A FULL CENTURY OF WORLD ROAD CONGRESSES

by Jean-François Corté, General Secretary of the World Road Association (PIARC)

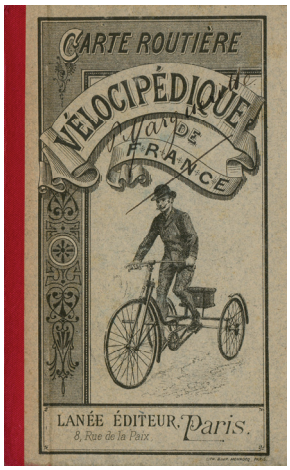
(This text provided background for the talk delivered during the opening session of the 23rd World Road Congress, Paris, 17-21 September 2007)

"*The role of our major roadways has been altered since railroad construction became prevalent. These thoroughfares no longer serve their former purpose of transport over routes of any distance, but now constitute tributary links to the railway network, bringing traffic to central rail stations from neighboring regions and distributing the passengers or freight that arrive by train. Traffic patterns on these roads have become more localized.*"
A century review (1801-1900) - Alfred Picard (1906)

Time however would quickly disprove the assessment offered by Alfred Picard[1] on the role of road transport. Let's examine herein how over the course of the 20th century, the World Road Congresses have reflected the evolution in conceptions and context regarding the road and the road transport system.

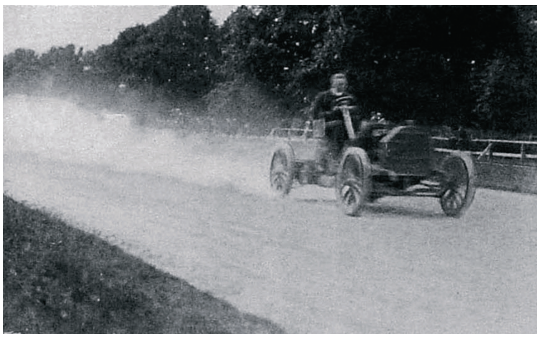
AT THE DAWN OF THE FIRST CONGRESS

To begin this historical review, it would be useful to recall the 19th-century fascination with cycling as the new means for enjoying leisure and tourism, a speed-enhancing instrument that preceded by just a few years the advent of the automobile. As illustrated by the Bicycle Touring Club founded in England in 1878, cycling clubs were spreading into several countries and new members soon started lobbying against the poor state of road networks, designed for animal-powered locomotion and incapable of accommodating this new mode of travel.



As the 20th unfolded, some fifteen years following introduction of the automobile, the pioneering efforts had already come and gone, and in both Europe and the United States automakers and auto users had organized into associations, called Automobile Clubs, creating very active lobbies to promote automobile transportation. As of 1900, the city of Paris, which would remain the world's car manufacturing capital for another few years, hosted the first International Automobile Congress.

[1] Alfred Picard (1844-1913), alumnus of *Ecole Polytechnique* and *Ponts et Chaussées*-certified civil engineer, held the post of Director of Bridges, Roads, Mines and Railroads, in addition to being appointed General Commissioner of the 1900 World's Fair, Minister of Marine Affairs in 1908, and Vice President of the Council of State from 1912 until his death.



During the association's 3rd event, held in Milan in 1906, Tedeschi, Editor of the industry review *Le Strade*, stated: "*Generally speaking, road pavements are barely able to meet the needs of these new transport modes, in terms of either construction or even maintenance; moreover, this flaw could in the near term constitute a sizable obstacle to expanding the level of automobile traffic*". Tedeschi followed up by asking attendees to commit to the following:

"- Have our public authorities show interest, given the new functions assigned to pavements, in proceeding with the necessary road construction and maintenance modifications, in accordance with the wishes expressed in the report presented to this Congress.

- Have Touring Clubs across the various nations constitute a permanent International Committee for all issues inherent in building and maintaining roads, as well as those relative to automobile traffic, in the aim of raising road utility to a level commensurate with conditions imposed by revised use and travel patterns."

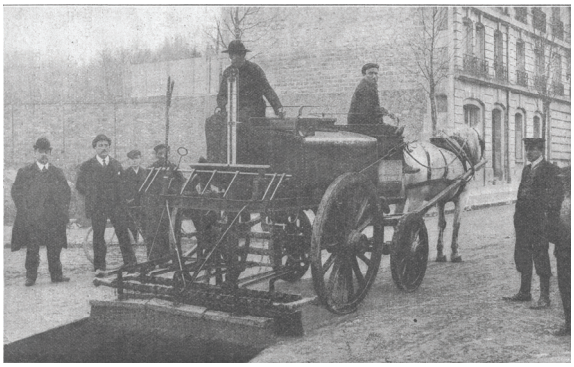
THE FIRST CONGRESSES

With this backdrop and in light of pressures exerted by the Touring and Automobile Clubs, coupled with the hygienists' movement against dust, the first International Road Congress was held in 1908 in Paris, as an initiative championed by France's Public Works Minister, Louis Barthou. This effort may have appeared as a public-sector attempt to wrest control over adaptation of the road system to meet the demands of automobile users. One of the topics included on the 1908 Congress agenda, entitled "The road of the future", underscored this preoccupation.

The success of this initial Congress, which assembled over 2,000 participants from 33 countries, gave rise in 1909 to the founding of the **Permanent International Association of Roads Congresses** (PIARC), as a body empowered to organize such events on a regular basis and promote international cooperation in this endeavor.

The specific issues addressed during the first three meetings (Paris 1908, Brussels 1910 and London 1913) would all lie under the headings of "Road building and maintenance" and "Traffic and operations".

The problem of controlling dust on roadways was quite quickly resolved by developing an array of surfacing techniques based on the application of tar and bitumen.



These early Congresses provided the impetus to standardize signaling intended to inform motorists of road hazards, given that for a long time this responsibility had been left to the Automobile Clubs; session discussions on this topic turned out to be quite heated.

The other main topic treated early on at Congresses focused on traffic difficulties encountered in large cities due to the mix of roadway uses as horse-powered locomotion, widely prevalent at the time, was vying for right-of-way with streetcars, pedestrians and the first automobiles.

The mission of assembling the next Congress in Munich in 1916 had to be aborted when World War I broke out. In 1923, Congress attendees convening in Seville noted with disappointment the ill-chosen motto for the association "Via Vita" (or "*The road is life*"), drawn from an enthusiastic speech delivered by the Belgian Public Works Minister Delbecke, in 1910: "*The road means prosperity for all. It's about civilization, fraternity, it's life!*". The aftermath of the war was not a time to appreciate such effusiveness.

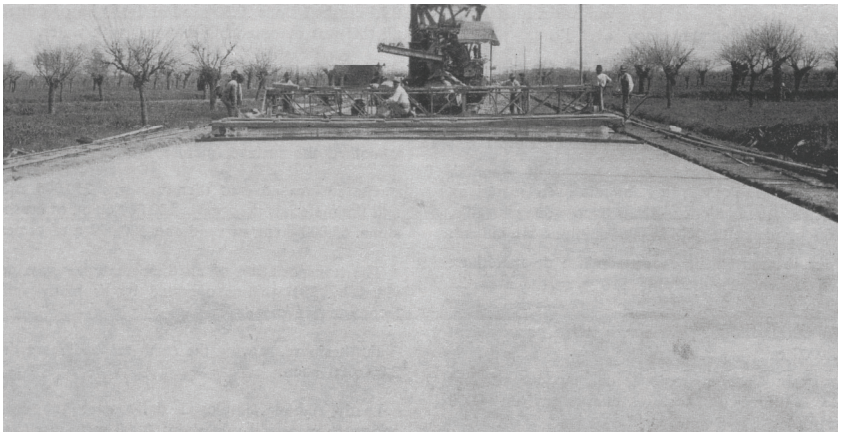
Automobile transport had also become critical to military logistics, as highlighted by Albert Mahieu, acting PIARC President, in his opening remarks:

"*During the armed conflict that engulfed our world for more than four years, it was transportation, and roads in particular, that played a decisive role. The construction, maintenance and rehabilitation of roads for adaptation to meet needs heretofore unknown, in this instance dictated by military strategy, engaged the capacities of all technical experts: the presence of the road, the amazing development of automobile use, especially trucks and crawler tractors, raised a new set of problems that required solutions at all costs. The question of how to regulate the incessant flow of thousands of vehicles day and night, of all types and shapes, also had to be solved using appropriate means.*"

BETWEEN THE TWO WORLD WARS

The Congresses held between World War I and World War II were noteworthy for the debates centered on "dedicated roads for automobiles" (Question 6 on the 1926 Milan agenda), which stirred sharply divided opinions. Italy's "*autostrada*" between Milan and Varese, over 80 km long and inaugurated in 1924, represented the first such major facility and was justified with proclamations like:

*"The need will be felt to connect large industrial, commercial and tourism centers by roads that remain fully independent of those designated for ordinary use, in order to provide adequate service to both very heavy trucks and speedy cars. For this reason, Italy has built (via private initiative, yet encouraged by the Italian government) a 90-km road between Milan, the country's production capital and the industrial and tourism centers of Come and Varese. This is the essence of our term '*autostrada*'."*



This Congress also provided the venue for raising the question of how to finance and operate this new type of infrastructure, eliciting:

"The autostrade*, which cater nearly exclusively to a single category of user, must neither be built nor paid by the public sector given the institutional reaction, through the power of taxation, to share costs among the entire population. With respect to the benefit derived however for ordinary roads from the resultant reduction in traffic, public institutions should be responsible for covering a reasonable share of expenses; moreover, the State should always retain the right to take possession of* autostrade*, as well as to enjoy the associated advantages or benefits. For the time being, the building and operations of* autostrade *will be entrusted to a private concern... As for road policing and traffic rules, these will be left with the State, as part of its public service mission.*"

With this exchange, discussion on the topic drew to a close.

In 1930, PIARC was invited to extend its association to the United States, where road transportation for automobiles had many years prior made the transition from a luxurious mode of travel to one of the cornerstones of the American economy.

By 1925, the United States already had nearly 17.5 million vehicles in circulation, accounting for 70% of the world's stock; in that year alone almost 4 million passenger cars rolled off the assembly line, and the Ford motor company produced its ten-millionth car.

The importance of automobile transport at the time was stressed in the address opening the 6th Congress in Washington D.C. by American Secretary of State Henry L. Stimpson:

"*In our country, we have seen bold improvements to the road system, and the automobile now reaches regions heretofore deprived of all means of communication. We have witnessed: the farmer entering into daily communication with the local market town; a fresh dynamic offered to urban trade and commerce, thriving retail activity in general; and a new set of forces playing an efficient role in battling disease and other impediments to organized society.*"

The 1920's and 1930's also witnessed the emergence, spearheaded by the United States, of a scientific approach to road-related problems. This movement entailed: the 1920 constitution of a High Research Board, the introduction of traffic study methodologies, and the appointment of engineers to key posts within Road Agencies. These trends would help incite a more technical approach to road issues while ensuring rapid network development.

The Washington Congress took place just a few months after the stock market crash, and the worsening economic crisis throughout the world would serve to justify major road construction projects as a way of absorbing some of the masses of unemployed workers.

Roy D. Chapin, who presided the Congress, declared: "*Our Congress is being held at a very opportune time, given that each country is currently seeking to undertake economically-productive projects while providing work for the unemployed.*"

In Germany during 1934, the country's highway construction program employed some 250,000 workers. Yet that same year, the Munich Congress was not spared from Nazi party propaganda, which intervened to promote the projects directed by Fritz Todt, the Congress's Executive Committee President.

The 1938 Congress took place amidst a temporal vacuum, as Austria had just been annexed and both Italy and Japan had withdrawn from the League of Nations, although they were still represented at the Congress. The Hague provided the venue and discussions remained focused on highly technical subjects involving materials, traffic management conditions, road accidents, determination of accident causes and the resources available to mitigate accident risks. The session president was inspired to remark: "*A crusade needs to be led in every country under the banner of road safety.*"

At that time however, the world's attention was being shifted to dramatic events elsewhere.

RENAISSANCE AND GLOBALIZATION

PIARC's resurgence following the Second World War stagnated, during a period of strong east-west tensions and ideological confrontation. The Congress did not reconvene until 1951 in Lisbon, marking the end of a 13-year hiatus.

While the United States elected to refrain from participating at PIARC events for a while by citing statutory reasons, American road engineering technology was nonetheless being heavily exported: methods in road geotechnics, experience derived and applied from the building of airport runways, the international distribution of construction equipment.

During this period of financial uncertainty that strained the budgets of many countries, coupled with raw materials shortages and oil rationing, the topic of profitability from road works first came to the fore in 1951; as a result, economic and financial issues would be included on the agendas of all subsequent Congresses.

An initial decision, which proved critical to PIARC's consolidation, prompted the formation of technical committees assigned a formal set of tasks in between Congresses. These committees worked to shape an international cooperation network and over the years published recommendations and state-of-the-art assessments that have become references in their respective fields.

The second major decision, after the 1955 Istanbul Congress, was to hold subsequent events on a worldwide scale outside of Europe; the 1959 Congress in Rio de Janeiro took place on the eve of Brasilia's inauguration by Kubitschek. New Delhi was slated to host the 1963 Congress, but upon India's declaration of a state of emergency, Italy proposed Rome as a replacement venue in 1964, followed by Tokyo's Congress in 1967. The move towards globalization had been successfully orchestrated.

The economic expansion of the 1960's spurred throughout the Western world a drive to democratize use of the automobile, which had also become a symbol of mobility and autonomy, evoking the ideal of individual freedom. For Western European countries, the rate of automobile

ownership (measured as the total number of cars per 1,000 population) increased nearly tenfold between 1950 and the end of the 1960's.

This growth of automobiles in circulation and of trip-making habits took place however prior to performing necessary road network adaptations and development. The response to traffic clogging ordinary roads was manifested by initiating extensive motorway works programs. From a technical standpoint, this period saw the introduction of computer calculation strategies, whose applications would become widespread in many high-profile projects.

Though the issue of integrating roads into the landscape was first raised in 1964, it would remain of secondary importance for quite some time. Moreover, to accommodate interurban highways within major conurbations, the approach conceived in 1971 proved very technical in nature, calling for urban motorways, ring-roads, etc. Road engineers were not able therefore to correctly anticipate the population's reactions to pursuing strictly technical approaches, and in so doing compromised the preeminence they had enjoyed until then.

The Congresses went on however to reflect the day's environmental concerns as regards nuisances, noise and air pollution caused by urban traffic, offering the following:
"The contemporary road is a large-scale architectural work that must be integrated into and not forced upon the landscape, be it urban or rural… Affirming that a road is modern, well-designed and able to provide a positive contribution must not come at the expense of neglecting the need to conduct an exhaustive evaluation of the economic and environmental aspects of vital concern to the entire community. In performing such an evaluation, it is essential to proceed with multidisciplinary studies in the aim of determining the impacts of the modern road, both positive and negative, that must be presented both explicitly and objectively (conclusions offered for Question VI – The road in its environment, 1975).

The first oil shock raised concerns over the shortage of oil products, as reflected at the end of the 1970's by revising road project planning processes and by the push towards recycling pavement materials and using materials treated with hydraulic binders.

The issue of social impacts correlated with the creation of new infrastructure was raised forcefully in Mexico City in 1975 by the Public Works Minister Bracamontes:
"The criteria that international funding organizations use to base their project allocation decisions needs to be modified so as to acknowledge the social and economic policies of the target countries, given that these policies exert a far greater impact on indirect benefits than on direct ones. Adjustments also have to be made to the set of criteria that serve to establish these organizations' share of project costs".

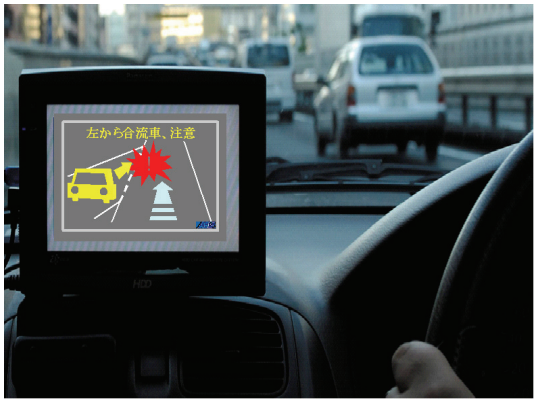
The "*labor route*" solution, derived in order to open up rural zones while raising living standards and training workers, stayed at the heart of many Congress discussions. This issue would also fuel strategic sessions that subsequently led to noteworthy changes of course in intended policies by financial sponsors, for whom the notion of highly labor-intensive projects would come to represent a critical component.

The attention given developing countries continued to grow after the 1983 Sydney Congress not only regarding socioeconomic impacts but also the transfer and adaptability of technical advances to the developing world.

In 1991, Morocco became the first Arab and African country to a host a World Road Congress: "*... The right to roads has now been legitimized.*" The country's Prime Minister Laraki made a case for worldwide solidarity "*to assist remote regions in developing roads that meet their needs and nurture their development.*"

This Congress also provided the forum to present and discuss the World Bank report entitled "*Road policy reform in Africa*", which sounded the alarm on the loss of capital investment committed over the previous two decades and stressed *the need for a national goal of: permanently maintaining a road system in a good state of repair, assigning responsibility to actors involved in maintenance functions, and introducing institutional reforms to enhance the level of efficiency associated with this maintenance effort…*"

After changing its name in 1995 to the **World Road Association**, though the acronym "PIARC" was retained, the Association has continued to rotate Congresses between continents over the past decade, with Montreal in 1995, Kuala Lumpur in 1999 and Durban in 2003. The general topics covered by the Technical Committees and Congress sessions have kept evolving, with studies of the physical road increasingly giving way to assessments of functionalities and the role of roads within the entire transport system from a sustainable development perspective, a topic that gave rise in 2003 to a request for ministers to share and compare their points of view in South Africa.



A DECIDEDLY HUMAN ENDEAVOR

PIARC has remained resolutely confident in both the technological progress and benefits for humanity from enhanced mobility. The association's ambitions of creating a brotherhood in this pursuit have been realized by the strong personal ties that enabled it to survive while traversing the conflicts that wreaked havoc during the 20th century.

During the Cold War period, PIARC and its technical committees extended a welcome from the Western world to all our Eastern European colleagues.

PIARC's ability to solidify the trust of governments over the ages stems from the capacity to preserve its role as a forum for exchange, without having to bend to commercial pressures or defend special interests and without being swayed by political dogma, while providing decision-makers with relevant information within a global transport policy context.

A whole century later and the domains of the road and the automobile are still challenged by the task of generating a common strategy, as the association's work now requires incorporating an ever greater level of multidisciplinarity.

PIARC's capacity to adapt must also be credited to the foresight of a series of French directors over a period culminating with the presidency of Roger Coquand in 1976. Maurice Milne (Great Britain) then inaugurated a highly-international succession of association directors, whose presence at the 23rd Congress in Paris has been deeply appreciated:
Enrique Balaguer (Spain), Victor Mahbub (Mexico), Hiroshi Mitani (Japan), Olivier Michaud (Switzerland), Colin Jordan (Australia), to which I would like to associate the names of my two predecessors, Secretaries-General Bernard Fauveau and Jean-François Coste.

PIARC Presidents:
Claude-Henry Lethier (1909-1910), Albert de Préaudeau (1910-1914), Albert Mahieu (1920-1940), Daniel Boutet (1947-1953), André Rumpler (1953-1969), Roger Coquand (1969-1976), Maurice Milne (Great Britain) (1977-1983), Enrique Balaguer (Spain) (1984-1992), Victor Mahbub (Mexico) (1993-1996), Hiroshi Mitani (Japan) (1997-2000), Olivier Michaud (Switzerland) (2001-2004), and Colin Jordan (Australia) (2005-2008).