

## CONFERENCE PROGRAM Sunday 13 to Thursday 17 August 2017

15<sup>th</sup> International Conference on Competition and Ownership in Land Passenger Transport

Hosted by Stockholm School of Economics and Swedish National Road and Transport Research Institute (VTI)





			Sun	day 13	Augu	st 2017			
12:00-16:00	General Assembly of Bus Rapid Transit Centre of Excellence (including sandwich lunch and coffee break) / Room Ragnar								
18:00-20:00				We	elcome reception	n / Atrium			
			Mon	day 14	Augus	st 2017			
09:00-09:25	Welcome	from Local D	irector, Stockho	olm School of Ed	conomics Vice F	President, VTI Dir	ector General a	nd International (	Chair / Aula
09:25-10:15	Plenary presentation by David Hensher, Dr. David Bray and Yale Wong / Aula								
10:15-10:30		Keynote o	pening speech:	: Mattias Landgr	en, State Secre	tary, Ministry of E	Enterprise and Ir	nnovation / Aula	
10:30-11:00	Morning Tea / Atrium								
11:00-12:15	Panel discussion on "Competition, cooperation and trust between actors in a deregulated transportation market" with participants from the Swedish transportation sector /Aula								
12:15-12:30	Introduction to workshop sessions / Aula See pages 14-19 for details and location of your workshop								
12:30-13:30	Lunch / Atrium Meeting for Chairs, Local Director and International Chair (by invitation only) / Board Room (Direktionsrummet)								
40.00.45.00	Workshop 1	Worksho	ops 2a+2b	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8
13:30-15:00	A342	A720 then	A520+A536	A350	A336	A133	A138	A320	A348
15:00-15:30					Afternoon Tea /	Atrium			
15:30-16:50	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
16:50-17:00	Short break								
17:00-18:00	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
			Tues	sday 15	5 Augu	st 2017	,		
09:00-10:30	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
10:30-11:00					Morning Tea / A	Atrium			
11:00-12:30	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
12:30-13:30	Lunch / Atrium								
13.30-15:00	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
15:00-15:30					Afternoon Tea /	Atrium			
15:30-16:50	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
16:50-17:00					Short brea	lk			
17:00-18:00	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
19:00-21:00			Recep	otion at Stockhol	Im City Hall, hos	sted by the City o	f Stockholm		

			Wedn	esday	16 Aug	ust 20	17		
09:00-10:30	W1	W2a	W2b	W3	W4	W5	W6	W7	W8
10:30-11:00	Morning Tea / Atrium 1st floor								
11:00-12:30	W1	W2a + V	V2b (A720)	W3	W4	W5	W6	W7	W8
12:30-13:30	Lunch / Atrium Michael Beesley Award Committee meeting (by invitation only) / Board Room (Direktionsrummet)								
13:30-15:30	Free time for delegates Final preparation of workshop reports / Rooms below Atrium								
15:30-17:30	Boat excursion with Strömma Kanalbolaget								
19:00-23:00	Guide	ed tour at the	Vasa Museum,	followed by Cor	nference Dinner,	Michael Beesl	ey Award and Thre	edbo 16 announ	cement
Thursday 17 August 2017									
09:00-10:30	Plenary session on Mobility as a Service with keynote presentations by Dr. Maria Kamargianni and lida Huhtanen / Aula								
10:30-11:00	Morning Tea / Atrium								
11:00-12:30	Workshop Reports 1, 2a-2b, 3 and 4 / Aula								
12:30-13:30	Lunch / Atrium								
13:30-15:00	Workshop Reports 5-8 / Aula								
15:00-15:30	Afternoon Tea / Atrium								
15:30-16:45	Presentation of top three workshop papers, including paper of Michael Beesley Award recipient / Aula								
16:45-17:00	Closing speeches / Aula								
17:10-17:30	Open discussion on the future direction of Thredbo conferences, A120, opposite Aula								
19:00-22:00	International Steering Committee dinner (by invitation only)								
			Frie	day 18	Augus	t 2017			
09:00-16:00			Tech	nical tour / Meet	t-up at Slussen,	metro exit Söd	ermalmstorg		

WiFi-network:SSE Guest Username: t0000001 Password: h971up

# 15<sup>th</sup> International Conference on Competition and Ownership in Land Passenger Transport

## Hosted and Organized by

Stockholm School of Economics

Swedish National Road and Transport Research Institute (VTI)





## Local Organizing Committee

Dr. Gunnar Alexandersson	Stockholm School of Economics Institute for Research
Anders Bondemark	Stockholm School of Economics Institute for Research
Anna Grönlund	Swedish Bus and Coach Federation
Dr. Mattias Haraldsson	Swedish National Road and Transport Research Institute
Dr. John Hultén	K2 - The Swedish Knowledge Centre for Public Transport
Associate Professor Staffan Hultén	Stockholm School of Economics Institute for Research
Dr. Anders Ljungberg	Transport Analysis
Helena Leufstadius	Swedish Public Transport Association
Andreas Vigren	Swedish National Road and Transport Research Institute

## **International Steering Committee**

Professor David Hensher (Chair)	The University of Sydney, Australia
Dr. Gunnar Alexandersson	Stockholm School of Economics, Sweden
Professor Joaquim de Aragão	University of Brasília, Brazil
Brendan Finn	European Transport and Telematics Systems Ltd, Ireland
Professor Rosário Macário	Instituto Superior Técnico, Portugal
Professor Rico Merkert	University of Sydney Business School, Australia
Professor Juan Carlos Muñoz	Pontificia Universidad Católica de Chile, Chile
Professor John Preston	University of Southampton, UK
Professor John Stanley	The University of Sydney, Australia
Didier Van de Velde	Delft University of Technology and Inno-V, The Netherlands
Professor Jackie Walters	University of Johannesburg, South Africa
Ruth Steel (Secretariat)	The University of Sydney, Australia

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## 2 Welcome



#### Dear Delegate,

It gives me great pleasure to welcome you to the 15th International Conference on Competition and Ownership in Land Passenger Transport in Stockholm, Sweden. This conference is proudly hosted by Stockholm School of Economics and VTI, the Swedish National Road and Transport Research Institute.

Since its inception nearly 30 years ago this conference series has established itself as the premier international forum dedicated to the analysis and debate of competition and ownership issues in land passenger transport and in recent years with a broadening out to reflect the changing focus of reforms in passenger transport. It has attracted high quality participation and delivered a large portfolio of impressive material synthesising developments not only from developed nations but increasingly from developing nations.

I would like to express my gratitude for the generous support of our sponsors and for the efforts of the local organising and international steering committees. A special thanks goes to Dr. Gunnar Alexandersson, the chair of the local committee and to the tireless efforts of Ruth Steel, the manager of the Thredbo International Secretariat. These contributions have greatly helped in making this conference, what we hope will be, the most successful in the series so far. I have every confidence you will be stimulated by the activities and discussions at this influential forum over the next few days. I particularly look forward to learning of the outcomes of the workshops. Enjoy the culture and heritage of Stockholm and the excellent company!



#### PROFESSOR DAVID HENSHER, FASSA

Executive Chair and Co-founder of the Thredbo Series Director, Institute of Transport and Logistics Studies The University of Sydney Business School, Australia



#### Dear Delegate,

It has been my privilege and honour to chair the local organizing committee for Thredbo 15, consisting of a dedicated team of people from Stockholm School of Economics, VTI, industry agencies and stakeholders.

Having attended my first Thredbo conference in Leeds exactly 20 years ago, I fondly remember the impact it made. Ever since, the series has played an important role in my development as a researcher. Thredbo is a unique forum where people from public agencies, transport operators, consultants and academics can get involved in theoretical, policy-oriented and very practical discussions. The conference receives contributions from each of these groups and therefore participants will get exposed to academic developments, case studies and benchmark experiences.

This year's event has attracted 130 contributions from 31 countries on five continents. We expect a lively, exciting week, but the outcome very much depends on the active involvement of all participants, not least during the workshop sessions. Hopefully, you will also enjoy some relaxing and entertaining moments as we explore a couple of highlights of what Stockholm can offer.

On behalf of the local organizing committee, I would like to thank the International Steering Committee for giving us the opportunity to host Thredbo, and the organizations whose financial contribution and support have made it possible to arrange the conference in Stockholm. Special thanks go to David Hensher, the international chair, and Ruth Steel, the manager of the international secretariat, for their extensive help and feedback during the whole process of preparations.

1-

#### DR. GUNNAR ALEXANDERSSON

Thredbo 15 Conference Director and Chair of the Local Organizing Committee Senior Researcher, Stockholm School of Economics Institute for Research

## 3 Conference Program

**Conference venue:** Stockholm School of Economics Sveavägen 65 Wheelchair access: Bertil Ohlins Gata 5

Dress code: Smart casual, no suits or ties are required, even for the social events

## Sunday 13 August 2017

- **12:00-16:00** General Assembly of Bus Rapid Transit Centre of Excellence (including sandwich lunch and coffee break), *Room Ragnar, 3rd floor*
- 15:00-17:00 Registration of conference delegates, Room A120, opposite Aula
- 18:00-20:00 Welcome reception, Atrium, 1st floor

## Monday 14 August 2017

Plenary morning session in the Aula, 1st floor. Afternoon workshop sessions in separate rooms. All meals served in the Atrium, 1st floor

- **08:00** Registration of conference delegates (contd.)
- **09:00-09:25** Welcome and introduction:
  - Dr. Gunnar Alexandersson, Thredbo 15 Conference Director, Stockholm School of Economics
  - Lars Ågren, Senior Executive Vice President, Stockholm School of Economics
  - Tomas Svensson, Director General, VTI
  - Professor David Hensher, co-founder of the Thredbo conference series, Institute of Transport and Logistics Studies, University of Sydney Business School
- **09:25-10:15** Plenary presentation: "30 Years of Thredbo Conferences Themes, Achievements and Impact"
  - Professor David Hensher, University of Sydney Business School, Dr. David Bray, University of Queensland & Yale Wong, University of Sydney Business School
- **10:15-10:30** Keynote opening speech: Mattias Landgren, State Secretary, Ministry of Enterprise and Innovation
- 10:30-11:00 Morning Tea
- **11:00-12:15** Panel discussion on "Competition, cooperation and trust between actors in a deregulated transportation market", introduced by Dr Gunnar Alexandersson, Stockholm School of Economics

Participants from the Swedish transportation sector, including:

- Helena Leufstadius, Swedish Public Transport Association
- Erik Pauldin, MTR Nordic AB
- Simon Posluk, Swedish Transport Agency
- Kristoffer Tamsons, Stockholm County Council
- Magnus Åkerhielm, Keolis Sweden
- Caroline Åstrand, SJ AB

Moderator: Didier van de Velde, TU Delft

12:15-12:30	Introduction to workshop sessions: Professor David Hensher, University of Sydney Business School
12:30-13:30	Lunch (with separate meeting for Chairs, Local Director and International Chair in the Board Room)
13:30-15:00	Workshop Sessions
15:00-15:30	Afternoon Tea
15:30-16:50	Workshop Sessions
16:50-17:00	Short break
17:00-18:00	Workshop Sessions
Evening:	Free time for delegates

### Tuesday 15 August 2017

Workshop sessions in separate rooms. All meals served in the Atrium, 1st floor

- 09:00-10:30 Workshop Sessions
- 10:30-11:00 Morning Tea
- 11:00-12:30 Workshop Sessions
- 12:30-13:30 Lunch
- 13:30-15:00 Workshop Sessions
- 15:00-15:30 Afternoon Tea
- 15:30-16:50 Workshop Sessions
- 16:50-17:00 Short break
- 17:00-18:00 Workshop Sessions
- 19:00-21:00 Reception at Stockholm City Hall, hosted by the City of Stockholm

### Wednesday 16 August 2017

Workshop morning sessions in separate rooms. Meals served in the Atrium, 1st floor

- 09:00-10:30 Workshop Sessions, including preparation of workshop report
- 10.30-11:00 Morning Tea
- 11:00-12:30 Workshop Sessions, including preparation of workshop report
- **12:30-13:30** Lunch (*with separate meeting of the Michael Beesley Award Committee in the Board Room*)
- **13:30-15:00** Free time for delegates; final preparation of workshop reports, *in rooms below the Atrium*
- 15:30-17:30 Boat excursion with Strömma Kanalbolaget
- **19:00-23:00** Guided tour at the Vasa Museum, followed by Conference Dinner, Michael Beesley Award and Thredbo 16 announcement

### Thursday 17 August 2017

Plenary session in the Aula, 1st floor. All meals served in the Atrium, 1st floor.

- 09:00-10:30 Plenary session on Mobility as a Service
  - "The Mobility as a Service Concept & Londoners' Preferences for MaaS products", Dr. Maria Kamargianni, Urban Transport and Energy Lab, UCL Energy Institute, London
  - "Mobility as a Service perspectives from Finland", lida Huhtanen, Finnish Ministry of Transport

Concluding discussion and Q&A with both speakers, chaired by Professor Corinne Mulley, University of Sydney Business School

- 10:30-11:00 Morning Tea
- **11:00-12:30** Workshop Reports 1, 2a-2b, 3 and 4 (about 15 minutes per report, including moderated discussion)
- 12:30-13:30 Lunch
- 13:30-15:00 Workshop Reports 5-8
- **15:00-15:30** Afternoon Tea
- **15:30-16:45** Presentation of top three workshop papers, including paper of Michael Beesley Award recipient; introduced by MB Award Committee chair Professor Wijnand Veeneman
- 16:45-17:00 Closing speeches
- **17:10-17:30** Open discussion on the future direction of Thredbo conferences, *Room A120, opposite Aula*
- 19:00-22:00 Separate meeting and dinner for International Steering Committee members

### Friday 18 August 2017

- **09:00-16:00** On Friday, previously registered delegates have the opportunity to join a technical tour, including:
  - Visit to the Slussen reconstruction project
  - Presentation of congestion charging in Stockholm
  - Presentation of cooperation in urban-, station- and public transport development
  - Presentation of The Stockholm Negotiation of Housing and Infrastructure
  - Visit to the new Keolis bus depot in Fredriksdal, including presentation of the new bus line network

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ICC has been granted Observer Status to the United Nations General Assembly from 1st January 2017. ICC also works closely with the World Trade Organization and intergovernmental forums including the G20.





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## 4 Site and venue plans



The main building of Stockholm School of Economics, seen from Sveavägen





## WORKSHOP 1

## Integrating rail and bus based modes (including BRT) into a user-relevant transport system

Chair: Professor Graham Currie Rapporteur: Dr. Dario Hidalgo Location: A342

Building on workshop 4 of Thredbo 14 and its more general discussion on developing inter-modal transport systems, this workshop should focus on the challenges in finding an appropriate role of bus and rail modes into an integrated transport system. We need to move away from debates on rail *or* bus towards a debate on bus and rail integration. Establishing conditions under which various bus or rail treatments really work (from full BRT to lighter versions) will be an important part of this workshop. The workshop will cover themes such as:

- Transit Oriented Development around bus as well as rail including BRT-oriented development (BRTOD) the strategic orientation of urban development around BRT.
- Identifying and designing opportunities for bus and BRT to interact with other modes, particularly non-motorised and electric vehicles.
- Network and timetable synchronization to improve convenience and provide seamless transfers between all modes.
- Understanding the customer experience around integrated transfer sites and how this varies by bus, rail and BRT.
- Thresholds for cost-effectiveness, mobility and accessibility factors for investment in busbased technologies versus rail systems (metros and LRT) and developing decision frameworks to aid policy makers across many global contexts.
- Innovative methods to build and sustain community and political engagement and buy-in for effective rail, bus and BRT as a key surface-transport service articulating a fully integrated and sustainable transport system in cities of diverse sizes and characteristics.
- Examination of instruments and policies that allow successful institutional and service integration of incumbent (sometimes informal) operators with formal, publicly sponsored, rail, bus and BRT systems

This workshop should also focus on understanding why new transit systems including BRT systems often struggle to meet initial expectations regarding service quality or operating subsidy, and also to understand what capacity, resource and political economic dynamics/constraints have prevented transit projects from being implemented and how. Can transit including BRT be an "agent of transformation" in transport, institutions, industry structure and PT contracts? Of interest in many countries is whether we should be restoring large bus operations where they have been substantially replaced by paratransit/informals or with new technologies such as app-based taxi services (taxi-like services are discussed further in another workshop), and developing the structures and capacity of the industry sector that best address these issues.

## WORKSHOP 2A-2B

## Competitive tendering and other forms of contracting-out: institutional and contract design and performance measurement

*Workshop 2 will start and conclude in joint sessions, but otherwise be divided into two groups: 2A - Bus/Coach and general public transport, and 2B - Railways and general public transport* 

**Chairs:** Associate Professor Rico Merkert (2A) and Professor John Preston (2B) **Rapporteurs:** Dr. Maria Melkersson (2A) and Dr. Heike Link (2B) **Location:** A520 (2A); A536 (2B); joint start and finish in A720

This workshop builds on workshop 2 of Thredbo 14 and several previous workshops looking at the introduction of, and continued use of, competitive tendering and other types of contracting-out as a way to introduce more competition in public transport services.

In several countries, the significant efficiency-gains of tendering are things of the past, with authorities and operators facing the challenge of keeping a tendered regime meaningful in the long run in mature markets. Understanding both which factors make procurement successful, and which make them fail are subjects of this workshop. These factors include choices and practices in contract design, performance measures and indicators (KPIs), incentive and penalty regimes, benchmarking and the distribution of risks of operation.

The relation between the authority and the operator is of particular interest, including how to implement strong public transport in weak institutional frameworks. Some focus should be given to regulating, managing and developing the informal and paratransit sector; including guiding it to improved service, safety and organization. Developing appropriate means of procurement, contracts and payment structures in context of inexperienced transport agencies and uncertain finances is of interest.

Further, the potential and experiences of hybrid regimes, for example applying both tendering and direct award, other types of performance-based contract regimes, and deconstructing the governance elements and their effects on performance are also relevant, as well as the costs of tendering in terms of switching operators or transaction costs of the tendering process.

The workshop encourages papers on all these topics both from mature and new markets and representing different institutional settings.

### WORKSHOP 3

## Market initiative regimes: experience and measures to improve performance

Chair: Didier Van de Velde Rapporteur: Dr. Astrid Karl Location: A350

This workshop continues in the tradition of past Thredbo conferences (most recently workshop 7 from Thredbo 14) to discuss the experience with innovation and entrepreneurship and measures that can improve performance in regimes where autonomous market-initiative plays a role.

The workshop will cover collective modes of transport (bus, coach or rail) in local, regional and long-distance markets (taxi-like services are covered by another workshop). Autonomous market

entry could either be the main institutional feature or part of a hybrid regime where market-initiative is an option, for example in addition to a market otherwise characterised by tendering. Studying competitive tendering or other forms of contracting-out will however *not* constitute the topic of this workshop.

This workshop is interested in receiving case studies of both good and bad practices, in terms of legislation and regulation, but also in terms of local action by transport authorities. These can come from existing deregulated regimes (e.g. detailed analyses of examples of quality partnerships from Great Britain, the process leading to their appearance and their performance), recently added experience of deregulation (e.g. long-distance coaches in Germany and France, etc.), on-the-track rail competition (e.g. in Sweden, Italy and Austria), and other markets where market-initiated regimes play a role, such as in Central and Eastern Europe. Long-term conclusions and retrospective analyses from mature markets, such as in Great Britain or New Zealand, are also of interest.

Participants to the workshop are encouraged to develop papers on theoretical issues and optimal regulatory requirements (what regulatory are needed to optimise the functioning of such markets?), papers that discuss the evolution of the regulatory environment (what leads to new legislation, such as the Buses Bill in Britain, and to its specific contents?), papers on the circumstances that favour better performance at the local level (what determines the uptake of regulatory possibilities by the local authorities?), papers that realise case studies (what type of innovation and entrepreneurship can be witnessed at that level?), papers that monitor and evaluate schemes where measures have been taken to promote network effects within a deregulated regime (cases of service coordination and the integration of fares, ticketing and information), etc.

### WORKSHOP 4

## Criteria for successful collaboration

#### Chair: Professor Tom Rye Rapporteur: Associate Professor Karolina Isaksson Location: A336

A client-performer type of relationship often characterizes interaction between organizations in public transportation. However, many challenges facing public transportation require innovative solutions that do not easily emerge from such relationships. This workshop focuses on voluntary collaboration between public and private organizations as a key dimension of public transport governance. Collaborative arrangements can in some cases be a complementary approach to client-performer relationships (when allowed within the legal framework).

Collaboration between organizations with different resources and aims is often crucial for the ability to identify, develop and implement efficient solutions to problems that exceed traditional divisions of responsibility. It can foster trust (trusting partnerships) and joint capacity for innovation. However, precautions might be necessary to avoid corruption. It can also raise questions regarding legitimacy, transparency and accountability. Collaboration can take place in formalized partnerships or more informal networks.

The workshop will address both positive and negative experiences of collaboration and lead to the formulation of key lessons regarding collaboration as a critical dimension in the interaction between the organizations that drive the development of future transport solutions. We welcome research papers on collaboration in a wide set of circumstances and contexts, e.g. related to planning, infrastructure development and provision of public transport services in different institutional regimes.

## WORKSHOP 5

## Bridging the benefit/funding gap

Chair: Professor John Stanley Rapporteur: Dr. Anders Ljungberg Location: A133

This workshop builds upon the results from workshop 3 from Thredbo 14, examining different ways to bridge the benefit/funding gap in public transportation. That workshop sought to identify the benefits and costs of sustainable public transport and then link this to possible means of funding services and service improvements. Such funding will ultimately come either from government (national, regional or local), increased land value, users or others who benefit in some way from public transport services.

Different ways to monetize the benefits and costs of public transport will be highlighted in this workshop. We welcome research studying benefit measurement pricing and funding of public transport systems in urban areas of different scales, geographies and levels of development. This may also include examples of regimes where ticket fees have been abandoned altogether. Moreover, we welcome comparisons with pricing and funding regimes of other relevant services. A wide range of issues are of interest, e.g. land value capture in greenfield and brownfield settings, funding implications of gross cost and net cost contracts, potential for and challenges with private sector funding, fiscal federalism and/or cities deals, including the role and implications of government funding at various levels. A related issue of interest is whether social support to public transportation should be given to individuals rather than to public transport organizations (or systems) and, if so, how this might best be managed.

## WORKSHOP 6

# Wider impacts of public transport and successful implementation of desirable and beneficial projects

#### Chair: Associate Professor Christo Venter Rapporteur: Dr. Wai Yan Leong Location: A138

This workshop builds on workshop 8 at Thredbo 14 and its discussions on the wider economic, social and environmental impacts of investment in public transport. Being the conventional tool for evaluating public transport projects, cost benefit analysis (CBA) may not capture all benefits, thereby deeming some projects less likely to be accepted for implementation. There is both a justification for the inclusion of wider impacts (where they exist) and an improved communication of all impacts.

As concluded at Thredbo 14, accessibility is an important measure of benefit, but seems challenging to communicate only within a general CBA. Other accompanying measures need to be included if the objectives are to evaluate distributional and social policy. These parameters are driven by accessibility changes, by measures of economic development for cities and regions and by social inclusion of community development for neighborhoods. In order to understand the contribution of accessibility, it is necessary to document how different accessibility aspects deliver social benefits or harms, such as new employment, employment accessibility, intermodal connections, access to health care, access to education, and how these variables are influenced by income and preferences. Papers are encouraged that a) make estimations of wider economic benefits of public transport projects (investment in infrastructure and/or development of operation) and/or b) provide ex-post studies of implemented projects comparing social benefits with costs. Discussions on ex-post cases are needed to identify the change in risk estimates from including wider social and economic impacts, in particular community involvement, operator and authority behaviour, and factors outside the control of all stakeholders.

### WORKSHOP 7

### The "uberisation" of public transport and mobility as a service (MaaS): Implications for future mainstream public transport

Chair: Professor Corinne Mulley Rapporteurs: Professor Annica Kronsell Location: A320

The widespread adoption of wearable internet-connected devices such as smartphones, with easy-to-install customised apps for handling a number of services and tasks, has opened up new possibilities in the transport sector. For example, sharing real-time location data and preferences between potential passengers and vehicle providers through apps has given birth to a range of ride-hailing companies, such as Uber and Lyft, as well as new car-sharing services, such as BlaBlaCar and Zipcar, with the impact being particularly strongly felt in the traditional taxi market. In some cities and countries, the new services have been welcomed and even facilitated, while in others there have been clashes with regulators as well as with incumbent operators.

In the early years of the Thredbo Conference series, the taxi market was given much attention, in particular relating to efforts aimed at market opening and deregulation. The impact of various forms of taxi services has also been a recurrent theme in discussions of the sometimes informal, unregulated part of the transport sector, notably in developing countries. This workshop highlights the need to revisit the taxi market and study how changes in ownership and competition create a new landscape. There appears to be an abundance of more or less documented cases from many countries. Coupled with the visible effects and experiences gained, fundamental questions arise on how to treat the new entrants. What kind of regulation is appropriate in order to create "fair" conditions in the market and perhaps set minimum standards? Will such efforts lead to market exit or collaborations to provide door-to-door services? Are the business models of the new entrants really sustainable or are new business models needed and, if so, what might they look like? The collected knowledge of previous Thredbo conferences should make it possible to give a contribution to these and other current issues. Papers looking at the various experiences and regulatory reactions in different geographical settings and contexts are welcome.

The shared economy and technological developments made possible by digitalization, which have broader implications for public transport to consider, are also part of this workshop. Can a wider implementation of the practices of the ride-hailing companies lead to new ways of creating flexible and truly on-demand urban bus services? Are there special implications for transport services for passengers with reduced mobility? Will the adoption of new technologies such as autonomous vehicles and new mobility and business models such as mobility as a service (MaaS) open up mobility options that respond to user needs? How might the various players (existing and new) position themselves to benefit by new possibilities offered as a result of digitalization? Will the way public transport is organized and financed ultimately be disrupted – and what will be viable in terms of competition, contracts and governance? What implications are there for traffic congestion, and who really benefits?

We welcome research on institutional, social and economic aspects (in particular regarding Thredbo cornerstones like ownership and competition) related to the assessment, planning and implementation of less conventional and innovative solutions. Papers relating to countries where car ownership is low (as in many developing economies) as well as countries with high car ownership are equally welcome.

## WORKSHOP 8

## Big spatial data and data analytics in the digital age and how it can benefit public transport users

Chair: Professor Marcela Munizaga Rapporteur: Dr. Menno Yap Location: A348

Workshop 5 at Thredbo 14 initiated a discussion on Big Data and its relevance for public transportation, for example to improve planning and operations. It was concluded that although progress has been made in terms of its utilization, much remains to be done. Examples include standardization of data formats, development and sharing of analytical tools and best practices across the industry, collaboration between academics and transit agencies, data fusion using data from different sources, and utilization of data generated in transportation systems for "outside applications" such as urban planning, healthcare and public safety.

In general, there is a need for more case studies to be discussed, involving people from a broad range of stakeholders and disciplines. In addition to the need to continue work on models to extract knowledge from historical transportation data, there is a largely unexplored area of predictive transportation models that can be built using big data.

This workshop welcomes papers that can contribute to the further development and knowledge related to the use of big data in public transportation. Case studies that involve collaboration between academics and practitioners, with direct implications on policy or other developments that will benefit the users of public transportation, are particularly welcome.



K2 is Sweden's national centre for research and education on public transport.

Our research areas: Financing and Governance I Societal Impact I Collaboration Digitalisation I Travel Behaviour

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K2 is operated and funded by Lund University, Malmö University and VTI in collaboration with the Stockholm County Council, Region Västra Götaland and Region Skåne.

We get support from Vinnova, Formas and the Swedish Transport Administration.

## 6 Plenary Speakers



#### DR. DAVID BRAY

Dr. David Bray is an Adjunct Associate Professor at the University of Queensland and an independent consultant. As a government employee, a consultant to governments and international development agencies and a researcher, he has worked in 30 countries, mostly in Asia, the Pacific and the Middle East. He specialises in transport policy, economics and planning and also has extensive experience in strategic multi-sector infrastructure planning and municipal development. He has had an extended previous association with bus contracting in Adelaide (Australia), and has attended all Thredbo conferences since 2001.



#### PROFESSOR DAVID HENSHER

David Hensher is Professor of Management, and Founding Director of the Institute of Transport and Logistics Studies (ITLS) at The University of Sydney. Educated in UK, Kenya and Australia, David is a Fellow of the Australian Academy of Social Sciences, Recipient of the 2009 International Association of Travel Behaviour Research (IATBR) Lifetime Achievement Award in recognition for his long-standing and exceptional contribution to IATBR as well as to the wider travel behaviour community; Recipient of the 2006 Engineers Australia Transport Medal for lifelong contribution to transportation. David is also the recipient of the Smart 2013 Premier Award for Excellence in Supply Chain Management, the 2014 Institute of Transportation Engineers (Australia and New Zealand) Transport Profession Award, and the 2016 Award for Outstanding Research as part of the inaugural University of Sydney Vice-Chancellor's Awards for Excellence. Honorary Fellow of Singapore Land Transport Authority, and a Past President of the International Association of Travel Behaviour Research.

He has published extensively (over 600 papers) in the leading international transport journals and key journals in economics as well as 16 books. He has over 41,000 citations of his contributions in Google scholar. David has advised numerous government and industry agencies in many countries (notably Australia, New Zealand, UK, USA and The Netherlands), appointment to Infrastructure Australia's reference panel on public transport, and is called upon regularly by the media for commentary. David is a member of the Board of Advice of ITLS (Africa) at the University of Johannesburg.



#### IIDA HUHTANEN

lida Huhtanen is a Senior Officer for Legal Affairs at the Finnish Ministry of Transport and Communications. In this position she works with legislative proposals regarding public transportation. This includes the Ministry's ambitious and ground-breaking legislative reform, the Transport Code. Iida Huhtanen is a down-to-earth lawyer with understanding for projects large and small and building bridges between stakeholders. She holds a Master's degree in Law from the University of Helsinki.

#### DR. MARIA KAMARGIANNI

Dr. Maria Kamargianni is a Lecturer (Assistant Professor) in Transport and Energy and the Head of MaaSLab at the UCL Energy Institute. Her areas of research include travel behavior, new mobility services, mobility-as-a-service (MaaS), transportation demand modelling, transportation systems analysis, market research and econometrics. She has widely published in the academic and professional literature. She is the Project Coordinator of several MaaS related projects, such as: MaaS4EU (H2020 project-she is the scientific co-ordinator), FS-MaaS, De-MaaS, SMaaS, SimMaaS. Dr. Kamargianni has received several outstanding awards in the transport sector for her research and methodologies she developed, such as: 1. the Bronze medal in the pan-European contest for early stage researchers (by the Transport Research Arena; Brussels, 2010), 2. the Best Student Paper Award in Choice Modelling (by the Elsevier Journal of Choice Modelling; Sydney, 2013), and 3. the Ryuichi Kitamura Best Paper Award in Travel Analysis Methods (by the US National Academies of Sciences, Engineering, Medicine – Transportation Research Board; Washington DC, 2014).

She works closely with the public authorities and the industry to transfer and apply her research outputs to the real world.



#### MATTIAS LANDGREN

Mattias Landgren is State Secretary to the Minister for Infrastructure, Tomas Eneroth, at the Ministry of Enterprise and Innovation. His areas of responsibility are transport and infrastructure issues. Mattias Landgren holds a Master of Law from Uppsala University and has previously worked as lawyer and legal officer at several Swedish trade unions. Between 2014 and 2016 he was a political adviser at the Coordination Secretariat at the Prime Minister's Office. He holds the Swedish model in high regard, not least when it comes to negotiations between opposing stakeholders. Even if opinions differ and negotiations are tough, he stresses the importance of eventually reaching an agreement, leading to mutual benefit and progress.



#### YALE WONG

Yale Wong is a Doctoral Candidate and Research Analyst at the Institute of Transport and Logistics Studies (ITLS) at the University of Sydney Business School. His present research is to market test mobility as a service (MaaS) with respect to demanders and suppliers, supervised by Professors David Hensher and Corinne Mulley. He holds the Busways Group and University of Sydney Business School Postgraduate Scholarship on Public Transport Systems. Yale has completed projects for the Bus Industry Confederation and Sustainable Business Australia, and recently concluded a three-month study visit to South Africa funded by the Volvo Research and Educational Foundations. He has worked previously in bus operations with experience in network planning and service development.

## 7 Panelists



#### HELENA LEUFSTADIUS

As CEO for Svensk Kollektivtrafik – the Swedish Public Transport Association, the trade organisation of public transport authorities in Sweden, Helena Leufstadius works on providing support and service to their members by being a powerful voice for public transport, spreading know-how on and increasing the insight into its advantages among decision-makers. Helena has vast previous experience from the Swedish public transport sector, working as CEO at two public transport authorities, being director of procurement at the train operating company SJ, as well as senior consultant on sustainable transport at the engineering consultancy firm Sweco.



#### ERIK PAULDIN

Erik Pauldin is the Public Affairs Manager of the public transport operator MTR Nordic, a subsidiary of the Hong Kong-based multinational company MTR Corporation. Erik has a background in the transport industry from positions at Jernhusen and Ports of Stockholm. Apart from being the contractor for the Stockholm metro system since 2009, MTR also entered the Swedish long-distance passenger railway market with the MTR Express brand in 2015, and started operating the tendered Stockholm commuter rail network in December 2016.



#### SIMON POSLUK

Simon Posluk is Head of unit for market, environment and analysis at the Swedish Transport Agency, a government agency with multi-modal regulatory responsibilities. He has a background as management consultant at PwC and project manager at LFV – the Air Navigation Services of Sweden. He is Sweden's representative in the Air Transport Regulation Panel of the International Civil Aviation Organization (ICAO) and is also chief delegate /alternate chief delegate for the Swedish delegation to the Maritime Protection Committee of the International Maritime Organization (IMO)



#### KRISTOFFER TAMSONS

Kristoffer Tamsons was, at the turn of the year 2014 and 2015, elected as County Council Commissioner responsible for the Traffic and the Public Transport sector in the Stockholm County. A member of The Moderate Party, which has held power in the region since 2006, Mr. Tamsons has been Mayor, Campaign manager and Chief of Staff for the party in Stockholm County. As a former Speechwriter, Director of Planning and Chief of Staff to then Swedish Prime Minister Fredrik Reinfeldt, Kristoffer Tamsons has played a key role in Swedish national policy-making and governance.



#### MAGNUS ÅKERHIELM

As CEO of the Swedish division of the global public transport group Keolis, Magnus Åkerhielm manages one of Sweden's largest bus operators with operations all over Sweden, serving over 800,000 passengers per day. Contributing with his solid knowledge and background in public transport, Magnus also serves as a board member of the Swedish Bus and Coach Federation – Sveriges Bussföretag, a trade organization representing the professional bus and coach industry in Sweden.



#### CAROLINE ÅSTRAND

Caroline Åstrand is Senior Vice President and head of the Product division at the train operating company SJ AB. As such, she has the overall responsibility for SJ's open access traffic lines as well as SJ's tendered traffic business. This role has given her deep insights in commercial viability, traffic planning, pricing, and service offering in the Nordic rail market. SJ's extensive operations cover all of Sweden as well as services to the Scandinavian capitals Copenhagen and Oslo. Before joining SJ, Caroline Åstrand worked at the Boston Consulting Group as an advisor to companies in the transportation sector – investors, service providers and operators of both goods and passenger traffic.



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## Chairs and Rapporteurs



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#### PROFESSOR GRAHAM CURRIE

Professor Currie directs the Public Transport Research Group at Monash University, Australia, which was identified as a top 3 world research group by a 2015 independent European review. Graham has published more papers in international journals in PT than any other researcher. In July 2016 he won the best paper prize at the 14th World Conference on Transport Research and also the William W Millar prize for best research paper at TRB in the USA. He researches PT markets, route and network design, transit futures and social/ economic benefits. He is also Chair of the Light Rail Transit Committee at TRB. Transit Oriented Development around bus as well as rail including BRT-oriented development – the strategic orientation of urban development around BRT.



#### DR. DARIO HIDALGO

Dr. Hidalgo guides the WRI Ross Center for Sustainable Cities international team of transport engineers and planners. This team is involved in walking, bicycling, public transport, new mobility and demand management projects and policy support in multiple developing countries, particularly in Colombia, México, Brazil, Turkey, India and China. He also coordinates the Observatory of the BRT Center of Excellence. He has more than 25 years of experience as a transport expert, consultant, and government official. He has taken part in urban transport projects and taught training courses in 15+ countries. He is also a lecturer in transport planning and is the author of 85 publications. He holds PhD and MSc degrees in Transportation Planning from Ohio State University, and a Civil Engineering degree from Universidad de los Andes, Colombia. He has been part of WRI for 10 years. He is based in Bogotá, Colombia



#### ADJUNCT PROFESSOR KAROLINA ISAKSSON

Karolina Isaksson is a Senior Research Leader in planning and decision making processes at VTI, the Swedish National Road and Transport Research Institute, and Adjunct Professor in Urban Planning at KTH, the Royal Institute of Technology in Stockholm, specialising in policy and sustainability transitions. Her research is targeted at exploring power relations, strategy making and the integration of sustainability concerns in transport and land use policy and planning, as well as how ideas of democracy and social justice get implemented in planning practice. She is active as a researcher in K2 – the Swedish knowledge center for public transport.



#### DR ASTRID KARL

Dr Astrid Karl is a senior expert of the consultancy KCW GmbH, Berlin. She works primarily on the legal framework of the public transport in Germany providing thereby essential background for advising local, national and international authorities. Her focus is the development of the Federal Passenger Transportation Act which regulates road bound public transport, national and European procurement law, and the relevant European competition and state aid law. Before specialising in public transport regulation she worked as social scientist at the WZB Berlin Social Science Center and at the MZES Mannheimer Zentrum für Europäsiche Sozialforschung.



#### PROFESSOR ANNICA KRONSELL

Annica Kronsell is Professor of Political Science at Lund University in Sweden. Her research spans the fields of governance and institutions in environmental and climate issues. She leads the Vinnova project on Institutional Frameworks for Integrated Mobility Services in future cities and is involved in the project: Gender Equality and Increased Energy efficiency in the Transport Sector financed by the Energy Agency. Recent publications include: 'Achieving Climate Objectives in Transport Policy by Including Women and Challenging Gender Norms – the Swedish Case', Journal of Sustainable Transport (2016) and 'Urban Living Labs: Governing Urban Sustainability Transitions', Current Opinion in Environmental Sustainability (2017).



#### DR WAIYAN LEONG

After completing his PhD studies at the University of Sydney in 2013, Waiyan joined the Land Transport Authority (LTA) in Singapore, where he is currently Lead Economist with the LTA Economics Unit. He is tasked with a diverse research portfolio, ranging from evaluating the impact of policies to reduce car dependence at the individual level to understanding the dynamics of a rapidly evolving public transport industry, especially in light of emerging technologies.

#### **DR HEIKE LINK**

Heike Link is Senior Research Manager at the German Institute for Economic Research in Berlin (DIW Berlin) in the department Energy, Transport and Environment. She has been in charge for a variety of national and international research and consultancy projects on infrastructure issues, transport pricing and railway economics such as access pricing, rail competition and efficiency analysis in the rail sector. The clients of these projects include institutions in Germany such as the Transport Ministry, the Federal Environmental Board and the Federal Road Authority, the European Commission, the OECD and national institutions in Europe as for example in Austria, Spain, Italy, Switzerland and in the UK. Her work has been published both in international refereed journals and as book contributions.



#### DR ANDERS LJUNGBERG

Anders Ljungberg works as a senior adviser with policy analyses at the governmental agency Transport Analysis. Dr Ljungberg was previously at the Swedish Transport Administration (and in charge of the Swedish CBA-guidelines) and at the Swedish Maritime Administration (involved in the national infrastructure plan for all modes of transport). His fields of interest are in cost-benefit analysis, public transport and external costs in the transport sector.



#### DR MARIA MELKERSSON Senior Adviser, Transport Analysis, Sweden

Dr Maria Melkersson wrote a PhD thesis in Econometrics, To Choose or Not to Choose - Choice and Choice Set Models, illustrating the choices unemployed people are faced with, in the form of different policy measures. Today Maria is a Senior Adviser at the government Institute of Transport Analysis, working with, for example, contracts in public transport.



#### PROFESSOR RICO MERKERT

Professor Rico Merkert is Chair in Transport and Supply Chain Management and Deputy Director of the Institute of Transport and Logistics Studies at The University of Sydney. Rico is Editor-in-Chief of the Journal of Air Transport Management and an appointed member of three U.S. Transportation Research Board (TRB) standing Committees. He is a Visiting Professor at the University of Johannesburg, a Fellow of the Higher Education Academy and has taught at various high profile institutions including Cranfield University. Most of his recent projects focused on benchmarking and the efficient management of various elements of aviation and transport supply chains both in the global and regional context.



#### **PROFESSOR CORINNE MULLEY**

Professor Corinne Mulley is the founding Chair in Public Transport at the Institute of Transport and Logistics Studies, University of Sydney. As a transport economist she has researched and published at the interface of transport policy and economics, in particular on issues relating to public transport. She led a high profile European and UK consortia undertaking benchmarking in urban public transport and has provided both practical and strategic advice to local and national governments on transport evaluation, including economic impact analysis, benchmarking, rural transport issues, and public transport management. She is part of the team looking at the role of Mobility as a Service (MaaS) at ITLS and leading an investigation into the role of MaaS for Community Transport. Professor Mulley's research is motivated by a need to provide evidence for policy initiatives and she has been involved in such research at local, regional, national and European levels.



#### ASSOCIATE PROFESSOR MARCELA MUNIZAGA

Marcela Munizaga is an Associate Professor at Universidad de Chile. She is a specialist on transport demand modeling, predictive models and microeconomic analysis applied to private and public transport. In the last few years she has led research on smartcard data and developed applications to obtain valuable information from automatically generated databases, which have been transferred to practice and used for planning purposes. Marcela Munizaga also holds positions as Associate Researcher of the Complex Engineering Systems Institute ISCI, in charge of the Smartcities research group, Adjunct researcher at the Center for Climate and Resilience Research (CR)2 and Co-Chair of the International Steering Committee for Transport Survey Conferences ISCTSC.



#### PROFESSOR JOHN PRESTON

John Preston is Professor of Rail Transport and Head of the Transportation Research Group at the University of Southampton, UK. He has over 30 years of experience in transport research and education, with his research covering demand and cost modelling, regulatory studies, and economic appraisal and evaluation. His initial work concentrated on rail and bus but subsequent work has covered all the major modes of transport. He has held over 140 research grants and contracts and has published around 300 articles, book chapters, conference and working papers. He is a member of the steering group for the International Conference on Competition and Ownership in Land Passenger Transport and has attended all the conferences to date.



#### PROFESSOR TOM RYE

Tom re-joined Edinburgh Napier University as Professor in Transport and Director of its Transport Research Institute in January 2015. Before this, he worked for 2½ years as a Professor at the Division of Transport and Roads, Lund University in Sweden; whilst there, he also successfully started up Sweden's new National Knowledge Centre for Public Transport, as its Director. He has degrees in Geography, and Spatial Planning, and a PhD in Mobility Management. He also worked at Edinburgh Napier University from 1996-2012 but alongside academia, he spent much time seconded to consultants and local government, as well as on projects for Scottish and UK Governments and the EC. His specialisms are transport training, mobility management, transport policy evaluation and implementation, parking policy and planning for public and slow modes of transport.



#### PROFESSOR JOHN STANLEY

John joined the Institute of Transport and Logistics Studies (ITLS) at University of Sydney in July 2008 as Adjunct Professor, following nine years as Executive Director of Bus Association Victoria and eight years as Deputy Chairman of Australia's National Road Transport Commission. John has advised Victoria's last two Planning Ministers on Melbourne's Metropolitan Planning Strategy. He has published widely on transport and land use policy and planning and is co-author of the books, An Introduction to Transport Policy and How Great Cities Happen. He was awarded a Centenary Medal for services to public transport and conservation.



#### DIDIER VAN DE VELDE

Didier van de Velde is a researcher at Delft University of Technology (Faculty of Technology, Policy and Management) and Director of inno-V, a Dutch consultancy bureau specialized in public transport (policy, planning and competitive tendering). Didier is an expert on institutional reforms and competition in public transport and rail. He likes to analyse and bring structure in complex issues and developed the STO (strategic, tactical, operational) framework now widely used by PT researchers. He advises local, national and international authorities on reforms and contracting. His research interests also include railway unbundling and the economic effects of vertical separation in the railway sector.



#### ASSOCIATE PROFESSOR CHRISTO VENTER

Dr Christo Venter is an Associate Professor in the Department of Civil Engineering at the University of Pretoria, South Africa. He is a registered professional engineer and a member of the South African Institution of Civil Engineering, a past member of the TRB's Committee on Accessible Transport and Mobility (ABE60), and a serving member on several editorial and research advisory panels. His research interests are generally focused on the intersection of transport policy, public transport deployment, and planning processes within the challenging environment of developing countries.



#### MENNO YAP

Menno Yap is working as PhD researcher at the Delft University of Technology, department of Transport & Planning, the Netherlands. His research focuses on measuring and modelling reliability of multi-level public transport networks. Especially better understanding and modelling passenger behaviour during disruptions by inference from passive data sources have his interest. Besides his PhD research, Menno also works as public transport consultant, mainly involved in developing, improving and applying data driven public transport ridership models. Menno holds his MSc in Transport, Infrastructure and Logistics, and his BSc in Systems Engineering, Policy Analysis and Management (both cum laude). In his spare time he volunteers as tram driver in The Hague, the Netherlands.



#### The Swedish Bus and Coach Federation

The Swedish Bus and Coach Federation (in Swedish Sveriges Bussföretag) is the trade organization representing the professional bus and coach industry in Sweden. We have nearly 400 unique businesses as active members.

We sign collective agreements with Swedish Municipal Workers' Union and Transport Workers' Union, the Salaried Employees' Union, the Swedish Association of Graduate Engineers.

Sveriges Bussföretag offers advice and service to our member companies on a wide range of topics, including legislation changes, traffic requirements both at home and abroad, environmental issues, traffic safety and regulation, customer care and quality aspects, and good business practices.



## 9 Attendees

#### This list was elaborated with participants registered until 9 August 2017

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## 10 The Michael Beesley Award



Professor Michael Beesley (1924-1999) was one of the most influential transport economists of his time. He was the co-founder (with Professor David Hensher) of the Thredbo conference series. In 2005 the conference series' International Steering Committee established the Michael Beesley Award to pay tribute to his memory. The award recognises the best workshop paper presented at the conference by a person in the early stages of their career (first ten years). The person must be the primary author of the paper presented. The award is determined by the Michael Beesley Award Committee Chair (appointed by the Conference Chair) in consultation with all Workshop Chairs. The award recipient receives a trophy presented at the conference dinner. Honourable mention may be made to up to two other authors who will receive certificates of recognition. All award recipients receive sponsored registration to the next conference in the series.



#### Michael Beesley Award Committee Chair:

#### PROFESSOR WIJNAND VEENEMAN

Wijnand Veeneman is associate professor at Delft University of Technology. Together with his PhDs he researches governance of infrastructure sectors, with a focus on public transport. He teaches governance for complex projects in Delft and at Shell. He is the Chair of the Dutch Advisory Committee on the Netherlands Institute of Government, and scientific director of the Next Generation Infrastructure society researching governance of infrastructures. He has been advising governments and operators on their relation in tendered and not tendered environments, in decision-making, development, construction, operation and evaluation phases. His current work includes advising the Dutch national parliament on complex rail projects, the European Union on financing sustainable transport, and Israel on restructuring their relation with their rail operation. His recent academic interest focuses in the role of organisational conflict in governance.

# 11 Papers presented at Thredbo 15

This list was elaborated with the papers received until 9 August 2017

Papers are listed by workshop and then by the first named author. The number in square brackets [0] refers to the number of the electronic paper file.

#### Plenary

Thredbo at thirty: review of past papers and reflections [47] David Bray, David A. Hensher and Yale Z. Wong

Londoners' attitudes towards car-ownership and Mobility as a Service: Impact assessment and opportunities that lie ahead

Maria Kamargianni, Melinda Matyas and Weibo Li

**The Thredbo story: a journey of competition and ownership in land passenger transport [4]** Yale Z .Wong and David A. Hensher

#### Workshop 1. Integrating rail and bus based modes (including BRT) into a userrelevant transport system

Modelling perceived service quality in Latin-American BRT-type systems [133] Jaime Allen, Juan Carlos Muñoz and Juan De Dios Ortúzar

**Cross-cultural contrasts of preferences for Bus Rapid Transit and Light Rail Transit [72]** Camila Balbontin, David A. Hensher, Chinh Q. Ho and Corinne Mulley

Barriers and facilitators of integration between buses with a higher level of service and rail: an Australian case study [43]

Geoffrey Clifton and Corinne Mulley

**Competition and substitution between public transport modes [48]** Nils Fearnley, Graham Currie, Stefan Flügel, Fredrik A. Gregersen, Marit Killi, Jeremy Toner and Mark Wardman

Bus Rapid Transit: End of a love affair in Latin America and South Asia? No, moving to a serious and long lasting relationship [178] Dario Hidalgo

Level of service and the transit neighbourhood - observations from the Greater Dublin Area [90] David O'Connor and Brian Caulfield

The future of BRT: analysis of the use of autonomous vehicles in a metropolitan transport network in Brazil [75] Cecília L. Sabat, Katarini W.G. Araújo, Maurício O. Andrade and Maria L.A. Maia

Preferences for park/kiss and bus rapid transit ride in Okinawa, Japan [138] Nobuhiro Sanko and Chodai Takamiyagi

Understanding the trip and user characteristics of the combined bicycle and transit mode [56] Sanmay Shelat, Raymond Huisman and Niels van Oort

**Institutional design challenges: a review of BRT systems [119]** Maria Spandou and Rosário Macário Multimodal transportation performance certificates (MTPC) for buildings and neighborhoods comparing methods for benchmarking the effect of built environment on travel [23] Todor Stojanovski

Understanding Bus Rapid Transit (BRT) performance: examining the relationship between speed and BRT design indicators [71]

Thet Hein Tun, Pablo Guarda, Camila Ramos and Dario Hidalgo

Inter-modal competition in an urbanized area: heavy rail and busways [35] Barbara T.H. Yena, Wen-Chun Tseng and Corinne Mulley

#### Workshop 2a./b. (joint session) Competitive tendering and other forms of contracting-out: institutional and contract design and performance measurement

Experts' inventory and rating of core performance indicators and organisational features in public transport: a global Delphi survey [154] Fabio Hirschhorn, Wijnand Veeneman and Didier van de Velde

Competitive tendering to improve transit service quality: comparative case studies in Europe and North America [5]

Stephanie Lotshaw, Paul Lewis, David Bragdon and Zachary Accuardi

#### Do direct awards lead to a better public transport? [100] Christoph Schaaffkamp

#### Workshop 2a. (Bus/Coach and general public transport) Competitive tendering and other forms of contracting-out: institutional and contract design and performance measurement

Looking back at 20 years of competitive tendering in the Norwegian bus industry - explaining cost increases and reduced competition [83]

Jørgen Aarhaug, Nils Fearnley, Fredrik Alexander Gregersen and Robert Bjørnøy Norseng

Introducing renewable fuel in public bus transport – challenges and opportunities [165] Malin Aldenius

Partnering for quality and performance: a standpoint for enhanced services [112] Caroline Fabianski

Singapore's experience with transition to bus contracting model [19] Puay San Goh and Swee Alison

Evaluation of costs drivers within public bus transports in Sweden [84] Helene Lidestam, Carolina Camén and Björn Lidestam

Public transport - an essential service? [3] Ian MacDonald

An analysis on institutional preparedness to bus route tendering in the context of a fragmented liberalized market: case study of Harare, Zimbabwe [15] Tatenda Mbara and Smart Dumba

Trade-offs between transaction cost, operation cost and innovation in the context of procurement and asset specificity – the example of the BRT bus industry [73] Rico Merkert, Corinne Mulley and Md Mahbubul Hakim

Financial implications of specifying service quality in public transport service contracts with a large captive user base – the case of South Africa [57] Mathetha Mokonyama and Christo Venter

Outcomes from new contracts with "strong" incentives for increasing patronage in bus transport in Stockholm [185]

Roger Pyddoke and Hanna Lindgren

Urban bus contractual regimes in small- and medium-sized municipalities: competitive tendering or negotiation? [12] Jordi Rosell

Local public transport in Russia: regulation, ownership and competition [11] Alexander Ryzhkov

**Urban bus contract risks, an analysis based on Transantiago's latest and upcoming reforms [33]** Sebastián Tamblay, Marina Dragicevic, Antonio Gschwender and Juan Carlos Munoz

How many want to drive the bus? Analyzing number of bids in public transport bus tenders [93] Andreas Vigren

The potential cost implications of public transport contract risks: the views of bus operators in South Africa [39]

Jackie Walters

Is the mere threat enough? An empirical analysis about competitive tendering as a threat and cost efficiency in public bus transportation [117] Philipp Wegelin

# Workshop 2b. (Railways and general public transport) Competitive tendering and other forms of contracting-out: institutional and contract design and performance measurement

Transaction cost economics of authority operator relations in public transport: the case of Istanbul as a hybrid regime [184]

Fatih Canitez and Dilay Celebi

Contract re-award and consumer sovereignty, the case of British rail privatisation [179] Jonathan Cowie

**Contracting-out public transport services to asymmetric partnerships [87]** Andrei Dementiev

When competitive tendering seems too risky - evidence from regional railways in Poland [167] Marcin Krol

Franchising regional rail passenger services in Germany – new evidence on the efficiency in ussing subsidies [50] Heike Link Introducing competition into rail passenger services: lessons from European experience [10] Chris Nash, Yves Crozet, Heike Link, Jan-Eric Nilsson and Andrew Smith

The Norwegian railway reform: industry cost structure and its implications for optimal contracting, incentives, and organization [151]

Silvia Olsen, Julie Runde Krogstad, Nils Fearnley, Kenneth Rødseth, Askill Halse, Phill Wheat and Andrew Smith

The wheels keep on turning? Is the end of rail franchising in Britain in sight? [162] John Preston

"The Frankfurt Way" - innovative institutional arrangements for public transport planning and management [54] Winfried Schmitz

How do different payment schemes to operators affect public transport concessions? A microeconomic model [74]

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Developments in public transport governance in the Netherlands: even more recent developments [153]

Wijnand Veeneman

**Benchmarking the costs of urban public transport in the Netherlands [161]** Niek Wijmenga, Wijnand Veeneman and Fabio Hirschhorn

### Workshop 3. Market initiative regimes: experience and measures to improve performance

Intercity coach liberalisation in Italy: fares determinants in an evolving market [106] Paolo Beria, Dario Nistri and Antonio Laurino

Welfare effects of open-access competition on railway markets [64] Emanuel Broman and Jonas Eliasson

**Developments of new coach services in France: "Much Ado about Nothing?" [136]** Yves Crozet and Laurent Guihéry

The HSR competition in Italy: how are the regulatory design and practices concerned? [32] Christian Desmaris and Fabio Croccolo

User acceptance of long distance bus services in Germany [31] Alexander Eisenkopf, Christian Burgdorf and Andreas Knorr

A computer experiment to examine network development in two different business regimes of public transport [6]

David Emerson, Corinne Mulley and Michiel Bliemer

### Factors influencing open access competition in the European long-distance passenger rail market - a Delphi study [59]

Lisa Feuerstein, Torsten Busacker and Jingjing Xu

An analysis of long distance cross-border coach services in Switzerland: An overview and a case study [120]

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#### The role of bus partnerships [186]

John Godfrey and John Taylor

Impacts of the German interurban bus market deregulation on regional railway services [61] Cornelia Gremm

The Swedish open market for bus and coach services develops (too) slowly [164] Anna Grönlund

Commercial services in German local public transport [94] Astrid Karl

Business strategies of private railway operators and regulatory change: lessons from the case of Japanese major railway companies [140]

Yeon-Jung Song and Kenichi Shoji

Competition in Swedish passenger railway: entry in an open-access market and its effect on price [116]

Andreas Vigren

### An analysis of international passenger train services development from and to Switzerland from 2007 to 2016 [79]

Widar von Arx, Simon Maarfield, Vu Thi Thao, Philipp Wegelin and Jonas Frölicher

#### Prospects in Britain in the light of the Bus Services Act 2017 [28] Peter White

#### Workshop 4. Criteria for successful collaboration

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Gunnar Alexandersson, Anders Bondemark, Lars Henriksson and Staffan Hultén

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#### The politics and policies of collaboration: towards a critical understanding of public transport governance [62]

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Exploring the collaborative toolbox for the public transport sector – guidelines and living labs as informal methods for achieving efficient collaboration [128] Fredrik Pettersson, Stig Westerdahl and Joel Hansson

How to create functioning collaboration in theory and in practice – practical experiences of collaboration when planning public transport systems [129] Fredrik Pettersson and Robert Hrelja

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Lake Sagaris

A terminology of interorganisational coordination in public transport: the case of timetable planning in Denmark [121]

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**Temporal and spatial analysis of fare evasion in Transantiago [27]** Carolina Buneder and Patricia Galilea

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Managing unprofitable passenger rail operations in Japan - lessons from the experience in Sweden [76]

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Current trends and innovations affecting the potential for a widespread adoption of electric buses - a comparative case study of 22 cities in the Americas, Asia-Pacific and Europe [99] Xiangyi Li, Sebastian Castellanos and Anne Maassen

A broader perspective of social outcomes in transport [14] Christopher Lowe, John Stanley and Janet Stanley

Effects of road pricing – some suggestions based upon experience from urban areas like Stockholm [98] Olav Hauge Public investment decision under uncertainty: how do the financial policies impact on public investment decision on transport infrastructures? [110]

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How much are we willing to pay to provide universal accessibility to public transport for people with reduced mobility or disability? [122]

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Uberisation in rural Japan: a case of community transport in Tango Peninsula, Kyoto Prefecture [36] Minoru Nomura and Yoshinori Takahashi

**Mobility as a service: implications for future mainstream public transport [146]** Göran Smith, Jana Sochor and Marianne Karlsson

How does the ride-hailing systems demand affect individual transport regulation? [65] Laize Andréa de Souza Silva, Maurício Oliveira de Andrade and Maria Leonor Alves Maia

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# Thredbo Conference Series Timeline





