

# Leading Practice Models of Collective Urban Transport

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# Integrated Management of Sustainable Urban Passenger Transport Systems in Dispersed Cities: A Review of Successful Institutional Interventions

## Goals & Objectives

- To review successful integration of: collective transport modes & planning for collective & individualised transport, in Australia & internationally
- To identify case studies for further investigation
- To explore the institutional factors leading to success
- To inform key Australian urban transport decision makers
- To refocus the Australian transport planning debate
- To contribute to transport planning theory



## International Case Studies

Barcelona, Spain  
Bogotá, Columbia  
Curitiba, Brazil  
Gothenburg, Sweden  
Portland, USA  
Shanghai, China  
Singapore  
Stockholm, Sweden  
Toronto, Canada  
Vancouver, Canada  
Zurich, Switzerland

## Australian Case Studies

Brisbane  
Melbourne  
Perth  
Sydney



## On Integrated Transport Systems

*Viegas (1999): Dimensions of integrated transport*

- Physical: Space & time (e.g., interchange stations & coordinated timetables)
- Logical: System information shared by operators & managers
- Tariff: Packages of transport services using integrated prices

European Commission (2003): Influences on efficacy of integrated transport

- Policy & Institutional
- Management & Operational
- Planning, Design, & Implementation

*Potter & Skinner (2000): Integration typology*

- Functional or Modal Integration, which is part of ...
- Transport and Planning Integration, which is part of ...
- Social Integration, which is part of ...
- Environmental, Economic & Transport Policy Integration



## Thinking about Institutions

- Values, norms, rules, & formal & informal procedures that determine or influence social behaviour
- Often in the form of organisations or mechanisms (such as rules & laws) that determine social structure & govern social & individual behaviour (as well that set of informal rules within society)
- Competing theories & schools, incl.: Rationalist, Historicist, Sociological, Institutions as actors, Institutions as cognitive frameworks, New Institutionalism

## Key Transport Institutional Issues

- **Governance & regulation**
- **Economic productivity**
- **Management**
- **'Territory'**
- **Technology choice**
- **Ecological sustainability**
- **Community interests**



# Indicators of Integration

**Table PI. Indicators of Integration**

Institutional factors	
<ul style="list-style-type: none"> <li>• Institutional cooperation between transport actors</li> <li>• Integrated strategies between environment &amp; transport actors</li> <li>• Transport &amp; environment monitoring services</li> <li>• Integrated strategy &amp; policy development &amp; implementation</li> <li>• Formal systems of public accountability for system operation</li> <li>• Formal legitimacy</li> </ul>	
Non-Institutional Factors	
<p><b>Integrated Public Transport Services</b></p> <ul style="list-style-type: none"> <li>• Coordination across different modes</li> <li>• Unitary fare/ ticketing system</li> <li>• Coordinated timetables across system</li> <li>• Provision of city-wide service</li> <li>• Inner-city—suburban linkages</li> <li>• Cross-city linkages</li> </ul>	<p><b>Access and Equity</b></p> <ul style="list-style-type: none"> <li>• Access to transport services</li> <li>• Services for the disabled</li> <li>• Services for disadvantaged groups</li> <li>• Fare structures</li> </ul>
<p><b>Infrastructure and Services</b></p> <ul style="list-style-type: none"> <li>• Infrastructure capacity</li> <li>• Infrastructure investments</li> </ul>	<p><b>Costs and Prices</b></p> <ul style="list-style-type: none"> <li>• External costs</li> <li>• Costs of services</li> </ul>
<p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Energy use, energy efficiency</li> <li>• Greenhouse gas emissions</li> <li>• Accidents &amp; safety measures</li> <li>• Emissions to air and water</li> <li>• Noise levels</li> <li>• Monitoring &amp; performance valuation</li> </ul>	<p><b>Technology Choices</b></p> <ul style="list-style-type: none"> <li>• Environmental performance</li> <li>• Economic performance</li> <li>• Safety &amp; comfort</li> <li>• Compatibility with wider system</li> </ul>
<p><b>Transport Demand</b></p> <ul style="list-style-type: none"> <li>• Passenger demand</li> <li>• Modal split</li> </ul>	<p><b>Coordination with Private Transport</b></p> <ul style="list-style-type: none"> <li>• Coordinated transport planning</li> </ul>



# Contesting Regimes: Urban Planning & Transport Planning

**Table CM. Conventional Model of Institutional Features of Urban Planning and Transport Planning**

Institutions	Role	Orientation	Typical Concerns
Planning	<p>Urban land use zoning and development control</p> <p>Shaping urban structure</p> <p>Infrastructure development</p> <p>Social and environmental impact assessment</p> <p>Coordination of public and private investment/ public regulation</p> <p>Resolve land use conflicts</p>	Urban geography Spatial analysis	<p>Urban form (pattern)</p> <p>'Orderly' development</p> <p>Management of planning process</p>
Transport	<p>Transport planning</p> <p>Transport infrastructure development</p> <p>Transport operations</p> <p>Transport management</p>	<p>Transport engineering</p> <p>Public sector accounting</p>	<p>Travel demand</p> <p>Operations and maintenance</p> <p>Capacity and service levels</p> <p>Supply costs</p>



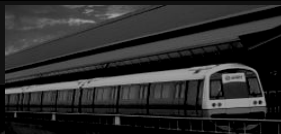
## Major Influences on Urban Integrated Transport Systems

- **Transport Governance (esp. Institutions, Organisations, & Policies)**
- **Guiding Rationale for the Transport System (esp. Values, Principles, & Goals)**
- **Characteristics of the Transport System (esp. Infrastructure & Services)**
- **Urban Form & Function (esp. History, Geography, & Economy)**



## Path Dependency & Integrated Public Transport

- 'History matters' in creating institutional support for integration
- History also matters in promoting 'sub-optimal' conditions
- Technology choice issues in public transport important
- Future expectations often highly influential (esp. transport planning)
- 'Collective good' problems & public transport: durable institutions and policies
- Conditions for change are difficult to determine: timing important, many possible equilibria, small events → lasting effects, source for change can be obscure



Ticketing Zones

Zone 1

Zone 2

Zone 3

Zone 4

Zone 5

Zone 6

Zone 7

## Australian Cities & Integrated Public Transport

- **Integration in:**
  - Ticketing**
  - Journey planning**
  - Current planning, esp. for urban expansion**
- **Less success in:**
  - Timetable coordination & Interchange facilities**
  - Current planning for existing urban fabric**
  - Implementation of integrated plans**
  - 'System-wide' integration**
- **Institutions: Integration typically an 'overlay' on existing arrangements**