



PROUDLY FACILITATED BY

# INTERNATIONAL SEMINAR ON INTEGRATED ROAD TRANSPORT & MOBILITY

PIARC SEMINAR 2018

## SECOND ANNOUNCEMENT

5-7 NOVEMBER 2018

LAGOON BEACH HOTEL  
MILNERTON, CAPE TOWN

### PRELIMINARY PROGRAMME

## SUNDAY, 4 NOVEMBER 2018

17:00	Registration Opens
18:00	Welcome Cocktail at Lagoon Beach Hotel

## MONDAY, 5 NOVEMBER 2018

07:30	Registration opens
09:00 - 11:00	Opening ceremony

### TAKING AFRICA INTO THE FUTURE

- Welcome address by the South African hosts; the South African National Roads Agency SOC Limited (SANRAL):  
**Mr Skhumbuzo Macozoma (South Africa): Chief Executive Officer**
- A welcome by South Africa's Western Cape Government
- Opening address by the South African Department of Transport
- Welcome address by the World Road Association (PIARC):  
**Yuya Namiki (Japan), PIARC Technical Adviser**
- Welcome address by the PIARC Technical Committees Chairpersons:  
**Jacques Ehrlich (France), B1: Road Network Operations/Intelligent Transport Systems**  
**André Broto (France), B3: Sustainable Multimodality in Urban Regions**  
**Martin Ruesch (Switzerland), B4: Freight**
- Guest Speaker:  
**Mike Walton (USA)**

11:15 - 12:45

Plenary Session

## DISRUPTIVE TRAFFIC MONITORING AND MANAGEMENT FOR PEOPLE AND FREIGHT MOBILITY

Several disruptive technologies have emerged in recent years. Among them is information collected from vehicles (Floating Car Data), social networks and sensors scattered everywhere (Internet of Things). This leads to processing huge amounts of data that require new technologies and techniques. In addition, new business models based on Private-Public Partnerships are emerging.

These evolutions make it possible to put road network operations within a broader framework. It aims to optimise not only the traffic with a standpoint to efficiency and safety but more generally a “system” including the road, the city and rurality with sustainable development objectives to optimize mobility of people and goods. New services are emerging such as real-time alerts on incidents, reconfiguration of routes in the event of a natural disaster, information on weather conditions, specific recommendation of itineraries for trucks etc. In addition, the introduction of autonomous vehicles (car and truck) will substantially modify the use of roads and the underlying services.

How do we anticipate future evolutions in terms of services, organizational models, new professions etc. What are the open questions that need research and development efforts? These topics (and many more) will be addressed in this session.

Panel chairperson and introduction:

**Randall Cable (South Africa)**

Speakers and discussion topics:

**Johan Andersen (South Africa):** Disruptive technologies – key to sustainable transport in developing countries?

**Valentina Galasso (Italy):** Modena automotive smart area

**Kobus van der Walt (South Africa):** Exploring disruptive technologies with SANRAL

**Participant to be confirmed:** Freight traffic monitoring and intelligent access programme

13:30 - 15:00

Cross-Cutting Session & Specific Session

### Cross-Cutting Session:

## IMPROVING TRAFFIC MANAGEMENT AND PUBLIC TRANSPORT OPERATIONS, SMART CITY, SHARED MOBILITY, BIG DATA, INTERNET OF THINGS (IOT), CONNECTED AND AUTONOMOUS VEHICLES: WHICH IS THE FUTURE OF TRANSPORT AND TRAFFIC MANAGEMENT IN URBAN AREAS?

Today, we live in a world, where people are always connected and where it is possible to provide them with a personalized mobility offer. Tomorrow these are the objects that will all be connected. More and more sensors are distributed in the urban areas: they inform us about the meteorological conditions, the level of pollution, the noise level and the consumption of energies. Vehicles and vulnerable users also become mobile sensors, particularly thanks to the Smartphone. The interconnection of all individuals and objects allows a detailed knowledge of the state of a vast user-vehicle-infrastructure system at the heart of which lies the Smart City.

Our view of the organization of transport systems, the operation of road networks and traffic control introduces a complex system that needs to be regulated in order to offer customized mobility services, minimize noise pollution, and maximize safety. This new future will be explored in this session.

Panel chairperson and introduction:

**Progress Hlahla (South Africa)**

Speakers and discussion topics:

**Andrew Aucamp (South Africa):** eThekweni Smart City, IFMS and ITS Initiatives

**Arve Kirkevold (Norway):** Smart Cities in a changing environment

**Keechoo Choi (Korea):** Transport services in Smart Cities for improved road network operations

**Wanda Debauche (Belgium):** Are new shared mobility services going to re-define the urban landscape?

## Specific Session:

### POLICIES ENABLING MULTIMODAL AND GREEN LONG-DISTANCE FREIGHT MOVEMENTS

In many countries around the world, the major economic contribution of the road freight industry stand in contrast to its negative impacts. These include traffic congestion, negative environmental impact (noise, pollution), high energy consumption and use of non-renewable energy resources, contribution to climate change, a high proportion of GHG-emissions, safety and security issues, limited resilience of the road transport system and the impact of overloading on accelerated deterioration of road pavements.

It is therefore very important to develop and implement freight transport policies aimed at the optimal use of different modes (road, rail, inland waterway, short and deep sea shipping) which form part of an overall transport strategy.

Within this session, best practices for policies enabling multimodal and green long- distance freight movements are presented and discussed. This includes policy goals, policy instruments and measures, implementation processes, impacts of policies and success and failure factors.

Panel chairperson and introduction:

**Hinko van Geelen (Belgium)**

Speakers and discussion topics:

**Prasanth Mohan (South Africa):** South African Freight Transport Policy

**Tiffany Julien (USA): Lessons learned:** National Multimodal Freight and Logistics Policies

**Mohammad Tayyaran (Canada):** Overview of Canada's trade flows and supporting funding and policy initiatives

**Patrick Grassi (Austria):** National Logistics and Freight Master Plan of Austria

15:45 - 17:15	Panel Session
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### GREENING OF ROAD TRANSPORT

The world is facing an ever-growing challenge in dealing with pollution generated by the road transportation system. Out of the total greenhouse gas emissions, road transport contributes up to 75% of all emissions and this trend is likely to increase if it continues unabated. Governments are being urged to develop policies to reduce greenhouse gas emissions as well as oil demands. This will have a huge impact on energy consumption and GHG-emissions. Therefore, it is very important to develop, evaluate and implement measures which increase the energy-efficiency of all road transport. Such measures can be technical, operational, logistics related, regulatory and infrastructural. In middle to low income countries, there is a need to move to sustainable and environmentally friendly public transport and reduce the car ownership dependencies.

This panel discussion will look at how both the public and private sector can contribute to effecting climate change in the transport industry from greener fuels to reducing energy and carbon emissions with efficient planning and better transport management, their related challenges, combined approaches and best practises.

Panel facilitator:

**Bernard Jacob (France)**

Panel participants:

**Mpati Mako (South Africa),** SANRAL

**Patrik Akermann (Germany),** Siemens

**Patrick Duprat (France),** Alstom

**Annelie Nylander (Sweden)**

**Jacques Ehrlich (France)**

**Wanda Debauche (Belgium)**

19:00	Networking Event
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## TOLPLAN GALA DINNER:

### LAGOON BEACH HOTEL FOR ALL SEMINAR PARTICIPANTS

Proudly Sponsored By Tolplan, South Africa

ORGANISED BY TECHNICAL COMMITTEES B1: ROAD NETWORK OPERATIONS/INTELLIGENT TRANSPORTATION SYSTEMS, B3: SUSTAINABLE MULTIMODALITY IN URBAN REGIONS AND B4: FREIGHT

# TUESDAY, 6 NOVEMBER 2018

07:30	Registration opens
09:00 - 10:30	Plenary Session

## MULTIMODAL SMART INFRASTRUCTURE

The main objective of Multimodal smart infrastructure is to combine public transport with other motorised and non-motorised modes as well as new types of vehicle ownership with technology. The main aim is to combine the different transportation modes to manage a users' journey in a seamless way towards sustainability in urban transport. Further it involves the use of innovative technologies, such as smart-phones and mobile apps to provide information and access to all modes with a vision of a Smart City.

Similarly, multimodal freight infrastructure includes ports, multi- and intermodal terminals, airports and large freight distribution centers, which are connected by road and further modes as rail, deep sea shipping, inland waterway or air. To increase the capacity, efficiency and quality of multimodal freight transport there is a need for innovative approaches using ITS and ICT at multimodal freight infrastructures. Such applications include port/terminal management systems and telematics solutions, which optimize the road freight flows from and to such facilities.

This session will present and discuss related challenges, innovations and good practices with the goal of developing multimodal smart infrastructure for all types of transport.

Panel chairperson and introduction:

**Tiffany Julien (USA)**

Speakers and discussion topics:

**Logashri Sewnarain (South Africa):** Specific topic, relating to the theme, to be confirmed

**Martin Boehm (Austria):** Preparing the digital infrastructure for enabling multimodal services

**André Broto (France):** Specific topic, relating to the theme, to be confirmed

**Martin Ruesch (Switzerland):** Intelligent solutions for intermodal freight terminals and transfer points

11:15 - 12:45	Cross-Cutting Session & Specific Session
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**Cross-Cutting Session:**

## ITS SOLUTIONS FOR ROAD FREIGHT TRAFFIC, OPERATIONS AND MONITORING

In most of the countries worldwide freight transport on roads is on the increase. Bottlenecks lead to high transport costs and have a negative impact on the environment and the reliability of freight transport. On some main road freight corridors, truck-rest and parking options are not sufficient in relation to the number of truck stops/parking spaces required and the standards of these facilities. At border crossings, long waiting times and queues are common. In order to improve efficiencies and safety in the freight logistics industry, approaches for better monitoring and management of road freight transport are needed should be improved. Potential solutions include truck management (incl. platooning management), intelligent access programs and truck parking and monitoring. Such measures are expected to lead to a substantial better use of roads, increasing safety and higher energy efficiency of road freight transport. This session will highlight and discuss innovative ITS solutions and best practices for the freight industry.

Panel chairperson and introduction:

**Gail Bester (South Africa)**

Speakers and discussion topics:

**Michelle van der Walt (South Africa):** E-WIMS Project

**Paul Nordengen (South Africa):** Self-regulation and performance based standards for heavy vehicles

**Hidenori Yoshida (Japan):** Freight/ public transport management by giving added value to existing systems/ frameworks

**Bernard Jacob (France):** ITS solutions and platooning for long distance road freight transport

## Specific Session:

### ALIGNING PEOPLES' MOBILITY NEEDS AND THE BEST OFFERS OF TRANSPORT

Large cities are extending their commuting area to very large urban regions. Those urban regions are composed of very different territories (urban areas, peri-urban areas, and rural areas). People living in those territories have different types of daily mobility needs, from short distance trips for purposes such as going to school or to a market place, up to long commuting trips of 10 to 100 km in length. These transportation systems must handle those different needs for these different territories. This session will present the mobility needs and best practices in the field of transportation systems.

Panel chairperson and introduction:

**André Broto (France)**

Speakers and discussion topics:

**Siveshni Pillay (South Africa):** Pedestrian and Public Transport Guideline for National Roads

**Amanda Gibberd (South Africa):** Universal access for all road users

**Akira Endo (Japan):** Specific topic, relating to the theme, to be confirmed

**Dudley Mbambo (South Africa):** Design transport networks for accessibility

13:30 - 15:00

Cross-Cutting Session & Specific Session

## Cross-Cutting Session:

### EFFICIENT CO-EXISTENCE BETWEEN URBAN MOBILITY AND CITY LOGISTICS

Urban areas are facing increased passenger and freight transport populations for which the availability of road space is very limited. Added to this is the growing demand for urban freight transport to address the e-commerce market as the industry, its suppliers and its customers form a complex web that expands across diverse areas. The urban landscape is further being challenged with the need to align the differing transport modal demands with pedestrians and cyclists.

There is therefore an urgent need to manage the urban road space in such a way as to provide an efficient balance between passenger and freight movements. Innovative approaches include the provision and management of loading/unloading zones, pick-up and drop-off zones, the flexible and dynamic use of curb space (loading/unloading, parking, etc.) and access management and dynamic routing for freight vehicles. This session will highlight and discuss innovative solutions and best practices in this regard.

Panel chairperson and introduction:

**Martin Ruesch (Switzerland)**

Speakers and discussion topics:

**Dr Havenga (South Africa):** The future of road freight in South Africa

**Eiichi Taniguchi (Japan):** City logistics and use of urban road space for freight

**Pilippe Crist (France)/ Luis Martinez (Spain):** The Shared-Use City: managing the curb (ITF/OECD Report May 2018)

**Hinko van Geelen (Belgium)/ Wanda Debauche (Belgium):** How to manage conflicts between active modes of transport and freight transport

## Specific Session:

### INNOVATION AND LOW COST ITS SOLUTIONS FOR LOW-MIDDLE INCOME COUNTRIES

The Low Cost ITS Solution introduces the concept of cost effective mechanisms that require minimal capital expenditure to introduce intelligent transport systems to middle and low income countries. Low Cost solutions relate to data collection, dissemination and analysis through readily available and cheaper technologies or information i.e. smartphones. These innovations attempt to maximise efficiencies for both the road user and the road entity whilst aiming to improve freight efficiencies, mobility, road safety including emergency management solutions and public transport reliability. This option also becomes attractive to developed countries as well, as most government agencies encounter budget constraints. This session aims to investigate possible low cost options and their potential for deployment and implementation in middle to low income countries.

Panel chairperson and introduction:

**Jacques Ehrlich (France)**

Speakers and discussion topics:

**Martin Margrieter (Germany):** Bluetooth technology for motorway management for motorway technology

**Galen McGill (USA):** Exploring “real low cost” case studies in the USA

**Jacques Ehrlich (France):** Low cost ITS solutions

15:45 - 17:15

Panel Session

## OPTIMAL LAND AND INFRASTRUCTURE USE IN URBAN AREAS FOR PASSENGER AND FREIGHT TRANSPORT

The integration of transport and land use planning is essential to the achievement of sustainable development. The challenge faced by governments is the alignment of mobility and accessibility and their coexistence within a balanced network.

NMT perspective: The historic lack of such integrated planning and implementation can be ascribed to a fragmented approach to planning where the different levels of government address the differing needs of transport modes, the misalignment of these needs with spatial master planning objectives coupled with limited focus on non-motorised needs (including pedestrians). Due to insufficient budget, the historic focus and determination of transport needs has primarily been focussed on vehicular needs (freight, public transport and private transport), without due consideration of NMT needs. Furthermore, provision needs to be made to accommodate all modes of transport.

Freight perspective: The logistics market is growing in many countries over the world due to globalization, outsourcing and especially the fast growing e-commerce industry. Logistics costs for South Africa are much higher than the international norm, partly due to urban sprawl and long distances to ports of exit and entry. In addition, rail transport is continuing to lose its attractiveness as mode of transport, leading to increased freight transport on roads and the provision of freight hubs conveniently located in relation to higher order mobility roads. This emphasises both the need for adequate capacity and mobility provision on higher order roads, as well as the improvement of competitiveness of rail as mode of transport.

Land use strategies in urban areas should consider these challenges and provide approaches and instruments for securing/protecting space and infrastructure for large scale logistics facilities such as ports, distribution centres, multimodal terminals, etc. as well as small scale logistics facilities such as micro-hubs and pick up points intending to make last-mile-deliveries more efficient. The panel will discuss related challenges, approaches and good practices.

Panel facilitator:

**Marianne Vanderschuren (South Africa)**

Panel participants:

**Mark Zuidgeest (South Africa)**

**Thami Manyathi (South Africa)**

International participants to be confirmed

## WEDNESDAY, 7 NOVEMBER 2018

07:30

Registration opens

09:00 - 10:30

Plenary Session

## REGULATORY ISSUES AND COMPLIANCE TOOLS FOR PEOPLE AND FREIGHT TRANSPORT

Compliance to road transport regulations by all road users always proves challenging. In South Africa particularly, there is a high level of non-compliance to road rules. This non-compliance results in the reduced safety of road users, especially vulnerable road users with huge economic costs to the country. Similarly, heavy vehicle non-compliance causes premature road deterioration together with inadequate vehicle maintenance, driver fatigue, poor driver health etc.

Intelligent enforcement of regulation is shifting the focus from a resource intensive activity to an automated process with a greater level of control. This session will explore intelligent compliance tools for the enforcement of road transport regulations. However, even automated processes require good cooperation between stakeholders.

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Panel chairperson and introduction:

**Alex van Niekerk (South Africa)**

Speakers and discussion topics:

**Ronald Stuurman (South Africa):** Specific topic, relating to the theme, to be confirmed

**Bernard Jacob (France):** Ensuring heavy commercial compliance by WIM

**Dieter Hinterhaus (Austria):** Average speed over distance – vehicle compliance

11:15 - 12:45

Closing Ceremony

### CLOSING CEREMONY:

- Closing address by the PIARC Technical Committees Chairpersons  
**Jacques Ehrlich (France)**, B1: Road Network Operations/ Intelligent Transport Systems  
**André Broto (France)**, B3: Sustainable Multimodality in Urban Regions  
**Martin Ruesch (Switzerland)**, B4: Freight
- SANRAL Technical Committee Representatives  
**Siveshni Pillay (South Africa)**, **Dudley Mbambo (South Africa)**
- Electronic Toll Collection Hackathon Presentations and Awards  
**Coenie Vermaak (South Africa)**, **Sebastian Dyanti (South Africa)**
- Vote of Thanks  
**Alex van Niekerk (South Africa)**

13:30 -

Technical Visit

### ITS TECHNICAL VISIT:

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A VISIT TO THE INTEGRATED INTELLIGENT TRANSPORT SYSTEM CENTRE OF CAPE TOWN, INCLUDING PEDESTRIAN MONITORING FACILITIES AND PUBLIC TRANSPORT CO-ORDINATION.

POSTER SESSIONS WILL BE CONDUCTED DURING REFRESHMENT BREAKS

FOR UPDATED INFORMATION ON THE PROGRAMME, REGISTRATION TO PARTICIPATE AS A DELEGATE, OR TO SUBMIT A POSTER, PLEASE CONTACT THE ORGANISERS ON [SEMINAR@NRA.CO.ZA](mailto:SEMINAR@NRA.CO.ZA) OR VISIT [WWW.SANRALPIARC.CO.ZA](http://WWW.SANRALPIARC.CO.ZA)

