: none">• Delivery + storage grocery delivery-service with special conditions and exclusive online-shop beverage-delivery for free downtown-shopping storage for free |
| <ul style="list-style-type: none">• Integrated mobility bill for all basic costs, carsharing- and taxi-trips | |

Public transport suggestions

- ▶ Investigate ways to revise regulation approaches in order to give operators more incentives to be creative in competing with private car
- ▶ Operator objections to being asked to aim higher?
 - Could be seen as a good deal... in return for help from reinvigorated TDM, which should ensure continued profitability



Liveable Singapore suggestions

- ▶ Ways to reduce traffic impacts without reducing quality of urban places nor access to them
- ▶ Less emphasis on high speed traffic
 - Some arterials over-designed for excessive speed?
 - More willingness to slow traffic down and to enforce speed limits
- ▶ Attention to the multiple roles of streets ...

Streets as places ... and for access, not just as traffic/mobility facilities

- ▶ Tension between mobility role and access role of streets
- ▶ Tension between transport roles and role as public space
- ▶ In many places a strong case for changing the balance towards access role and 'street as place'
 - eg in important activity centres (eg Little India, Orchard Road, Chinatown, New Town centres)
- ▶ Decreased emphasis on traffic efficiency at all costs...



Health and safety: active transport

- ▶ A safer and more attractive urban environment in which to use active modes of transport is important for both health and safety
 - Traffic calming again ...
 - Road danger reduction philosophy
 - Short trips are as important as long trips
 - Walking as “glue” for whole transport system – most trips begin and end as a pedestrian trip
 - Investigate bicycles as having niches in a seamless system ... as an opportunity we are missing ...



Bicycle policy suggestions

- ▶ Beyond flippant reactions:
 - 'there is no room for bicycle lanes'
 - 'it is too hot and wet'
 - 'cycling has tiny role so why bother'
- ▶ Commission serious study
 - Count existing role and niches
 - Consider potential
 - Consider if bicycle policy can complement policy priorities and avoid conflict
 - Feasibility and cost of necessary facilities



Bicycle policy suggestions

- ▶ Consider feasibility and benefits of creating a national bicycle network!
 - Park connectors and short off-road links
 - Shared footpaths (improved and signed)
 - Existing quiet streets (with signage)
 - Traffic calmed streets (with signage)
 - On road bicycle lanes (sparingly)
 - Widened kerbside lanes everywhere else where feasible (helps cyclists, motorcyclists and buses generally, reducing conflict between them)
- ▶ Not just a network but also end-of-trip facilities, education, encouragement
- ▶ Institutionalise the effort
 - Regular, formal dialogue with cyclist representative groups
 - Town council bicycle/pedestrian officers (with LTA encouragement)
 - Future LTA bicycle unit with several full-time staff



Inclusive society: Barrier-free, universal design

- ▶ Part of valuing diversity and everyone's human potential
- ▶ As always... a matter of priorities!



Inclusive society: Barrier-free, universal design

- ▶ Not JUST for those with serious disabilities...
- ▶ Universal design can ease difficulties for everyone
 - Wide doors, low floors possibly speed boarding and egress on average, despite occasional delays for special users
- ▶ Growing literature on best practice, successes around the world...



CONCLUSION/SUMMARY

- ▶ Reconciling emerging imperatives for Singapore land transport will require innovation and increased cooperation/coordination
- ▶ Various ways to meet access/mobility aspirations AND quality of life aspirations
- ▶ Address underlying aspirations behind desire for private cars, without dramatic increase in traffic
- ▶ While actually reducing traffic impacts on sustainability, on vulnerable modes and on urban spaces, with increasing inclusiveness

Thank you

