



# KEYNOTE SPEECH

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### MEXICO



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## INTRODUCTION

The Minister of Communication and Transport of Mexico, Dionisio Perez-Jacome Friscione developed a session with the most relevant topics of the congress: Mobility, financing and sustainability, addressing issues from the perspective and experience in the case of Mexico.

### **Mobility, economic development and sustainability in public policy related to the development and operation of road infrastructure.**

Using a very precise route of these issues, the Mexican official illustrated his presentation with figures and examples applied to the Mexican government's public policies regarding the development of the country's infrastructure.

In addition to acknowledge the **World Road Association** for their valuable work in spreading the knowledge and experience worldwide in the area of road the Minister called the strengthening of such actions and events to include more countries to achieve solutions and operating practices that can be adapted internationally while taking into account the possibilities and situations of each nation.

Dionisio Perez-Jacome Friscione belongs to a new generation of Mexican officials, committed to sustainable development and global actions to mitigate the effects of climate change.

The Minister holds a degree in economics from the Autonomous Technological Institute of Mexico, where he also completed a master's degree in international management as well receiving a master's degree in Public Policy at John F. Kennedy of Harvard University. Dionisio Perez-Jacome Friscione has a large government experience in economics, energy and communication and transportation, with very prominent activities in the ministries of Finance and Energy, in addition to their close collaboration in the team of the current president of Mexico Felipe Calderon Hinojosa.

At the end of this conference, the Minister Dionisio Perez-Jacome signed on behalf of Mexico, a letter of intent to adhere to IRAP (International Road Assessment Programme), to implement systems in Mexico and the proposed evaluation of this important organization

dedicated to promoting the construction and operation of safer roads worldwide.







## **DIONISIO PÉREZ-JÁCOME FRISCIONE**

**MINISTER OF COMMUNICATIONS AND TRANSPORT OF MEXICO**

### **Prospective of public policy in the road sector**

Good afternoon, I am happy to be back in this important forum, where we have the honour of hosting the World Road Congress, which as you know is held every four years and that this time it has allowed us to have the presence of government representatives, technical specialists, entrepreneurs from over 100 countries, all of you present at this Congress, I extend a warm welcome once again. I hope these three days of work and we have experienced so far, are meeting the expectation you had as the work to prepare has been very intense, very fruitful, in which they are addressing issues of great significance and common concern for participating countries. Today I also have the honor to be back with you to address the issue of public policy, a public policy perspective in the road sector.

The presentation that I share with you today, try to incorporate elements comprehensively, the various tools and elements that must be taken into account when designing public policies on infrastructure development and in particular in road infrastructure development. At the end of the presentation, I refer to what we have been doing in the talks on Monday, which is the particular case of Mexico, with some

data to describe what the general objectives are and which therefore have been developments in the sector.

The index that I address today, deals precisely with the axes that have been chosen for this conference, for this Congress, have to do with mobility, economic development and sustainability in public policy related development and operation of road infrastructure.

Let me begin by saying, in terms of road infrastructure, that what we are seeing a worldwide need to change the traditional view, which is to connect different parts and find mobility between two cities or two regions without considering additional elements, such as the implications for development and sustainability.

What we want do now is precisely to follow the mobility that give us transportation systems through the facilitation of movement of persons, goods and services, analyze and take into account the effects on development that have to do with for example, the increasing industrial and commercial activities, increasing the income of individuals and companies and consider that with this increased mobility and the impact on development, it naturally has other effects as is the demand for transport , with new infrastructure it will generate more trips, more cars, buses or trucks driven on the new highways, roads and paths and rigged it also brings some externalities such as congestion of roads and of course pollution. It is about closing the circle of mobility, development and to take care of these externalities, with a sustainable vision; a vision in which governments and the private sector through public policy and operational improvements take those actions that will allow the use of infrastructure efficiently, and for the remainder of the presentation I'm going to discuss each of these pillars of mobility, what is being developed and what has to do with sustainability in building public policies.

Beginning with mobility. Mobility involves at least two concepts: connectivity and competitiveness. On the side of the connectivity, mobility facilitates trade through access to new markets and products, as already noted. In the case of Mexico with the construction of rural roads and the emphasis we have put on isolated population connectivity we are allowing a possibility for farmers, producers or manufacturers of goods to get their products and take them to the centers of consumption, being able to do in better conditions, being

able to ensure that they arrive in good condition, with no spoilage, sometimes some agricultural products are very sensitive and on roads that are not in optimal conditions, they can suffer a deterioration in the quality. **Connectivity speeds up territorial development, encourages social and cultural development, promotes tourism and integrate various transport modes.**

On the side of competitiveness, more and better roads help reduce costs, ie, we have different types of costs from operations, which are related to lower fuel use, those associated with maintenance reduced brake wear, tire and vehicles in general which is very important for travel time.

We have several examples in the case of Mexico, where the road infrastructure have been built, represents a very significant decrease in travel time. I would simply point to the example of the Arco Norte in Mexico City, where before the travel time was four hours where you had to pass through the area of Mexico City, and now it is less than two hours, or Durango-Mazatlan where we hope that in the paths of the trucks, just on the way from Durango to Mazatlan we may have a decrease of about six hours, because now the line will have 75 kilometres less than existing trace, of course, due to the specifications of the road and the fact that you can move with a higher average speed.

In Mexico-Tuxpan we are also expecting a decrease of approximately one hour thirty minutes. Competitiveness associated with mobility then also boosts the productivity of the regions, economies through countries with economies of scale, cost reduction and specialization, and increases the efficiency of supply chains, and as I said, reducing delivery times and accessing a greater number of suppliers.

In economic development there is a direct relationship between the construction of infrastructure and economic development, especially in regard to the road network. Economic development can be seen through the beneficial effect of communicating to underserved populations, the towns and regions benefit most tend to be those who previously held incommunicado or who had low standards of mobility, as I said a moment ago, we more 11 thousand kilometres of rural roads constructed or upgraded so far in this Administration.

Economic development is also higher in developing countries. The impact of this development is greater in developing countries than in developed countries according to what various studies show, this is because the marginal benefit is greater in countries with less development of their networks roads as with the addition of an extra length, giving residents the ability to access health services or education or, as we said, to receive goods. And it has an important effect on benefit for people with lower incomes; the benefit is greater for communities and people in disadvantaged areas and thus contributes to reduce the poverty gap.

In terms of sustainability, we have three pillars that I want to address today, related to the need for a planning, implementation and operation of roads in a sustainable way.

First it has to do with the preservation of the environment, which implies from the line of roads and the way it is built and the way it is used. Respect for communities has to do with cultural preservation and ways of life and the need to incorporate a comprehensive vision, from planning, financing and execution of any work road. The challenge is to create a virtuous circle in the chain of actions required to operationalize the road, this means that we will be going into detail in the following pictures, to have a long term vision, to have international cooperation mechanisms, just as the Congress we are celebrating today, where we can exchange experiences and knowledge and have access to best practices as well as promoting intermodality between the different transport systems.

In terms of funding, we need to continue to seek greater convergence and complementarities between actions and what they can provide the public and the private sector and have a clear identification and risk management to help mitigate their effects have technology, have efficiency criteria always present in the development of highway projects and incorporate, as has also been addressed at this Congress issues related to road safety, this has to do with planning, financing and implementation.

Then entering each of these issues. As for the preservation of the environment, transport roads naturally involves the emission of

greenhouse hence the importance of designing more sustainable roads.

To locate the context, global transportation sector contributes 13.1 percent of total emissions of greenhouse gases. It is below the contributing pollution from energy, industry, forestry and agriculture, ranks fifth. And within the transport sector we see that 77.4 percent is caused by the motor carrier.

11.6 percent is from air transportation, 9.5 percent is from sea and 1.5 percent from rail. Environmental sustainability must consider all facets of highway development and not just their use. As I said from the line where it is necessary to consider prevention, mitigation and adaptation to climate change; respect biodiversity, balance and conservation of ecosystems, thus ensuring that the road network live in harmony with the environment and even to protect it.

And this we have to look at from intersections, links and accesses' to secondary roads as well as on the same road networks. In the construction techniques and technologies we need to employ ever more environmentally friendly and suitable drainage systems to, for example, prevent erosion of roads and the environment.

Waste management is a very important issue and waste management during construction, ie the selective separation of waste, have provided facilities for storage and bear in mind the three R's, which is to reduce, reuse and recycle. In use, the challenge is finding the optimal solution between developments of new roads, improve quality and manage demand. That is, we must also evaluate, keep in mind what are the alternatives, such as promoting public transport, which is very important to mitigate the effect of pollution.

That is how we will achieve making a more efficient and sustainable infrastructure. In terms of respect for communities, promote social sustainability implies equity and opportunities between regions while respecting their diversity.

As for social equity I would like to highlight two concepts: that of intra-generational equity and intergenerational equity. For intra-generational



equity, what we mean is that there is greater accessibility, it produces social equity and creates new and better opportunities primarily for isolated communities.

The accessibility favours a more equitable distribution of wealth. On the other hand, to protect the environment and to respect the communities, values and practices of communities, we advocate also intra-generational equity, allowing future generations to also benefit from the wealth that has today.

And this view of intra-and intergeneration must be present in the sustainable development of infrastructure.

Social identity, which leads us to progress with respect to cultures and regional identities. Integrating marginalized rural communities to the recipient field of public services and social programs such as education and health, without disrupting its values and institutions and respecting differences.

Let me now turn to the vision of comprehensive long-term road planning, the mentality that should prevail is the resolution of problems in the medium and long term and not just immediate needs. What does long-term mean?, Strategic thinking means having a well-structured and critical approach about how we are designing the infrastructure, where we are building and why we are building, to move to a model that also responds to the questions of why? Who and what we are building.

In the case of Mexico, making a parenthesis, we have from the National Development Plan, the criteria we are looking for defined in the plan and they are also set in the sector program and the **National Infrastructure Program** that has a vision to throughout this administration.

What are we looking for in the case of Mexico? The road infrastructure strategies seek to complete the modernization of the main corridors, lateral and longitudinal those connect major cities, ports, borders and resorts in the country with high specification roads.

We are looking to develop inter-axes to improve communication between regions and the road network connectivity; we are looking to give special attention to the construction of bypasses and accesses to facilitate the continuity of traffic flow and improve the physical condition of road infrastructure and reduce the accident rate. The vision of the entire transportation system must meet criteria of continuity and effectiveness, to include elements of multimodality and intermodality, sustainability, both financial and environmental and technological development, identify regional needs, as I mentioned, in the case of Mexico it is a priority to promote the development of economic zones that are socially integrated and more competitive, to include public consultation processes, as we did in the case of the **National Development Plan** and to program infrastructure investment with consistent and permanent criteria, which is exactly which makes up the the **National Infrastructure Programme** and the objectives I have just mentioned. Thus having a long-term vision, we can achieve an integrated transport network interoperable, secure and which focuses on the user's attention.

International cooperation plays an important role, talking to my colleagues, Ministers and Deputy Ministers present at the World Congress, with many of them having left the issue and we agreed on the need of further strengthening international cooperation, we need access for all countries to forums like these, in specialized forums where we can go into detail of the challenges, to know what technologies are being used, which has worked well and what went wrong in other countries, all that has to do with the highway cycle.

Here I want to thank, of course the role being played by the **World Road Association** and in particular the President, **Anne-Marie LeClerc** who has been open to further strengthen the exchange of data, we have, for example, more information on comparable metrics uniform to allow us to establish benchmarks for more realistic and effective comparison between different countries throughout the world, and this will allow us to design comprehensive and unified public policies, that also respond appropriately to the specific problems of each country and to the point in the economic cycle and present level development of each country.

Intermodality is another element that must be considered and it is gaining greater weight in the design of public policies. The challenge is

to replace the last view in which the process of planning and transport infrastructure was typically unimodal criterion, and typically short term, generating poorly integrated systems with higher marginal costs and inefficient supply chains.

We want to invest in integrated high quality transport and consolidation of networks, to improve the mobility of people and goods. Intermodality means to combine the inherent advantages of each mode of transport, be it port, road, airport, rail, and create intermodal corridors, it has a fundamental effect on the connectivity and competitiveness of any region or country. We have several examples in Mexico: Durango-Mazatlán journey, part of Corridor Mazatlan-Matamoros, for example, where we are also rebuilding the road with the features I mentioned, also investing in the modernization of the port, to allow, which reduce the time from reaching the goods, that is more efficient transfer and that quality criteria are present.

Basically and I will discuss it later, when we see the longitudinal and transverse interconnections, this view of intermodality is present, notably in ports, and logistics platforms are also being developed as well as transportation centres where airports and rail transport are incorporated.

The cooperation of private and public sectors has been the subject in several discussions in this Congress. The private sector participation in the construction and operation of road infrastructure brings multiple benefits to users and we are trying to pass, or the global challenge is to move from a traditional view that prevailed in the state, with a presence very marked in the planning, financing and operation of infrastructure, where private investment was limited, limited competition between manufacturers and between operators and limited intermodal links, to a vision, a scenario in which the focus is primarily as state regulator and promoter, where it has a very strong regulatory framework, to give certainty to investment and private investment that would complement what countries are doing with public investment, ie, have a growing private investment.

In the case of Mexico also mentioned, through the **Public-Private Partnerships**, we are using as concessions, such as **PPS** (Project for the provision of services), as patterns of exploitation of assets, we are seeking to attract investment and complement the sector, taking the

largest share of the private sector. We are looking to lower entry barriers and of course, as I said, to seek greater multimodal integration.

The benefits are greater diversity of resources for the construction and maintenance of infrastructure, the greater diversity and amount of resources available, an alternative use of public resources to attract private investment to complement the efforts of infrastructure development with private investment, we can free part of public resources to be allocated to other purposes, such as education, health, other national priorities where it is necessary to use public resources.

The generation of better services and more competitive prices and lower operating costs.

Risk management is critical in this regard, it is required to incorporate risk management tools to ensure proper performance of highway projects, and wanted to try to put here two types of risk: physical risk and financial risks, there may be other of course and with other ways to classify them.

Among the physical risks that we suffer each year, countries and Mexico are the natural phenomena most recently with greater intensity due to climate change effects. Here it is necessary to use tools such as mitigation of its insurance contracts or have funds that allow us to meet and assist, in the case of Mexico as the FONDEN disaster. And we also have physical risks that have to do with the physical condition of the road when increasing the geometric standards of the strokes, during the the planning of roads, does it create an effect or a positive impact on road safety, what do I mean by this? Well, it includes the average speed of the roads, the degree of curvature, we must bear in mind the standards and best practices for the curves so the vehicles can flow at an proper average speed and then have lower probabilities of accidents, and of course, do everything we need to do to signal horizontally and vertically, as necessary, how the roads are and if a curve comes up, if you have the state of the same roads, what is needed for the booth, the typical related to signage, visibility, access controls, roughness, we are making an effort to audit where we need to in Mexico our roads and to identify the degree of roughness and look to have criteria for better maintenance and better conservation of our



highway infrastructure and pavement durability.

It is also important that operators of different countries are aware of some of the financial risks that arise in infrastructure projects, typically in infrastructure projects, and that operators have a strategy to mitigate them. These financial risks, some are foreign exchange risk, here there is a the need for tools for future and covered risks such as; commercial risks, incorporating seasonal demand analysis and business cycle effects to have reserve funds, legal risk, which is about giving legal certainty, legal certainty to operators and, of course, one of which we can't be free of, country risk, which has to do with prudent management of economies, and allowing or resulting from the macroeconomic stability and social policy.

Turning to technology. Using cutting edge technology allows greater efficiency in the construction and operation of highways, and we can apply technology for road construction, administration or operation of roads and it also plays an important role in the information to the user. Internationally, well, what we are seeing, as the use of warm mix asphalt, pavement recycling, the use of new materials or the use of nanotechnology, among other technologies, is what is being observed worldwide.

In the Road administration, the use of technology to improve the operation and safety of the different surface modes, an example, the use of scales, scales in motion dynamic, and acoustic sensors to determine the distribution of vehicle loads.

In some countries there is also intelligent cruise control or mechanisms to warn the nearby presence of other vehicles travelling in the same way; it has a lot to do with technological developments in vehicles themselves, lateral deviations systems, cameras reading plates.

In user information, the use of intelligent transport systems for the dissemination of traffic information, for example, sensors in roads and vehicles, traffic management and public transport, emergency management, user information, advanced security and control vehicles, electronic payments and safe crossings, among others.

All of these areas, of course, are subject to the application of technological advances, technological improvements ... and again, forums like today brings us together, gives us the opportunity to learn at different stages, what are the technological advances and thus look, as much as possible, for them in all countries,

Efficiency is a criterion that has to be present along the whole chain. The motor carrier policies include not only building more infrastructure, not only sustainability, but also efficiency. More and better road network reduces environmental pollution, as it allows greater speed and shorten average paths. But there must be a balance between infrastructure development and level of use.

To promote alternative fuels and cleaner and more efficient vehicles and engines are also being pursued objectives, all countries pursue and seek to incorporate.

Among the public policies that need to increase efficiency, we increase the capacity from road, improve network performance, which are grade separated crossings, effectively signalling that we have already mentioned, investment in infrastructure for public transport, more efficient use of roads, through practice, in cases that get to congestion, by of course, sharing vehicles, high occupancy lanes, avoid empty trips and discourage excessive use of roads, in cases where congestion is present.

Road safety, as I said, is an element that must be present throughout the entire planning cycle. There have already been talks about this subject also by specialists. Here I would like to highlight or comment again what we have already noted, the issue related to the **Decade of Action for Road Safety**, where the Organization of the **United Nations** proclaimed the period **2011-2020 as the Decade of Action for Road Safety** in order to stabilize and reduce the projected figures of fatalities in traffic accidents worldwide.

If not reversed, these mishaps will become the third leading cause of death and disability by the year 2020, according to the **United Nations** itself. Road accidents worldwide take 1.2 million lives annually. What to do? There are several tasks that we, the different agencies, departments and areas in each country, have to seek to lower accident

rates and improve road safety.

Include the upgrading and maintenance of roads and transport, for example, in Mexico it is a priority; a goal to which we have devoted much importance to, to seek the highest possible percentage of our networks to be in good condition regarding maintenance and conservation. 80 percent of the federal highway system in Mexico is in good and satisfactory condition and we are looking for all the forms and mechanisms that allow us to increase this further. The treatment of critical points ie spots or identified as high accident along the Federal Highway network must be identified and must be met every year to find and reduce accidents.

Strengthening road safety education is essential. We are making a concerted effort in the case of Mexico with the Secretary of Health and Education to advance at this point. Eliminate risk factors such as speeding, alcohol and drugs, not wearing seatbelts, the use of distractions, like cell phone, well, again are typical examples of what all countries have to do to have greater road safety.

And the coordination between the government and society to ensure compliance with the standard, it is about monitoring and awareness-building, increasing awareness in society of all these elements that are required, which are necessary for improving road safety.

In conclusion, I would like to put forward very briefly the main points that we have already had the opportunity to highlight during these days which is how major advances have been made in Mexico. We have to date, built or upgraded 17 000 kilometers of highways, roads and rural roads. We expect to close the year 2011 with 19 thousand miles.

During the Ministers' session, which I had the opportunity to attend two days ago, we did accounts and the pace of construction and modernization of roads that we take in Mexico allows us to incorporate daily around 12 kilometers, built or modernized. It is a very important metric that can favorably be compared internationally.

And of course, as we have been saying, these achievements contrast favorably with what was obtained in previous administrations; which is

more than 50 percent of what was achieved at the same point in the previous administration and more than double of what was achieved in all the administration since two administrations ago.

Investment in construction or upgrading, what we have now put into operation has involved more than 230 billion dollars of public and private resources. And here is where the schemes of **public-private partnership**, in addition to fiscal resources, come in.

Also a good thing we could conclude or, say, is the conclusion at the ministers' session two days ago, that where Mexico fortunately is in a favorable situation, it has to do with the possibility of using fiscal resources for construction, modernization and maintenance roads. Some countries, unfortunately, by the severity of the crises that have been experienced in recent years, do not have enough fiscal resources today to invest in road networks. In Mexico, through the responsible management we had in the past years; we have had in this administration, today we continue to invest fiscal resources and will continue until the last day of administration. And yes, supplemented with the schemes of Public-Private Partnership. The percentage of 80 percent of federal state network maintenance is good or satisfactory, in contrast to levels approaching 40 percent, which we had 15 or 20 years ago. And more than 11 000 kilometers of roads built or upgraded rural roads.

In **Public-Private Partnerships**, we are using various schemes ranging from grants for new assets, where the concession is granted to the lowest bidder to request financial support from the federal government. For projects that do not require that public resources, there are some bidders, given the expected capacity, that do not require support from the federal government via the **National Infrastructure Fund**. In these cases, grants are allocated to the highest consideration offered by the federal government. We are using Service Delivery Projects that are concessions given to a private company to design, finance, build, maintain and operate a road.

The bidder requiring the least amount in net present value is awarded payment by the federal government. And when the model is applied to highways, the periodic payment is made using a combination of tariffs and budgetary resources.



And we also have the **Asset Utilization** scheme which is concessions of existing assets, most new projects, where the concessionaire is responsible for operating the assets it receives, which is given in concession and build. We say it assumes the obligation to build and then operate new highways that are part of the package. The bidder offering the highest consideration to the government is awarded and packages include highways in operation, ie the mix between brownfields and new highways or greenfields.

It has also been very interesting, in this forum to hear and talk about the different **Public-Private Partnerships** schemes that are being experienced internationally.

In conclusion, I would just like to leave you with this map that shows what Mexico has set out to do in the **National Infrastructure Program** and which describes exactly what we want to achieve from having corridors or secondary roads and longitudinal interconnections, such as the Mazatlán-Reynosa, where finally, everyone from Manzanillo-Tampico, Lazaro Cardenas, can now reach Tuxpan, Mexico-Tuxpan and Acapulco-Veracruz, at last.

We are striving to complete this administration horizontal and vertical interconnections, that is the criterion we are privileging and that we have included, privileged or used as a priority to include work on the Project Expenditure Budget was submitted for consideration by the House of Representatives and is being analyzed in these months.

And we will continue looking for its conclusion in order to allow Mexico two benefits: first, increased competitions, secondly having also get them to close the gap of inequality between regions through the construction of corridors to better interconnect the country and particularly low-income populations.

Thank you very much. Thank you very much for your presence and I hope for continued successful sessions at this **World Road Congress**.



