CLOSING CEREMONY

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INTRODUCTION

The Mexican Road Engineering Association is a professional organization founded in 1974, which has as main objective the development and promotion of scientific and technological knowledge in the specialty of the roads, from a technical viewpoint, administrative and operational.

It is also the Mexican representative in international partnerships that share the same goals. Among these associations, highlights the performance of AMIVTAC which is the National Committee of the Permanent International Association of Road Congresses (PIARC for its acronym in English).

In the XXIV World Road Congress, AMIVTAC participated as co-host, alongside the Ministry of Communications and Transport and the World Road Association. AMIVTAC functioned and participated in the preparation of all activities, highlighted by its ability to call the business sector dedicated to roads and that their intervention was very important to involve developers, consultants, suppliers and specialists EXPO simultaneous development of the congress.

Mr. Clemente Poon Hung is chairman of the board of AMIVTAC, he has a long history of almost 30 years in public service, dedicated to roads and is currently head of the Directorate General of Highways of the Ministry of Communications and Transport. In addition to his outstanding performance, Mr. Poon Hung has always been closely linked to the activities of the Mexican civil engineering through professional organizations recognized specialty in Mexico: The Association of Civil Engineers of Mexico and the Mexican Road Engineering Association.

In this speech, Mr. Clement Poon Hung presented during the closing ceremony of the XXIV World Road Congress, a series of reflections on the issues discussed at the various sessions. He points out some of the challenges for the Association and he values deeply the contributions that the congress offers professionals in the road sector around the world.

CLEMENTE POON HUNG

CHAIR OF THE MEXICAN ROAD ENGINEERING ASSOCIATION (AMIVTAC)

HEAD OF THE GENERAL DIRECTORATE OF HIGHWAYS OF THE MINISTRY OF COMMUNIACTIONS AND TRANSPORT

Good afternoon.

I will say a few thoughts about the immediate future of roads derived from what were developed in the various sessions these five days of the World Road Congress here in Mexico City.

We have witnessed, in these five fruitful days, a great effort crystallized in the work and results of the different coordination of strategic issues, technical committees and special sessions in the cycle that ends today.

I will present some reflections of what is still, in my opinion, unaddressed in several issues related to roads and their surroundings, in the broadest sense: Mobility, sustainability, connectivity, intermodality, efficiency, social equity, economic development, competitiveness, climate change, security, are perhaps the most recurrent concepts we've heard these days, product analysis, development, diagnosis and prognosis related to the world of the roads.

I will first refer to mitigating the impact caused by the road network on climate change.

Reducing greenhouse gases is imperative that require solutions at least as far as what road transport contributes to the generation of these gases: solutions that include fiscal measures such as implementation cost due to congestion, parking and fuels, among others.

The implementation of policies leading to the reduction of such gases and the reduction of private vehicle fleet is a priority for countries. The theme of the generation and use of alternative energy and reducing impacts on the environment is a topic of high potential of multiple economic and environmental benefits.

In reviewing alternatives aimed at getting non-fossil energy for road systems, it was concluded that these exist now and are ready to be implemented. Its implementation has been somewhat slow in several countries, mainly due to fiscal and institutional obstacles.

As for the future of the automobiles it is required to invest not only in strategies to increase the number of electric cars, but also an infrastructure that can sustain the growing number of these cars. For now, there is an imbalance between the demand for electric vehicles and the construction of the appropriate infrastructure.

While there are countries that already have a large number of vehicles promoted by governments, a niche opportunity has also been detected that involves convincing the public to invest in electric cars mainly due to their high costs.

In parallel, the use of multimodal mass transportation should be encouraged in large cities such as light rail, articulated buses, bicycles, motorcycles, among others, with a corresponding adaptation of the infrastructure required for these forms of mobility thus decreasing the personal use of vehicles.

The global financial crisis has caused a challenge in this environment and therefore the road infrastructure financing will continue as a subject of study in which it will be beneficial to share the knowledge of complex contracts involving the private sector such as integrated services and public-private partnerships.

For its part, risk transfer and payment mechanisms, as the prospects of profitability, need revision. The funding is key to maintaining the existing highway system and to build new infrastructure. More than ever, the administrative authorities of roads must do more with less and engage the private sector in conservation and operation, to increase their productivity.

The roles of this participation varies from country to country and the degree of complexity. From the road system property to interests shared with federal, state and municipal governments in a wide range of services.

Employment schemes, known as public-private partnerships have been successful, since the resources available from central government road networks are limited.

On the identification of social impacts for highway projects, it was decided to define these impacts as those produced or collected by the user population that is not the road. These impacts include, for example, with respect to accessibility, the barrier effect, air pollution, climate change, energy consumption, noise and other environmental impacts, health, employment, social cohesion, local development or the price-cost transportation.

The final evaluation through systematic approaches or not, is still not a common practice among some member countries. Furthermore, in most cases where the post evaluation is performed, the evaluation focuses on impacts that are not necessarily social.

Charging systems continue to collaborate in financing the construction and / or maintenance of road networks, as well as traffic regulation and / or limiting the effects of traffic on the environment.

Rural roads play a crucial role in the economic and social development of societies, therefore, their conservation is essential to ensure adequate access and mobility for the rural population. From the experience gained in recent years in Latin America, as elsewhere, it can be concluded that the establishment of new road maintenance of rural roads is a priority, mainly based on the method of prevention.

Strategies must be highly contextualized to the needs and circumstances to determine the most appropriate management model. Second, I will refer the issue to improve the provision of transport services.

To provide a public service of value to the community, it takes more than a robust and a strong culture to prevent, detect and enforce laws against corruption. It is also necessary to make sure that users and stakeholders are involved and to have the human resources for the successful completion of the tasks that the organization providing the transportation service need to comply.

To make the best use of existing infrastructure, it requires a systems approach that incorporates high-level strategies, including alternative modes of transport. The measures for such integration should be based on three levels: strategic, tactical and operational, to improve coordination of services, systems and ongoing programs.

Faced with new problems encountered by urban sprawl and urban transport, spatial planning must achieve together through programs and coordination with the institutions responsible for regulating the transport, to find appropriate solutions to solve problems in these cities.

The management of non-recurring congestion must include application development strategies designed to mitigate traffic congestion due to irregular causes, such as traffic incidents, special events and construction sites.

With respect to recurring congestion, the one that occurs by excessive demand on the system of roads, we recommend the use of congestion pricing, the management of arterial roads and adequacy of traffic lights, real-time information to travelers and planning and implementing improvements in the capacity of road networks.

Intelligent transport systems have been identified as an efficient tool for administrations of road systems to maximize capacity, improve safety and assist in the management of maintenance and construction programs. It is worth mentioning that the ITS manual that PIARC produces has recently been updated and is available online.

When winter transport is concerned, you recognize the increasingly important role of operating systems based on weather information, communication between road users and sustainable development of the winter road operation.

The development of intelligent vehicles, interconnected with infrastructure opens new opportunities for better management of road networks. The work done PIARC with the International Federation of Automotive Engineering Societies should be mentioned in this regard.

To improve freight management, a series of measures should be implemented, including construction of new infrastructure and traffic management through the use of ITS. The problems caused by urban transport load, trying to reduce congestion, pollution, accidents and energy consumption deserve special attention.

The highlights, as far as the third theme on road safety is concerned, are the UN decade of action and the adoption of policies and strategic guidelines, programs, courses of action, targets and indicators to reverse the current mortality tasks, motivated in road accidents worldwide, we hear from Etienne Krug a global perspective on road safety, clearly and precisely the problem for which PIARC is involved in the solution in order to save five million lives.

The vision and focus are key aspects related to the formulation of policies on security, best practice is represented by a compromise, with a long-term goal of zero fatalities with strong intermediate goals that set the path to success.

This commitment at the highest level of government will influence and sustain the management and road safety policy and it will be reflected clearly in the proposals outlined by strategies and identified actions.

Many countries with ambitious goals such as zero vision recognize that they must set and achieve milestones; there should be continued emphasis on research, innovation and knowledge sharing in order to find ways to improve in this area in the years to come.

The design and operation of highways requires a complex approach

as a system, in order to be effective in the expected achievement of road safety. It has been concluded that the most effective way is to adapt the technical elements, vehicle and road transport system's abilities and limitations of users. The objective of the safety system approach is the development of a road transport system better suited to human error.

Vulnerable road users in urban roadways need to be seen as part of the solution in the design of these roads. Assessing the impact of security has become one of the objectives of the comprehensive plan for the UN decade of action for road safety, PIARC is therefore working on developing some improvements for audits and inspections of road safety as well as in defining the role that the security management infrastructure in the new safety manual.

It highlights the importance of reducing the risk associated with not only road accidents, but those of natural and anthropogenic origin affecting road infrastructure where there are good practices in risk management.

To assess risk quantitatively is the first essential step. The Association has developed publications that show the fundamental theory and risk management tools, including case studies that demonstrate the value of using risk management, not only in the operation of roads and highway projects and network operations, but also in organizational management, as well as publications to share methodologies that have been used to assess and address risks.

The identification of best practices in the management and operation of road tunnels in order to develop strategies that target the entities that operate, monitor and use the tunnels, both in urban and in long distance, has been a subject of debate within the Association. Among these practices, it has been highlighted the need to maintain service levels during the life of the tunnel, using procedures based on checklists to assess its functionality, where security checks are a goal and not a practice.

The fourth issue relates to highway infrastructure from a sustainable approach and adaptation to climate change. To way to improving the quality of infrastructure is through a more effective asset management. It is a fact that climate change and its effects directly affect the performance of the infrastructures, such as erosion, slope instability and reduced carrying capacity of highway pavements. In this regard, innovative solutions that can mitigate the effect of climate change,

adapting the road for that purpose, such as solar heat blocking paint pottery to significantly reduce the temperature of the pavement and reducing permanent deformation. Advances are detected in the collection of information on pavement conditions, such as three-dimensional profiles and other systems should be validated and used to improve the monitoring of the pavement surface. It is also necessary to identify the relative importance of each major contributor to carbon footprint, to identify key areas and identify effects of conflicting requirements and the speed with which they must build versus (against) the quality of the pavement and the impact of poor quality of life quality of the carbon footprint of the road, such as its construction, maintenance and rehabilitation.

In relation to noise pollution, it has been concluded that there are a number of national and international research projects which aim to reduce the physical impacts of environmental noise, including that caused by the tires of trucks.

Given the advanced age of the highway bridges, 45 years is the global average, it is imperative to have a sufficient amount of resources that should be allocated to these for conservation and be managed rationally. The training of inspectors is also essential, in order to have a reliable, consistent and detailed inspection of bridges. Innovative techniques of construction of bridges and rehabilitation processes that reduce maintenance costs of bridges are issues to address in future cycles of the Association.

The use of marginal materials in earthworks offers opportunity for improvement which requires a greater exchange of information and research in the next cycle of the Association. In similar cases the materials are too dry or too humid; those are linked to climate change issues where further research is needed. In the case of Africa or South America you need to find options other than the usual materials.

The unlined drainage pathways remain an important topic and the lack of regular maintenance has severe consequences on the uncoated roads and although there is a widespread awareness on climate change there are also infrastructure managers who are not yet clear on what effect that may occur on the roads.

The social, economic and environmental engine in favor of recycling and proper management of waste materials should be investigated to identify key issues on sustainable recycling and reuse of paving materials in order to maximize a long period of recycled products.

Finally, you can see a challenging and interesting future ahead for the World Road Association on the issues just mentioned. There is no doubt that the Association will continue to address these issues with the seriousness, commitment and professionalism for what it that has been known for during its long existence.

Highways for better lives. Thank you very much for your attention.

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