Welcome

Professor Michael Buxton
Centre for Urban Research
RMIT University
Professor Graham Currie
Public Transport Research Group
Institute of Transport Studies
Monash University
Benchmarking Public Transport in Melbourne

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Public Transport Research Group
Institute of Transport Studies
Monash University
Introduction

Modal Problems

Land Use Problems

Improvement?

Futures
This paper examines Melbourne public transport performance

- Mode Problems
- Land Use Problems
- Improvement?
- Futures
Introduction

Modal Problems

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Improvement?

Futures
Buses ARE Melbourne’s public transport for most residents, which is a problem....

- Over two thirds of Melbourne can only be serviced by bus services since rail and tram services lie considerable distances from where people live or where they want to travel to.
- In 1996 the Metropolitan strategy team identified that 2.16M Melbournians lived in areas where buses were the only means of access to public transport. 0.98M lived within access distance of rail services.
...because there aren't many

- Over two thirds of Melbourne can only be serviced by bus services since rail and tram services lie considerable distances from where people live or where they want to travel to.
- In 1996 the Metropolitan strategy team identified that 2.16M Melbournians lived in areas where buses were bus was the only means of access to public transport. 0.98M

<table>
<thead>
<tr>
<th>Weekday Service Frequency (2006)</th>
<th>Weekday Service Span</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak</td>
<td>Off Peak</td>
</tr>
<tr>
<td>AV. MELBOURNE</td>
<td>40m</td>
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</tbody>
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[Map of Melbourne with bus routes and key locations]
The bus network on weekdays...
...contrasts somewhat with weekends

Sunday Bus Services

Source: Currie (2003)
Frequency drives Australian ridership performance

In general our bus service level is poor compared to world practice.

Tram services are struggling in growing traffic congestion

Melbourne is the world's biggest "streetcar" system.

Mixed Traffic service impedes performance

Average Operating Speeds – World Tram/Light Rail Systems

Melbourne Tram Reliability

- 33% of services are considered to be NOT running on time
- On time defined as arriving more than 1 min early or more than 6 mins late

Source: Track Record

Source: UITP Databank
Melbourne tram ridership is low compared to overseas systems; due to low relative frequency

Better performing railways are built on new not old infrastructure and strong resilience/reliability

### Average Speed (Kph)

- **Melbourne**: 33
- **Singapore**: 45
- **Hong Kong**: 52.6
- **Perth**: 55

### Breakdowns in Service (000 kms)

- **Melbourne**: 15
- **Sydney**: 50
- **Best Practice**: 100
- **Singapore**: Never Recorded
- **Hong Kong**: Never Recorded

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**Av. Speed (Kph)**

**Breakdowns in Service (000 kms)**
...yet expanding rail, thus making it more complex, has been our approach to mass transit expansion
Unplanned disruptions are common; e.g. reported signal faults; 1,900 p.a. (5+/day)

Reported Signaling Disruptions

- 1,900 signal failures p.a. (12 months to August 2013)
- 5.2 per day
- Biggest Locations:
  - Flinders Street Station 89
  - North Melbourne 71
  - Newport 51

Metro Trains

"We are installing advanced computer technology which improves control of the signalling system, but our field equipment is outdated and requires replacing."

Source: Adam Carey, The Age, ‘Signal failures are causing chronic rail delays’ 23/10/2013
Melbourne rail demand growth has been impressive by any standard.
However the rail network has reached capacity
So what do passengers think about these issues?
Variation in Perceptions of Urban Public Transport Performance Between International Cities Using Spiral Plot Analysis


TRANSPORTATION RESEARCH RECORD No. 2538 on pages 54-2.5-2

Performance Minus Importance Ratings

Spiral Plot
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Futures
The Transit Orientation of Development

**Density**
– the concentration and compactness of development within geographic space

**Diversity**
– the land use mix including the balance and compatibility of users with each other (and transit)

**Design**
– which relates how the various land uses are combined, linked and presented in terms of ease of access and attractiveness

*Source: Cervero and Kockleman (1997)*
The Transit Orientation of Development – Design (Walkability) in Melbourne

The Transit Orientation of Development – Density in Melbourne

The Transit Orientation of Development – OVERALL Melbourne – only in central areas

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Since 2001 PT service increased 63% (66% bus/ 36% rail, 10% tram) but - but population growth continues at a faster pace...

Source: Department of Transport/ Public Transport Victoria Annual Reports
...in last 10 years, per capita service increased to 22% but declined since 2011 (we have gone down by 9% points); recent trend is flat.

Source: Department of Transport/ Public Transport Victoria Annual Reports
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Futures
Melbourne is expected to increase in size by another 1-2M people in 20-30 years

Source: Victoria in Future (2012)
Melbourne Metro; exciting but capacity upgrade is long overdue now – current start date is 2026!
Melbourne rail grade separations; exciting some capacity relief but not an increase in service
Where is tram and bus priority? – SmartBus; downgraded?
About World Transit Research

World Transit Research (WTR) is designed to help public transport practitioners and researchers get easier access to quality research in the field of public transport planning. WTR is a free repository of research papers, reports, research abstracts and links to research findings from leading research journals indexed and searchable to ensure easier access to topics of interest. The site is developed and run by the Public Transport Research Group at the Institute of Transport Studies, Monash University.

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Jenny Brake and John D. Nelson

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The Public Transport Research Group is the name for researchers at the Institute of Transport Studies, Monash University who are engaged in research on public transport systems. The group is run by Professor Graham Currie, the Chair in Public Transport at Monash University. Research interests of the group are varied but loosely focus on research associated with public transport and strategic planning, travel demand management, travel behaviour, transport economics, land use and transit, travel modelling, operations modelling and planning for major special events.

**ALSO:** NEW PTRG WEBSITE
PTRG.INFO
Join the **ITS (Monash) LinkedIn** group to keep informed of our activities
Professor Jago Dodson

Centre for Urban Research
RMIT University
Nicholas Low
President of Transport for Melbourne

Roger Taylor
Chair of Transport for Melbourne
Victoria McKenzie-McHarg
Climate Campaign Manager
Australia Conservation Foundation
Friends of Transport for Melbourne

John Hearsch – Rail Futures
Mike Reece – VTAG
Tony Morton – PTUA
Oz Kayak – TCPA
The Way Forward

- Review forum feedback
- Establish a federation of advocacy groups
- Confirm a community transport charter
- Engage with Government to develop a Transport Plan
- On-going community involvement in the Transport Plan
Become a Friend of TfM

See our website
www.transportformelbourne.org

Thank you all for your participation this evening
TfM thanks RMIT, Centre for Urban Research, for hosting this Forum