

The Forgotten Transport Modes



Planning for the Future

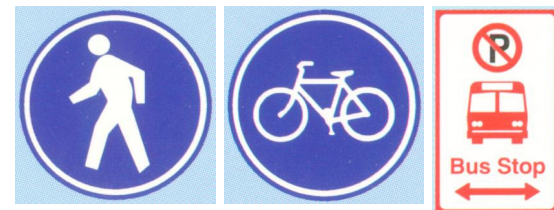
Axel Wilke

City Solutions

Christchurch City Council

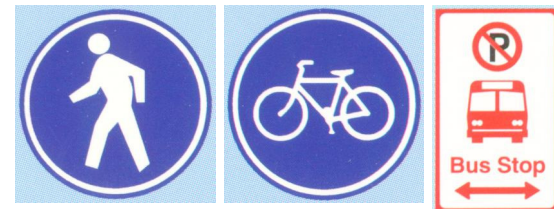
Summary

- z Presentation explores potential of the modes:
 - y walking
 - y cycling
 - y public transport
- z The potential of these modes seems to be underestimated.



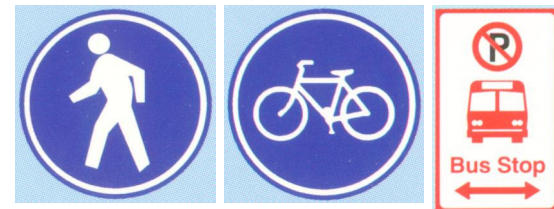
Objectives

- z Walking, cycling and public transport to be considered as legitimate modes of transport.
- z Share workable examples of providing for the 'forgotten transport modes' with you.
- z Challenge some existing practices.



Background

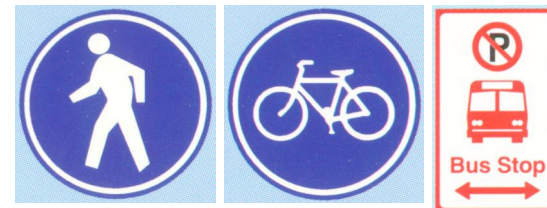
- z The presenter has experienced traffic problems in German cities.
- z NZ heading towards similar problems due to traffic growth.



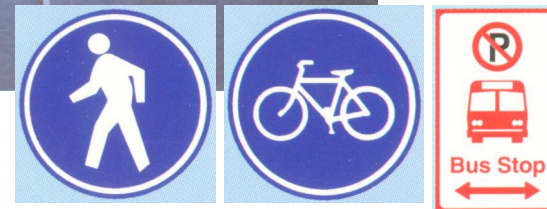
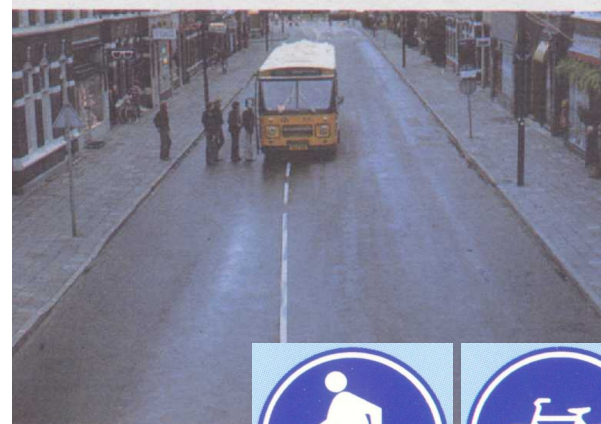
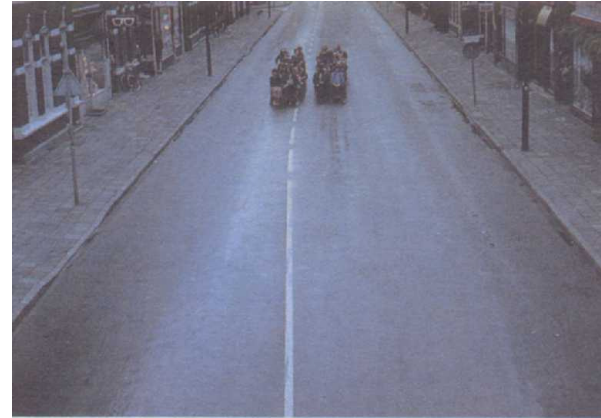
Road Capacity

Mode	Maximum Capacity ¹ (people/hour)
Car	2,300
Bus	7,000 to 10,000
Cyclists	13,300
Tram	18,000 to 25,000
Pedestrian	20,000
Light Rail	40,000 to 50,000

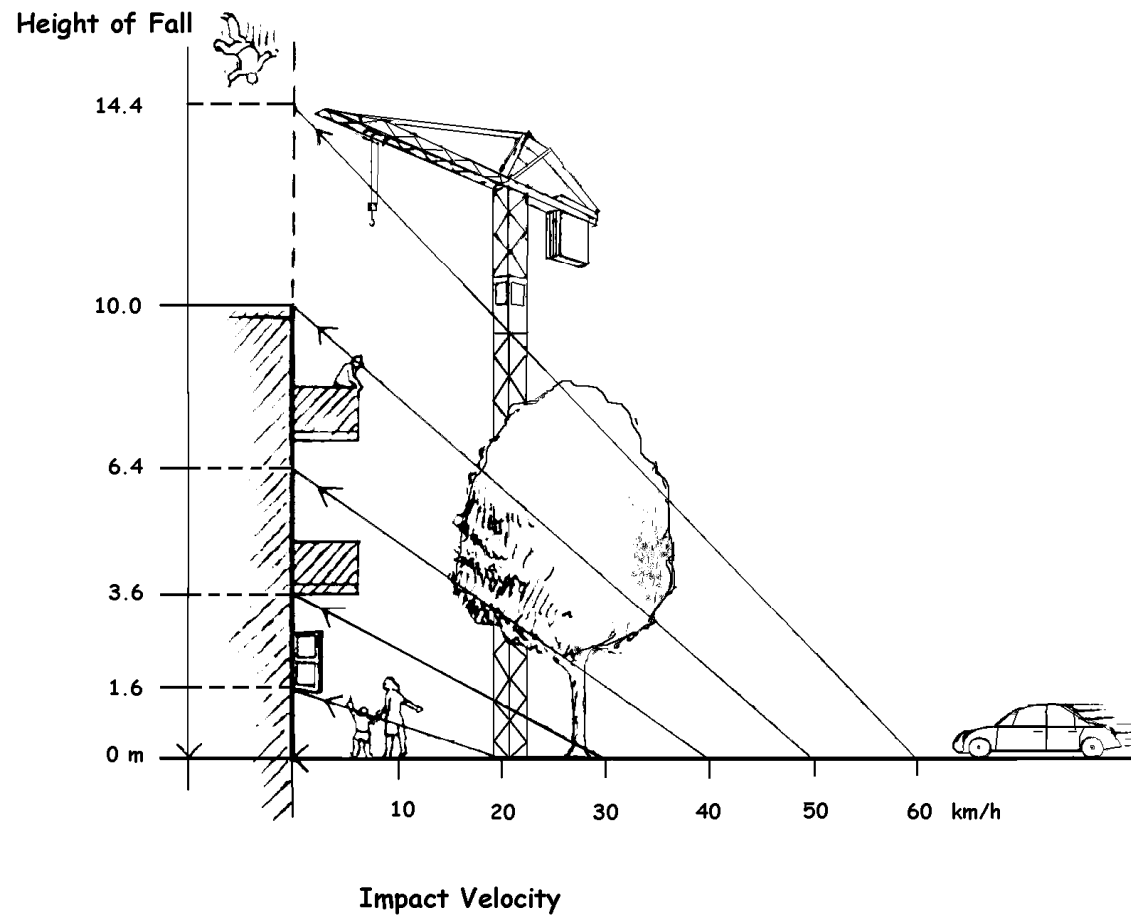
¹ 3 to 4 m roadway



Space Requirements



Speed and Injury Severity



30 km/h Speed Areas

- z Speed reductions.
- z Noise reductions.
- z Traffic redistribution to main road network.
 - z 600 areas implemented in Hamburg (Germany) within 5 years.
- ⌘ Roads easier to cross for pedestrians.
- ⌘ Safety improvements for pedestrians.



Co-Existence of Modes

- z Same rights for pedestrians and motorists.
- z Walking speed.
- z Pedestrians can cross diagonally.
- z Children are allowed to play.
- ± 40 to 60% drop in serious crashes & fatalities.



Co-Existence of Modes



Crossing the Road

- z Kerb build outs the exception rather than the norm.
- z Mostly remedial measure.
- z Suggestion: Generally provide parking bays.



Crossing the Road



Zebra Crossings

- z High Crash Rate
 - ⌘ Zebra Crossings removed
- z Suggestions:
 - ⌘ Better driver education
 - ⌘ Obvious enforcement
 - ⌘ Better engineering



Zebra Crossings



Reduce Emissions

City	Cycling: Percentage Urban Trips
Groningen	60
Beijing	48
Münster	48
Delft	43
Odense	25
Copenhagen	20
Basel	20
Christchurch	8.7
London	2
Auckland	1.8

- z Potential for future developments.



Improve Community Health

- z Report on Global Health (WHO, World Bank).
- z Impact of diseases measured through disability and years of lost life.
- z Two main factors in developed countries:
 - ⌘ Tobacco.
 - ⌘ Physical inactivity.



Improve Community Health

- z High blood pressure: 50% of patients could substitute all drugs with 20-30 minutes of exercise/day.
- z People too busy for additional exercise.
- z Activity has to coincide with lifestyle.
- z 3 activities maintained throughout life:
 - y Walking.
 - y Gardening.
 - y Cycling.



Stress Point Treatment

- ⌘ Where cyclists are vulnerable or feel unsafe.
 - y Weaving areas.
 - y Intersections.
 - y Inside of bends.
 - y Narrow shared lanes.



Stress Point Treatment

- z Emphasis on careful treatment of stress points.
- z Cyclists to be **continuously** guided through stress points.
- z Cycle facilities to be obvious to **every** road user.
- z Motorists must see what cyclists' likely path will be.



Stress Point Treatment



Stress Point Treatment



Creative Planning



The Need for Public Transport

- z Public transport keeps cities accessible (peak times).
- z Commuters easiest to attract to public transport.
- z Car parks available for customers.
- z Public transport can vitalise city centres.

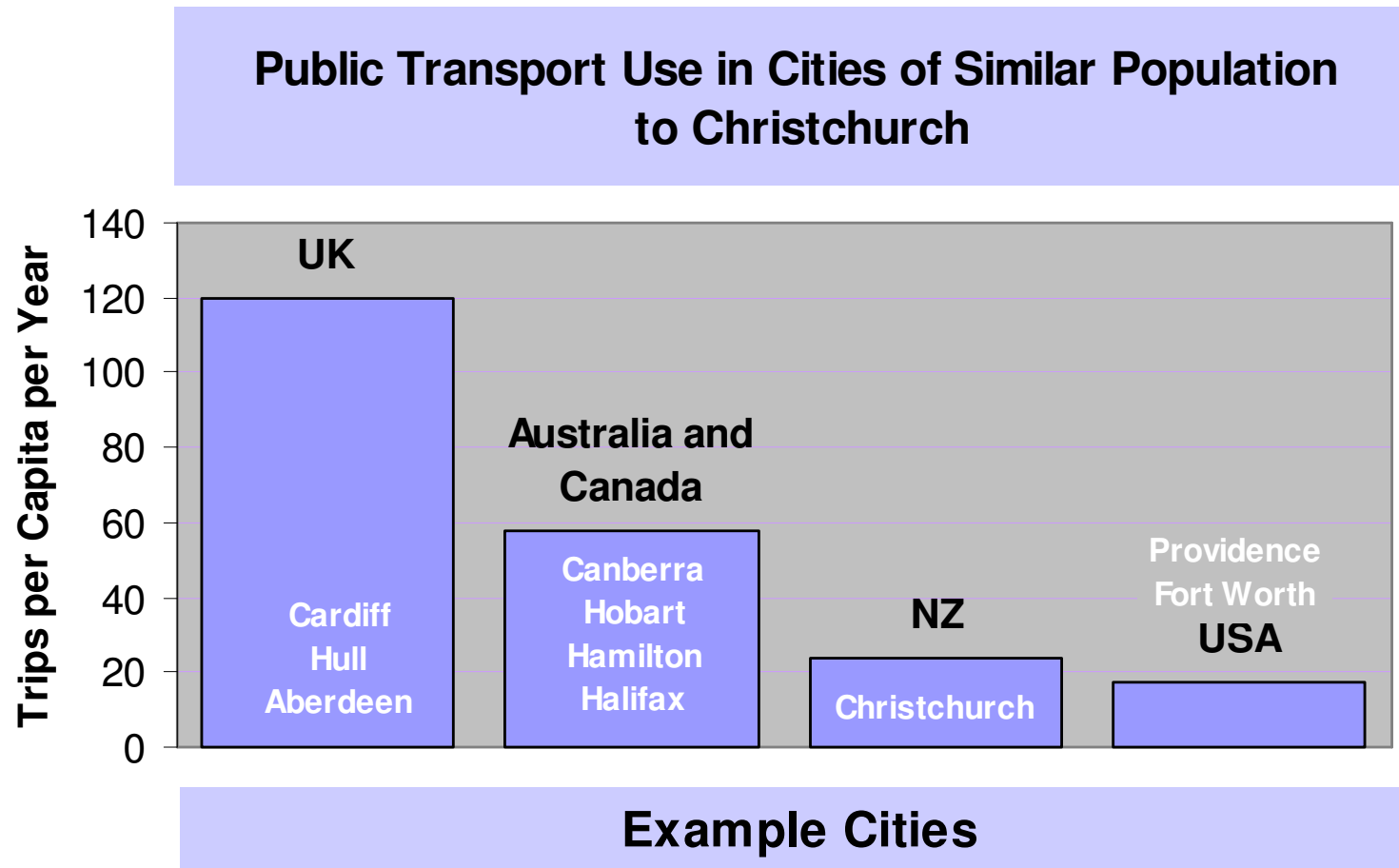


The Public Transport Myth

- z Only very large cities can have attractive public transport.
- ⌘ Wrong!
- z Comparison reveals: We make poor use of the public transport system.
- z Increasing public transport will make better use of existing transportation system.



The Public Transport Myth



Attractive Public Transport



- z Lemgo (Germany), a city of 42,000
- z 6 buses meet in the centre every 30 minutes.

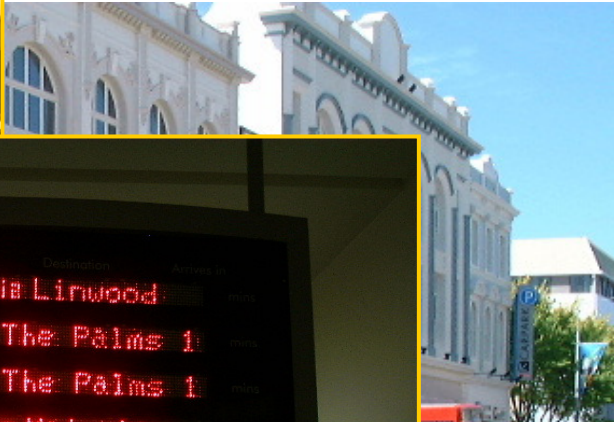


Creative Concepts

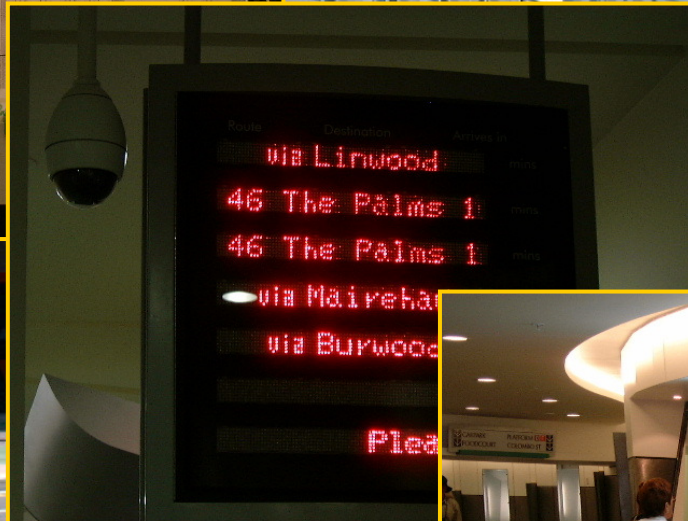
- z Co-operation with taxi company during night time.
- z Passenger requests a taxi to the destination bus stop.
- z Bus driver relays request.
- z Taxi awaits passenger when bus arrives.
- ⌚ Increased perceived safety.
- ⌚ Attracts new customers.



Attractive Public Transport



z Christchurch Bus Exchange



Ticketing

- z Up to 30% of travel time is taken up by bus drivers selling and checking tickets.
- z Sell tickets at dairies, bookshops, vending machines...
- z Let bus patrons board buses through all doors.
- z Economic models for loss of revenue (non-paying patrons) versus level of control by conductors available.
- z Less delay for patrons.



Partnership of Modes



Conclusions

- z The potentials of the transport modes walking, cycling and public transport are underestimated.



Conclusions

- z Improvements for pedestrians:
- ± Speed reduction of motor vehicles.
- ± Road crossing manoeuvres easier.



Conclusions



- z Reasons why cycling should be encouraged:
- z Reduction in emissions.
- z Improved community health.



Conclusions

- z Potential of public transport is not yet utilised.
- z Improved ticketing can increase the attractiveness of public transport.



Conclusions

- z Engineering and planning for the whole community requires paying particular attention to the requirements of all traffic modes, not just the private motor vehicle.

