



Workshop 1

Innovation in Service Delivery and Performance Management

SUMMARY OF OUTCOMES

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Thredbo

International Conference Series on Competition
and Ownership in Land Passenger Transport

Workshop 1 – 18 papers 40 participants...



13 Countries

Chile, Australia, Venezuela, Canada, Japan, Mexico, Singapore, USA, South Africa, Italy, Sweden, NZ, UK

Workshop 1 – 18 papers 40 participants...

1. **TRENDS** - What are the key trends in Innovations in Service Delivery and Performance Management?
2. **GAPS** - What aspects have not been covered by the papers presented in the workshop?
3. **FUTURES** - Where do we see the industry in regard to innovation, Service Delivery and performance management say in 2020?

Workshop 1 – 18 papers 40 participants in 5 Focus Areas

1. **TRENDS** - What are the key trends in Innovations in Service Delivery and Performance Management?
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3. **FUTURES** - Where do we see the industry in regard to innovation, Service Delivery and performance management say in 2020?

A - IMPROVING RELIABILITY & SPEED WITH TRANSIT PRIORITY AND OPERATIONS REFORM

B - SERVICE DESIGN IMPROVEMENT AND INNOVATION

C. IMPROVING TRANSIT PLANNING METHODS

D. USER PERCEPTIONS, NEEDS AND BEHAVIOUR CHANGE

E - INNOVATION IN PERFORMANCE MONITORING AND PROCUREMENT

A - IMPROVING RELIABILITY & SPEED WITH TRANSIT PRIORITY/ OPERATIONS REFORM

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Key Issues

Key Drivers

Papers

- When is a Bus Lane Warranted (13) - Todd Litman
- Improving Bus Service Reliability: The Singapore Experience (3) - Waiyan Leong and Karen Goh
- Increasing the speed: a case study from Santiago (169) - Alejandro Schmidt, Juan Carlos Munoz, Christopher Bucknell, Matias Navarro and Carolina Simonetti
- Scheduled vs headway based operation: A hybrid approach (65) - Diego García and Juan Carlos Muñoz

IMPACT

A - IMPROVING RELIABILITY & SPEED WITH TRANSIT PRIORITY/ OPERATIONS REFORM

Trends

- a. Increased priority/express/speed measure implementation
- b. Better quality/quantity of operations data
- c. Increased emphasis on improved passenger experience (reliability, information, speed)
- d. Trend is more concern about Reliability; mandated in contracts
- e. Emphasis on sustainability (bus speed, fuel use)
- f. More Pro Transit vs car emphasis (in some places)

Gaps

- g. A political/regulatory structure to deliver more priority
- h. Traffic signal (and dynamic) priority
- i. Approaches to data integration
- j. Definitions of reliability (human factor based)
- k. Human factor perspectives (and responses) to new technology
- l. Coordination/synchronization and reliability/priority
- m. The role of place/streetscape, complete streets in road redesign

Futures

- i. Realtime operations responses (automation, driverless – in corridors)
- ii. Increase in number and range of operational schedules
- iii. Other (new) modes ; shared mobility and dedicated infrastructure
- iv. Open, increasing data availability

Key Issues

- Poor contract approaches to:
 - priority impacts/ benefits
 - Handling of big data/ data integration

Key Drivers

- **Technology**
 - Computing, data, communications, geocoding
- City/Congestion Growth

B - SERVICE DESIGN IMPROVEMENT AND INNOVATION

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Key Issues

Key Drivers

Papers

- An overview of enhanced bus services in Australian cities: What has been tried, what has worked? (22) - Geoffrey Tilden Clifton and Corinne Mulley
- Super express services operated on urban highways: The opportunity of a new metropolitan transport mode (157) - Matias Navarro, Juan Carlos Muñoz, Christopher Bucknell and Alejandro Schmidt
- Comparing Open and Closed BRT networks in medium-sized cities (113) - Francisco Javier Probeste, Juan Carlos Munoz and Antonio Gschwender
- Demand and service impacts of competition for the market - Australian urban bus case studies (59) Ian Wallis

IMPACT

B - SERVICE DESIGN IMPROVEMENT AND INNOVATION

Trends

- a. Smart BRT [Pre BRT -BRT lite] development, testing, improvement

MUCH DIVERSITY OF MODELS BEING TESTED. IMPORTANT ISSUE IS WE ARE BEING INVENTIVE AND TRYING THINGS OUT – IMPACT ISSUE IS BRINGING OUT WHATS BEST; OPENNESS TO DIVERSITY AND NEW IDEAS

Gaps

- b. Dedication of corridors to Transit (BRT/BHLS, LRT Europe)
- c. Shared Mobility, Last Mile Innovation, low density (micro transit)
- d. Increased use of soft factors in design (e.g. info on bus, SF bus)
- e. Niche market offerings (SF bus), airports, universities
- f. Improving fixed bus infrastructure (stops stations)
- g. Selective frequency concentration on corridors
- h. Demand responsive transit
- i. Intermodal Integration

Futures

- i. Automation, dynamic assignment of vehicles
- ii. More Demand Responsive Transit and DRT Integration
- iii. More BRT

Key Issues

- Adapting buses to maintain public safety
- Value soft factors needed
- Vehicle Design

Key Drivers

- Value for money/ Efficiency
- Improving user experience

C. IMPROVING TRANSIT PLANNING METHODS

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Key Issues

Key Drivers

Papers

- A decision support system for managing disruptions in tram systems (104) - Paolo Carnaghi, Oded Cats and Wijnand Veeneman
- Passenger Flows Management by a Valve on Subway Platform (168) - Juan Carlos Muñoz, Arturo Didier and Constanza Silva
- Mixed integer programming approach for scheduling evasion-control inspectors in an integrated public transport system (149) - Cristián Cortés, Diego Muñoz, Pablo A Rey, Luis Trujillo and Sebastián Valenzuela Ramírez

IMPACT

C. IMPROVING TRANSIT PLANNING METHODS

Trends

a. Bid Data, Computed Planning, optimizing, data mining

MORE SOPHISTICATION BUT IS IT BETTER
LACK OF TOOLS

- LAND USE GAP – SOCIAL PLANNING GAP;
- HUMAN FACTOR GAPS

Gaps

- b. Mapping. GIS, Positioning, accessibility planning
- c. Types of analysis, longitudinal data, smart cards
- d. Better passenger data, smart cards
- e. More/easier passenger feedback sought/considered
- f. More social transit service concepts; how to plan?
- g. Challenges for capacity planning to manage overloading (rail/road)

Futures

- i. Tools to make sense of data, visualization, Tools for automated network planning??
- ii. Data Overload, long way from reality, alienation from reality/humans

Key Issues

- Silo approaches
- Lack of pro-active investment
- Need to consider human (psychological) factors
- Changing travel behaviours
- Poor model outcomes

Key Drivers

- Data, AVM
- Changing travel behaviours
- Poor model outcomes

D. USER PERCEPTIONS, NEEDS AND BEHAVIOUR CHANGE

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Key Issues

Key Drivers

Papers

- Enjoying loyalty: The relationship between service quality, customer satisfaction, and behavioral intentions in public transit (34) - Dea van Lierop and Ahmed El-Geneidy
- Nudge, Nudge, Wink, Wink. Say no more. The impact of smarter choices on the use of active travel and public transport (36) - John Preston, Alan Wong and Adrian Hickford
- The Role of Local Transport in the Solution for the Problem of Limited Access to Shopping Facilities (58) - Yoshinori Takahashi and Hiroki Sakai

IMPACT

D. USER PERCEPTIONS, NEEDS AND BEHAVIOUR CHANGE

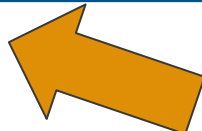
Trends

- a. Understanding user satisfaction, user experience
- b. Innovations in increasing ridership (softer measures)
- c. Data collection methods and tools for understanding implications
- d. Outreach of services to customers (shopping, rural)

Gaps

- e. New technologies to collect user data, opinions
- f. Transit marketing; managing user perceptions/expectations, responsibility
- g. Improved planning for customer satisfaction
- h. Innovative integrated service models (diverse services)

Futures

- i. More personalized services, easier to understand transit
 - ii. More customized information (disruptions)
 - iii. Consolidation of crowdsourcing
 - iv. Travel behavior change
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Key Issues

- Demographic/ land use changes - Aging population impairment liberalisation
- Changing user expectations
- Understanding how to use social media
- Understanding ridership retention

Key Drivers

- Pressure to increase ridership
- Technology/ coms.
- Better meet the needs of the customer/ Human factors
- Disability legislation
- Cost efficiency

E - INNOVATION IN PERFORMANCE MONITORING AND PROCUREMENT

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Key Issues

Key Drivers

Papers

- An innovative automatic certification tool for the assessment of Public Transport service performances indicators and the management of service contract 23) - Giorgio Ambrosino, Brendan Finn and Saverio Gini
- Subjective criteria in procurement of public bus transports 115) - Carolina Camén and Helene Lidestam
- Better, Quicker, Together: piloting a mobile crowdsourcing approach to real-time sensing of transit service quality and customer satisfaction 126) - Corinna Li, Kalan Vishwanath, Zhengquan Qin, Fang Zhao, Christopher Zegras and Jinhua Zhao
- Estimation of travel time variability for public transport users in Santiago (159) - Alejandro Tirachini and Elsa Durán


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E - INNOVATION IN PERFORMANCE MONITORING AND PROCUREMENT

Trends

- a. Detailed monitoring data and new technology collection of data
 - b. New methods of collecting data
 - c. More User opinions in monitoring performance
 - d. Better understanding of satisfaction
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Gaps

- e. Better fare collection (data) ; fairer revenue/better yield/ Management
 - f. More open data for procurement (info for procurement better contracts
 - g. More outsourcing and contracting
 - h. Increased outsourcing at all levels of the supply chain
 - i. Govts own assets but outsource operations
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Futures

- i. Better allocation of subsidies/funds
- ii. Better revenue allocation payment per pax km

Key Issues

- Open data and privacy
- Pax complaints to resolution method
- Full disclosure
- Fare evasion
- Take politics out of procurement
- Major disruption responses
- Increased measures but within an existing contract – needs flexible contracts
- Need for sophistication in satisfaction monitoring

Key Drivers

- Better performance
- Better info, technology
- Cost effectiveness
- Risk aversion in Govt
- Encouraging competition