

INTERNATIONAL SEMINAR ON

“Achieving Successful Road Transportation Through Effective Management and Organization”

April 25-26, 2018, Beijing CHINA

Prepared by: LIU Si, Research Assistant, China Academy of Transportation Sciences (CATS), TC A.1 Associate Member & Christos S. XENOPHONTOS, Assistant Director, Rhode Island Department of Transportation, TC A.1 English Secretary.

Transport Administrations need to stop defining themselves by the assets that they own, but rather by the service they deliver, the customer’s needs and expectations, and how the Transportation Administration’s actions could positively impact the quality of life of their customers.

This International Seminar was organized and hosted by the China Academy of Transportation Sciences (CATS) in cooperation with the Technical Committee TC A.1 “Performance of Transport Administrations” of the World Road Association (PIARC) and the support and guidance of the Ministry of Transport (MOT) of P.R. China. It was held in Beijing, CHINA from April 25-26, 2018 and was dedicated to the exchange of knowledge on the establishment of tools to measure the performance of Transport Administrations and on best practices for good governance.

The seminar, whose theme centered on “Achieving Successful Road Transportation Through Effective Management and Organization” was held at the Beijing Friendship Hotel, Beijing, China. The primary objective of the seminar was to exchange information on the establishment of tools to measure the performance of transport administrations and best practices for good governance. It brought together over 100 attendees from different parts of the World and China. Participants included representatives from the Asian Infrastructure Investment Bank, CATS, the MOT, TC A.1, the World Bank, and other organizations. They came from 14 countries (Australia, Austria, Belgium, Chile, China, Denmark, France, Mongolia, Singapore, Spain, South Africa, Sweden, Ukraine and the United States) and 20 different regions of China, of which 9 were from governmental organizations, 14 from universities, 22 from the private sector and the remaining 56 participants from research institutes and associations related to transport. It featured speakers from CATS, the MOT, TC A.1, the Asian Infrastructure Investment Bank, the World Bank, as well as academics, other governmental agencies and the private sector. Including the moderators and keynote speakers, there were a total of 21 different presenters and a total of 12 different panelists. Details on the different Plenary Sessions and Panels, including presenters’ short bios may be found on the Final Program and Seminar Guidebook prepared by CATS.

The participation of local communities and practitioners in the whole process was an integral part of the overall seminar program.

OPENING AND WELCOMING REMARKS

The Seminar was opened by Prof. SHI Baolin, President of CATS, who welcomed the attendees and participating members of TC A.1. Prof. SHI highlighted the achievements of China in the transport sector over the last few years and stressed the important role of promoting transportation. China is now

implementing the 13th Five-Year Plan for Economic and Social Development and is now in the golden age of transportation. The country has been continuously looking to improve the effectiveness and capacity of the transport system and to promote modernization and reform of the national government transport agency. The Seminar was organized to provide a platform to discuss and share developments in transport administration and highway management keeping in mind the need for a healthy and sustainable development. More than 20 experts from China and other countries will share the current status and explore the challenges of China's transportation development, share the results and experience of transport reform so far and share the international experience and technological innovation in industry management, reform of institutional mechanisms, and development of new modes of transportation. Prof. SHI said it is an opportunity for all of you to share the latest ideas and your practical experiences in the transportation industry, and use this opportunity to strengthen the exchange of information and cooperation. I have seen from the work of TC A.1 that administrative methods of road and road transport in various countries are unique and that each one has its own experience and we need everyone to exchange and discuss the development experience of various countries. Through seminars and exchanges like this we hope to promote the healthy and steady development of road and road transportation businesses in all countries of the world.

Mr. KONG Qingxue, Deputy Director General of the Highway Department of the MOT provided the keynote address and welcomed the attendees on behalf of MOT and China's First Delegate to PIARC who was not able to attend. Mr. KONG described how the World Road Association is composed of outstanding members selected by various countries in the world and that each technical committee has made great achievements in the field of transportation. He said that he believes this seminar will help further improve the administrative management of China's highway and road transport and that members will exchange results with each other, share experiences and wisdom, seek common development, and lay a solid foundation for the report on the work of the TC A.1 in 2019.

International learning and learning from each other is beneficial to the promotion of the efficiency of road transport administrative management in various countries. Mr. KONG stressed that all the countries should work together to promote joint connections and stronger integration development for the countries to prosper in the future in a peaceful world enhanced by transport. Chinese and global experience shows that infrastructure construction not only helps with the road network but it also provides economic development opportunities and plays an important role in the development of all areas. He highlighted the continued progress in the modernization of the MOT and the administration of roads and that MOT has established an integrated construction management system and continues to rise to meet its responsibility at all levels through providing easier market access and promoting inspections and penalties when necessary. The work of the infrastructure sector gives benefits not only to the economy but also to the life quality of people and the industrialization and restructuring of the economy. He stated that the World Road Association has built a good platform for us and that as the government member of the World Road Association, the Ministry of Transport of P.R. China has been actively participating in the work and activities of the association for many years. His hope is that through this seminar, PIARC will work more closely with China to build a more efficient and smarter highway and road transport administrative management system. Mr. Kong completed his remarks by thanking and congratulating CATS for organizing the seminar and asked all present to leverage the

expertise and knowledge of the people participating in the seminar as part of the mutual exchange of knowledge that is cultivated through these types of seminars.

José Manuel BLANCO SEGARRA, TC A.1 Chair thanked Prof. SHI and the staff of CATS for hosting the seminar and their hospitality and that he hoped the wisdom of the members from China, like Prof. SHI Baolin will continue to be present in the next cycles. He added that it is also his hope and expectation that the seminar will indeed strengthen the bond between China and PIARC. Mr. BLANCO SEGARRA gave a brief presentation on PIARC on behalf of the Strategic Theme Coordinator, Mr. Ernesto BARRERA GAJARDO who could not attend due to the concurrent meeting of PIARC's Executive Committee in Mexico.

He also provided a brief synopsis on the key missions, accessible deliverables, services available and current Strategic Plan for 2016-2019 for PIARC. He also provided the history of the Technical Committee since its creation in 1996 and the issues that the current TC A.1 is working on, namely, "Framework on measuring effectiveness and efficiency of transport administrations", "Evaluating the transformation of transport administrations", and "Promotion of a culture of transparency and accountability". He also introduced all of the active and present members of TC A.1. In introducing the mission of TC A.1, he stressed the importance of performance management, establishing a performance measurement hierarchy and a clear line of sight to the "overall outcome", and that what we measure shapes what we collectively strive to pursue.

Mr. BLANCO SEGARRA highlighted some of the products and recommendations produced during previous cycles, such as "Trends and Outcomes of Multimodal Governance in the Road and Transport Administrations", which includes a Toolkit for Multimodal Collaboration, "Guide to Good Practice Performance Frameworks" which also includes a Best Practice Toolkit, the development of the concept of "Public Value Chain" and finally the reports "Best Practices for Good Governance" which includes the "Integrity Toolkit" and a conceptual model on the "Cycle of Integrity" and the report "Good Governance and Anti-Corruption Measures" which showcased the "Well Prepared Project" and the influence of the media in creating perceptions relating to institutional integrity.

The Seminar was organized into three different Plenary Sessions with the first two Sessions focusing on the macro level development of transportation both in China and internationally, namely "The Transport Challenge in China – Current State and Future Prospects" and "Achieving Successful Outcomes through Transport Planning and Reform". The third Session, "International Perspectives on Transport Governance" in the morning of day two was focused on the international experience on transport governance. The Plenary Sessions provided the opportunity to set up and conclude with the "China–International Rolling Panels on Joint Transport Sector Experience" that featured two different panels, one on "Institutional Reform and Innovation" and one on "Technology and Innovation Driving New Business Models and Value Chains in the Transport Sector".

SUMMARY OF PLENARY SESSIONS

Plenary Session I, "The Transport Challenge in China – Current State and Future Prospects" was moderated by Prof. SHI and provided a solid background on the current state of transport development within China. The common theme among the four presentations was what Deputy Director General

KONG highlighted in his keynote remarks, that infrastructure construction not only helps with the road network but it also provides economic development opportunities and that infrastructure plays a very important role in the development of all areas of society. The presenters also touched on good planning across the modes and between agencies, collaboration between agencies, Central Government directives and local actions and communication, being open for new ideas, and how essential it is to have long term views of the business.

The Plenary Session highlighted the need to develop a convenient integrated service for the users of the system and that transportation development is the foundation for all political, economic and cultural development. It also laid the foundation for one of the Panel Discussions on how traditional transport can develop and co-exist, or be replaced, by the new sharing economy. It raised the Government vs. Enterprise vs. Users and Society issue when it comes to the new transportation models of sharing economy and how the sharing of travel is moving towards intellectualization, orderliness, and internationalization.

Abstracts from Plenary Session I:

Mr. YU Shengying, Former Counselor of Comprehensive Planning Department, MOT, PRC presented on the development phase and demand of transportation in China and the initial achievements in integrated transportation infrastructure construction, multimodal passenger and freight transportation, new transportation mode innovation, etc. China is now moving to establish a safe and convenient, economical and efficient, green and intelligent, open and integrated transportation system through completing 9 main tasks including institution reform, infrastructure network and integrated transportation hub layout optimization, longitudinal and transverse transport channels construction, improvement and integration of transport service, promotion of intelligent, green and safe transportation, and exploration of the new transportation mode.

The presentation by Ms. ZHAO Yang, Director of Beijing-Tianjin-Hebei Transport Integration and Coordination Division, Beijing Municipal Commission of Transport provided the status of transport integration in Beijing-Tianjin-Hebei region, including the main achievements of transport integration and the development prospects in Beijing city. The aim of transport integration is to build a multimodal, network, and region-wide transportation network with rail transport as the backbone and to construct a unified and open regional transportation market structure. In the next step, the government will handle the relationships with market, focus on function decentralization, both at the system and individual level.

Mr. LIN Zhonghong Vice President, China Railway Economic and Planning Research Institute presented on the "Development and Prospect of High-Speed Railways in China". The high-speed railways in China have achieved great progress in the past, having constructed large scale and high standard high-speed rail. It highlighted the construction of great passageways, intercity railways, and comprehensive transport hubs that strengthened connection between regions. Looking forward, the government will build a high-speed railway network, develop high-speed train technology with even higher speeds, and build intelligent high-speed railways.

The first Plenary Session concluded with a presentation by Mr. WU Hongyang, Deputy Director of China Urban Sustainable Transport Research Centre (CUSTReC) at CATS who presented on the "Path Options of Urban Transport Development under the Sharing Economy". Mr. WU pointed out that with mobile internet rapid development in China, the traditional forms of urban transportation such as bus, public

bike, taxi, parking, are being replaced by new business models such as online car hailing, bike sharing, time sharing, customized shuttle bus, parking sharing, etc. While the new business models bring more convenience and efficiency to the users, it has also created new problems that we must face as decision makers. Should decision makers have an open mind and positive attitude towards the new sharing economy models? How should we regulate and deal with the new challenges? We need to promote the new and traditional modes in cooperation to find win-win paths. He also said that social multi-component governance covering government, enterprise, users and society should be encouraged.

Plenary Session II, “Achieving Successful Outcomes through Transport Planning and Reform” was moderated by Prof. LI Zhongkui, Director of the Research Management Division at CATS, who moderated a strong theme focusing on smart transport, ITS, Autonomous Vehicles, bicycle hire, ride hailing, green transport, integrated transport and revitalized rural areas through transport. As current developments in China are entering a new phase, the focus of this Session was on reform and the need to start removing the barriers of the institutions and free up institutions to gain further efficiencies and productivity. With reform we are going to actively establish a governance system with mixed participation so that we can encourage participation. This can only be achieved through an open mind and through research and innovation while at the same time ensuring that is done in a fair market environment and with institutional integrity, reporting and focused towards the customers’ needs and service quality for passengers.

Abstracts from Plenary Session II:

Mr. SUN Jianping, kicked off the afternoon Plenary Session with a presentation that introduced the development in the comprehensive management of urban transportation, infrastructural construction, service level and social financial support in Shanghai. To build the city as the “Four Centers” and an international city by 2020, the “Intelligent, Low-carbon and Sharing” development concept should be involved in the improvement of comprehensive transportation management, and the “Management-oriented, Systematized, Weakness-supplementary” theory should be implemented in the development of transportation management and innovation. Finally, three effective development suggestions are discussed in the presentation, including improving the construction of urban transportation infrastructure, optimizing the quality of public transport service and innovative comprehensive transportation management model.

The presentation by Mr. THIA Jang Ping, Principal Economist, Policy and Strategy Department of Asian Infrastructure and Investment Bank gave an overview of AIIB’s draft strategy on supporting a sustainable and integrated transport system for trade and economic growth in Asia. It highlighted areas of growth in different countries and sub-regions of the continent and the demand for different modes of transport in the different areas. The implications for AIIB’s strategy is that it must put more emphasis on “middle-range” projects with large economic impact, to crowd-in private capital and make projects “bankable” with AIIB’s presence and to prioritize strategic connections.

Mr. Jonathan SPEAR, Director of Transport Policy and Planning, Atkins Acuity / TC A.1 Workgroup Leader presented next on “Sustainable Urban Transport in China – Lessons from International Experience”. The presentation reviewed developments in urban transport planning and delivery in China over the past 15 years. In the face of massive urbanization, demographic increase and economic development, many cities

have evolved complex, multimodal and increasingly integrated transport networks. However, despite major progress in infrastructure and services, including mass transit, significant challenges of congestion, pollution and road safety remain for policy makers. However, future success will require not only doing more of the same, but new reforms to policy, planning processes, regulation and governance, as well as appropriate and proportionate responses to emerging disruptive technologies and business models.

The “Asset Management of World Bank's Investment and Financing Projects” by Mr. ZHAI Xiaoke, Senior Transport Expert at the World Bank reviewed the role of road transportation, the overall development and management of road assets, and the key issues faced in road asset management in China. China invested heavily in road infrastructures development .and accumulated a huge amount of road assets, which supported and contributed to economic growth in past decades. However, with the aging of the road assets and the growing demands on quality services, China faces challenges to efficiently manage its road assets and provide better service in a sustainable way, including change of road asset management approach and policies, provision of sufficient maintenance funds, and improvement of road asset management decision and performance. The World Bank supports China to address these challenges through sharing international good practices and knowledge.

Mr. CAO Jiandong, Director of the Key Laboratory of Transport Industry of Big Data Application Technologies for Comprehensive Transport, provided a presentation on Information Resource Integration and Sharing & Practice of Big Data Application. Director CAO’s presentation introduced the work of the Laboratory on the integration of information resources and application of big data. The presentation covered the development background, including the National Strategy provided in 2015 by the State Council and the important instruction of General Secretary XI Jinping for the implementation of the national big data strategy, particularly to “Accelerate the improvement of digital infrastructure”, the recognition that “big data is a new stage of information development” and the six requirements to promote the innovation and development of big data technology industry. It provided details on the work foundation of the Laboratory and its responsibilities for the research of comprehensive transportation policy data standards, the preparation and maintenance of data resources catalogs, the exchange and sharing of ministerial data resources, and the development of open application systems, big data analysis and management, etc. It provided details on data integration and sharing, including the Laboratory’s efforts on Policy Documentation, creating a Work Program and more importantly a Data Exchange and Sharing Application Platform. Last it presents the work of the Laboratory in the area of data analysis and particularly in the analysis and application of highway toll collection data, urban traffic data analysis and application, and logistics data analysis and application.

The next presentation by Mr. Christos S. XENOPHONTOS, Assistant Director for the Rhode Island Department of Transportation / TC A.1 English Secretary described the journey (Rhode TRIP) that the Rhode Island Department of Transportation has undertaken in the Autonomous Vehicle arena from the Mini Summit on Connected and Autonomous Vehicles held in Rhode Island as part of the TC A.1 meeting in April of 2017 to the current seminar in Beijing. From Providence to Beijing in one year highlights the action plan implemented by RIDOT from framing an RFI around major questions on CAVs to the establishment of a state-wide partnership (RI Transportation Innovation Partnership – TRIP) to the issuance of an RFP under PPP for an Autonomous Vehicle Mobility Challenge to test automated multi-passenger vehicles in Providences Urban core. The goals of the TRIP are to introduce safe innovative

technology, improve transportation networks in underserved neighborhoods and integrated cutting-edge technology.

Mr. LIU Meiyin, Vice-President, DiDi wrapped up the presentations for Plenary Session II with a presentation on “One-stop Smart Travel Service”. Mr. LIU first introduced the challenges in urban transportation, such as population urbanization aggregation, restrictions of traffic resources and environment protection, and pointed out the limitations of the two traditional modes, public-service and self-service transportation systems, in transportation development. He then highlighted the new technological trends that can be applied in the furtherment of transportation, including artificial intelligence, automation, digitization and sharing. Finally, based on the development of new technologies and traffic demand, he presented the “All in One” traveling service mode of transport, which integrates the advantages of traditional modes and future traffic development trends.

Plenary Session III, “International Perspectives on Transport Governance” was moderated by Mr. Christos S. XENOPHONTOS, Assistant Director for RIDOT and TC A.1 English Secretary. It provided the attendees with a great perspective on the outcomes out of TC A.1 from previous cycles focusing on the “Reformation of Transport Governance Structures to Deliver Better Outcomes”, “The Role of Performance Management in Tracking and Improving Transport Delivery”, Sweden’s “National Experience of Multimodal Transport Authorities”, “Disrupting the Transport Sector through Technology and Innovation” and “Institutional Integrity and Implications for China”. The Plenary session highlighted what happens when same minded transportation professionals share knowledge and ideas so that we can learn from each other and advance the state of the practice in cutting-edge technology instead of reinventing the wheel.

Abstracts from Plenary Session III:

Mr. Jonathan SPEAR, Director of Transport Policy and Planning, Atkins Acuity / TC A.1 Workgroup Leader kicked the Plenary Session with a presentation on “Reforming Transport Governance Structures to Deliver Better Outcomes”. The presentation sets out work done by the previous Technical Committee between 2011 and 2015 to examine trends and responses by transport administrations toward multimodal planning and delivery. While this includes a focus on the emergence of so-called Integrated Transport Authorities at different spatial tiers, it is demonstrated that structural reform may not be the only way to achieve integration. Changes to planning and programming processes, inter-agency collaboration and a customer-focused culture may be equally important for successful outcomes. Following presentation of the main findings of the research, some of the lessons are also applied to China as major cities seek to reform their transport governance arrangements to effectively and efficiently operate and manage increasing complex, integrated and multimodal urban transport networks.

The next presentation by Ms. Anna WILDT-PERSSON, Chief Strategist of Strategic Development, Swedish Transport Administration (Trafkverket) / TC A.1 Member on “The National Experience of Multimodal Transport Authorities – The Case of Sweden” described the major changes in the Swedish transport sector during recent years and the reasoning behind the changes made by the Swedish Government. The reform culminated with the formation of a multimodal transport agency when the previous single-mode agencies merged into a single organization. Some strengths and weaknesses with the multimodal administration as well as challenges during the change process and lessons learned are presented. In

focus right now is a proposal for a new multimodal long-term plan for the transport system from 2018-2029

Mr. Alan COLEGATE, Manager Strategy of Main Roads Western Australia / TC A.1 Member presented next on the “Role of Performance Management in improving transport objectives”. The presentation shared the activities of the Working Group exploring the role of performance management in delivering better transport outcomes. It outlined current approaches and understanding in terms of the relationship between strategic planning and performance measurement and how that can assist transport agencies in explaining and understanding how they deliver value. This included looking at countries who have adopted common agreed societal outcomes and what that means for transport through to the more focused transport outcome based approaches at national and provincial agency level. The results of findings from an international survey of more than 30 organizations looked at how they approached the relationship between strategic planning and performance outcomes and value creation as described by the International Integrated Reporting Council and how that might be applied in a transport context. The presentation concluded with a look at a Case Study on Main Roads Western Australia and how they have applied some of the learnings from this approach.

Mr. Alexander WALCHER, Managing Director of ASFINAG BAU MAAGEMENT GRBH / TC A.1 Workgroup Leader and Mr. Michel DEMARRE, Director General of SEFI-FNTP/ TC A.1 French Secretary and Workgroup Leader jointly presented next on “Institutional Integrity and Implications for China”. With increasing global integration and the resulting need for greater levels of comparability, accountability and transparency within the public domain, the need to take targeted action to promote institutional integrity in corporate governance and to act decisively against corruption is increasingly recognized as a priority for all sectors worldwide. This counts the more for the road sector which has proven to be particularly vulnerable for corruption.

The function and operations of road administrations involve the planning, construction, operation, maintenance, financing and, in some cases, toll collection, of road infrastructure and associated services. The diversity and complexity of these activities requires extensive processes, structures and projects involving a multitude of stakeholders, often with different and, in some cases, conflicting economic, environmental and political interests. These conditions and the proximity and direct involvement of public administrations, high contract values, complex contractual arrangements and multiple interfaces provide opportunities for collusion and corrupt behavior and practices at a number of levels.

In the first part, the presentation sets out the work done by the previous WRA Technical Committees since the issue of fight against corruption was put on WRA’s agenda: namely the toolkit of integrity and associated recommended measures of prevention, identification and enforcement. The second part describes the laws, regulations, standards and good practices that were published after 2011 by a number of international organizations (such as G20, OECD, Multilateral Development Banks, ISO), in which China’s involvement has been steadily growing.

The next presentation by Ms. Anne-Severine POUPELEER, Head of division Planning and Coordination, Agency for Roads and Traffic – Flemish Government – Belgium / TC A.1 Member on “Disrupting the Transport Sector Through Technology and Innovation” provided the attendees with the opportunity to think out of the box when it comes to innovation. The presentation challenged the audience to recognize the importance of communication to any innovation or change management initiative. And even though

it is very hard to get engineers to change, you have to make the case and bring them along on the journey. Through a number of examples from Kodak to Nokia to BlaBlaCar, the case was about the need to recognize new trends and stay ahead of the innovation curve and that to change, you need someone at the top to lead this change and that you have to be open to new ideas while remembering that new does not mean the end.

The last presentation for this Plenary Session was by Dr. Jason CHANG, Professor of Taiwan University on “ITS for Transport Safety and Sustainability” who provided an overview of ITS development in Taiwan, including adoption of smart mobility for livable cities on the quest for improved quality of life and economic growth. Dr. CHANG highlighted the need for future mobility, particularly implementation of ITS²⁺¹, Integrated Intelligent Transport Safety and Sustainability System and the need for institutional reform and innovative governance together with international and multi-disciplinary collaborations to achieve the desired outcomes of providing customers with smart mobility options.

SUMMARY OF CHINA – INTERNATIONAL ROLLING PANELS ON JOINT TRANSPORT SECTOR EXPERIENCE

The Plenary Sessions provided the opportunity to set up and conclude with the “China–International Rolling Panels on Joint Transport Sector Experience” that featured two different panels, one on “Institutional Reform and Innovation” and one on “Technology and Innovation Driving New Business Models and Value Chains in the Transport Sector”. Both panel discussions were moderated by Dr. Jason CHANG, Professor of Department of Civil Engineering and Director of Advanced Public Transport Research Center in National Taiwan University and a visiting Professor at CATS and featured a blend of international and domestic experts.

Topic 1 – Institutional Reform and Innovation:

The following experts participated in the discussion for Topic 1:

- YU Shengying, Former Counselor of Comprehensive Planning Department, MOT, P. R. China
- WANG Wei, Professor of Chinese Academy of Governance
- Jonathan SPEAR, Director of Transport Policy and Planning, Atkins Acuity / TC A.1
- Michel DÉMARRE, Director General of SEFI-FNTP / TC A.1
- Anna WILDT-PERSSON, Chief Strategist of Strategic Development, Swedish Transport Administration (Trafikverket) / TC A.1
- Natalie FORSYUK, National Secretariat Director of CoST (Construction Sector Transparency Initiative) in Ukraine / TC A.1

The panel discussion centered on important key problems, not just for China but also very important for most countries, especially in the economic transformation of a country. The growth of transportation and institutional reform and innovation goes far beyond China. What kind of reforms are necessary to enhance the continuous improvement and innovation in the transport sector? The first Panel Discussion was centered on three main issues:

- Comparative importance of institutional reforms vs development of technical solutions for achieving effective transportation operations and services

- International experience and local model of creating effective institutional structures for mega cities and for those small/medium cities
- Transport demand management vs increase in supply/capacity

Following below are some of the main take-aways from the discussion and the Q&A session that followed:

The people-centered multimodal approach, like what we saw in Sweden is spreading. Multimodal integration needs another mindset. In Sweden it was done through organizational and institutional change. Infrastructure is a tool to achieve social development – the goal is not infrastructure development in itself but to create something for the citizens that live there. And this means all modes are needed and sometimes they complement each other and other times they are in conflict.

There is a need to balance the different policy areas and the complexity that comes with running very large organizations which varies in different parts of the world due to culture and approach. At the same time, we need to be careful not to become so generic that we lose focus and do not deliver anything at all.

The process of reform is important in eliminating blocks for innovation and to provide a better response for our citizens. China has more than 40 years of reform and opening up opportunities in the transport sector. For all of this to work we need to have a coordinated mechanism so that when you look at institutional reform you look at the entire picture. We need to embrace consistent organizations for innovation and research in the road and transport sector. It should be national and encompassing of all road authorities and not be constrained within silos. Institutional reform in transport will bring about new changes to everything.

Topic 2 - Technology and Innovation Driving New Business Models and Value Chains in the Transport Sector

The following experts participated in the discussion for Topic 2:

- SONG Zhongjie, Founder and CEO, Dida Chuxing
- WANG Zeqiong, Vice president of ZX Bike
- YIN Zhifang, Research Associate, CATS
- Christos Savvas XENOPHONTOS, Assistant Director, Rhode Island Department of Transportation (RIDOT), USA / TC A.1
- Anne-Séverine POUPELEER, Head of Division of planning and coordination, Roads and Traffic in Flanders (MOW – AWW), Belgium / TCA.1
- Niels TØRSLEV, Operation Director, the Danish Road Directorate / TC A.1

The second panel discussion centered on how new technologies and innovation are driving new business models in the transport sector. The rapid introduction of mobile internet is upending the traditional approaches with new customer-centric business models based on the sharing economy such as online car hailing, bike sharing, time sharing, customized shuttle bus, parking sharing, etc. And while the new business models bring more convenience and efficiency to the users, they have also created new problems that we must face as decision makers. Should decision makers have an open mind and positive

attitude towards the new sharing economy models? How should we regulate and deal with the new challenges? The second Panel Discussion was therefore centered on the following issues:

- Innovative services and new business models and their impacts on social and economic development
- Critical issues on old and new services
- International and local experience of policy supervision schemes on interest and new business
- Boundary of the supervision and market
- Role of service providers and their self-discipline

Following are some of the main take-aways from the discussion and the Q&A session that followed:

There is a need to set up strong management methods and apply appropriate technology solutions so that we can provide good customer service at an early stage. There is also a need to understand the role that Government needs to play in the evolution of these new economy models. Government is by definition risk averse and could stifle innovation and new business models before they have a chance to be proven. There is a need to provide a balance between regulations and encouraging private sector development and innovation. Our role should be to facilitate and help expedite the adoption of new technologies that can better serve our citizens and stakeholders.

Many people think that innovation and the new business models are helpful to society and economic development but we need to be careful so that we are not leaving people behind. While the digital divide between nations is rapidly closing, the digital divide between the haves and have nots at the personal level is getting wider. To ensure that people are not left behind in this digital divide the government must play a bigger role, particularly in the transport sector.

Data governance is one of the major issues that we will have to deal with and we need to look at how to create value from that. Governments need good and reliable data to design public policies and to provide quality public services. Data needs to be integrated at a large scale, but lack of data standards and varying degrees of data quality are hindering data integration. Coordination between governmental agencies relative to the management and implementation of data governance procedures is lagging the needs of the private sector and the new sharing economy. This is further exasperated by the lack of knowledge and skills in many governmental agencies to manage and interact with digital data particularly on the program management side and technology side, and the lack of a good understanding of the value of the available data.

At higher levels we need to compete for the market not in the market – for example in the case of shared bicycles we need to see them as one component of the Public Transport System and that together they can provide a better service to our customers.

CONCLUSIONS

TC A.1 Chair José Manuel BLANCO SEGARRA provided the seminar attendees with the conclusions and take-aways from the two days of the seminar.

José Manuel BLANCO SEGARRA closed the Seminar by recognizing that even though the foreign members of PIARC TC A.1 came to PRC as experts, they leave with more knowledge and very impressed with the continued progress of the PRC regarding infrastructure and network transformation and the

will to continue improving the organizations and performance in the countryside, mega cities and small/medium cities all over China.

The exchange and sharing of knowledge and information benefits all of us and has direct impact on our customers as we all become better professionals through the sharing of this knowledge. The members of TC A.1 came away from the Seminar with six (6) major conclusions.

Roads are not just a physical asset (infrastructure) but also a part of the Mobility as a Service (MaaS) equation and we must start looking at them as a service, Road as a Service (RaaS). The road network is an economic and social asset:

- There has been a great leap forward in infrastructure and modernization and reform of government agencies and the focus on transportation, MaaS, and the sharing economy. There is also a recognition that Transport Administrations need to take a customer-centric approach to providing transport services and consider the entire journey not just one aspect of it.
- This has included recognition of the need to adapt to social needs and improving the quality of life of citizens through the built environment and promoting environmentally friendly modes of transport including cycling and walking.

Communication, collaboration and good planning between agencies, across modes, and harmonizing central government directives and local actions are essential:

- There is a common desire around improving freight and logistics and enhancing the movement of freight to get better efficiencies. There is also a need to redefine the role of Intelligent Transportation Systems to include Safety, Sustainability and an Integrated Transport Solution and move to "ITS²⁺¹."
- There is a strong focus on reform for the future with metro or urban areas focused around looking for a seamless transport network, creating better urban economies and smart and livable cities. The big building program of high-speed rail in RPC would be a dream come true, creating the "fast" future of transportation.

Doing more of the same is no longer acceptable. Do not fear new ideas and disruptive trends and embrace innovation and new business models:

- We must innovate in order to stay relevant to our customers and provide them with world-class service. There is a strong need to focus on smart transport, ITS, CAV, cycle hire, ride hailing, green transport, integrated transport and revitalized rural areas through transport.
- All of this must be done in a fair market environment and with institutional integrity, reporting and focused towards the customers' needs and service quality for passengers. All of this is based on research and innovation and being open minded.

The sharing economy is coming and we need to address the new issues and opportunities that it will create:

- There is a great desire to achieve positive outcomes with "open data" but it's a difficult task. We are all at the beginning of that process, to share so much data from so many different systems and sources and achieve harmonization.
- Significant difficulties to bringing together the public and private or self-service sectors for outcomes as "one stop service" and "one stop platform" still remain in place.

Much remains to be done – the outcomes of tomorrow are determined by the choices we make today:

- Evolving from construction to complex operations, regulation and management. Institutional reform and innovation with clear objectives.
- Reforms to transport governance, regulatory environment, financing and engagement of private sector, creating value chain, and embracing disruptive technology with appropriate standards and regulations.

The nearby future:

- Be part of the global logistics network and the interest in having China being more involved in influencing the transport solutions for the world in a strong and positive way.
- Bringing professionals around a table for sharing ideas builds lasting goodwill and friendships that transcends boundaries and nationalities.
- We have a lot to learn from each other. As a collective, we have the opportunity to do great things. Let us build on the good work we have seen today in a positive manner. There is no need to reinvent the wheel.

Mr. BLANCO SEGARRA concluded by acknowledging all of the Chinese and international experts who shared their knowledge with everyone and thanked the Ministry of Transport of PRC and the China Academy of Transportation Sciences for their support and organization of the Seminar and TC A.1 meeting.

CLOSING

The President of CATS, Prof. SHI Baolin closed the Seminar by thanking José Manuel for providing the conclusions to the Seminar, the international and domestic experts that shared their knowledge and the attendees for actively participating. He highlighted that even though the theme of the Seminar was road transportation and effective management that we have gone beyond roads and transportation and we have talked about the whole transportation industry and all its elements in both urban and rural environments, and even though our discussions were based on roads, they went far beyond them into the impact to our communities and citizens.

He closed his remarks by thanking his colleagues at CATS for the hard work that they put into the preparing and hosting the Seminar and in particular he acknowledged Associate Professor LIU Leilei of the Research Management Division and Ms. LIU Si, Research Assistant for their exceptional efforts.

THE PASSING OF THE TORCH

We are pleased to announce that while attending the Seminar in Beijing, the City of Kiev has joined WRA/PIARC as a regional member and they will be hosting the next TC A.1 meeting and Seminar in Kiev (Ukraine).

Testimonial:

All - good afternoon! Greetings from Kiev - a new member of PIARC.

There are not enough words to describe the emotions of happiness from a wonderful seminar and an excellent company! I am genuinely delighted with the professionalism and love for my work of all members of the TC A1, the participants of the seminar!

And in a short period of time I found friends, close in spirit and devotion to my work. And even communication in different languages did not become an obstacle :)

Special thanks to SHI Baolin & LIU Si for the organization of the process, escort, hospitality, the discovery of charming China!

And I also wanted to thank you for the help and friendship of Natalie Forsyuk, who was my mouth and ears.

I look forward to the next meeting! But now at the seminar in October, in Kiev :))

Dear friends of TC A.1 – Thank you very much!!!

Welcome to Kiev!

Yours faithfully,

Oleksandr Gustieliev (Alexandr Gustelev)