



SESSION SUMMARIES

Full coverage of the IRF World Meeting

www.irf2010blog.com

Theme 1: Mobility, Transport & Infrastructure

PLENARY SESSION

Tuesday, 25 May 2010, 16:30-17:30

Lead question: There is a clear mismatch between mobility (e.g., road infrastructure) supply and demand - what are the reasons?

- The experience of Europe points to political considerations outweighing consumer needs. The allocation of resources on roads and rail should be based on consumer need and therefore demand, rather than a political (or in USA parlance “politically correct”) preferences. In Europe, the consumers demand more roads, but that sector is getting a fraction of public sector resources that rail does. This means that the public is serving the government, rather than the other way around.
- Today’s challenging economic times present a series of problems to the road sector - a possible approach is to focus on improving accessibility rather than mobility, and ensure maintaining and protecting road assets. In these respects, new technologies present a number of opportunities.
- In the United States, the interstate highway system has been the backbone of economic growth since the fifties. It is expected that the volume transported will double by 2050, and yet the resources for expansion and maintenance are decreasing in relative terms. It is estimated that 225 billion USD will be needed just to keep the infrastructure at its current level of service, and yet, only 40% of that amount has been made available.
- The main reason is that the gasoline (petrol) tax that has supported highway funding has remained constant in absolute but not relative terms. As a result, inflation has eaten away funding. While the logical solution would be to raise the tax rate, unfortunately the political climate prevents politicians from proposing increases in the tax rate (i.e., it is widely considered to be political suicide for anybody to propose such an increase). Therefore, the problem and the context are quite different from those in Europe.
- A new U.S. federal transportation bill that can effectively address this problem is needed. The bill should take into account disparate priorities at the state level (for example, the older East Coast states where maintenance is critical vs. the western states where expansion is essential).
- In Europe, the foundations for “green” mobility are being laid. This involves sustainable infrastructure growth and maintenance, through the use of tools such as ITS technologies, changes in behavior (i.e., car sharing), interoperability of the infrastructure, and increased safety. A positive trend is the gradual reduction in IT and electronics costs, which should have a positive effect on ITS costs as well. This trend will allow the widespread adoption of ITS tools

Participants:

- Susan MARTINOVICH, AASHTO Vice-President
- Jean-Luc MATE, Continental Automotive
- Ari VATANEN, MPE
- Jack SHORT (Recorded Interview)

Theme 2: Road Safety

PLENARY SESSION

Tuesday 25th May 2010, 17:30 to 18:30

Lead question: How is road safety progressing? EU and US spotlight

- In 2008 4 people died every hour on a European road (i.e. 106/day, 38.000/year). The EU has failed to reach its ambitious target of halving the number of road fatalities by 2010. This was initiated in 2001. Ten years later, with the exception of a few particularly meritorious countries (including Portugal which has invested extensively in improved infrastructure) many EU Member States, are still registering a critical road safety situation, notably in eastern Europe (underlining an ongoing discrepancy between the progress being made in western and eastern Europe). Infrastructure has a key role to play in this field and its full potential is still far from being realised, especially with respect to rural roads. Functionality (division of roads according to their function), homogeneity, recognisability (self-explaining roads) and ‘forgiveness’ are, according to Mr Antonio Avenoso (ETSC), four vital ingredients on the path towards safer road infrastructure in Europe. This vision should be backed up by a holistic European road safety policy, aimed at harmonisation to reduce the gap between “new” and “old” Europe. Moreover the Directive on road safety infrastructure only addresses the TEN-T. The EU should also address urban safety. Speed management has proven to be an efficient and cost-effective measure to reduce fatalities. According to a recent ETSC study, if every driver slowed down by only 1km/h, it could lead to a reduction of more than 2,200 road deaths per year!
- Road safety requires the involvement of a wide range of sectors, including education, safety and health etc. Hence, road safety policy should be multidisciplinary. The region of Catalunya benefitted from such a holistic approach to road safety under the auspices of the EuroRAP project. The objective was to identify high-risk areas, to audit them and to provide guidelines for improving the overall infrastructure, adopting a life-cycle approach (planning, building, operating and maintaining). The project enabled the gathering of comprehensive and far-reaching data relating to road fatalities and injuries in this region of Spain. These made it possible to identify “black spot” road sections by reference to relevant and authoritative statistics. After the identification phase, audits were carried out on some of the sections concerned and the results applied to produce guidelines/recommendations highlighting possible improvements. Special attention was devoted to rural roads and vulnerable road users.
- Despite figures of 95 road deaths per day in 2009, the United States has registered a significant improvement over the last two years, and has recorded a major reduction in the number of road fatalities compared to previous years. Echoing with situation in the EU, there are significant disparities in the figures from State to State. When analysing these differences, many criteria need to be taken into account, for example the particular geography of some regions. Another analogy with Europe concerns the dramatic situation in rural areas. In the U.S., 60% of fatalities occur on rural roads. According to Anthony Kane, the overall road safety situation in the country is on course to improve over the next two decades, mainly thanks to measures such as automated speed enforcement, the harmonisation of laws between all the States (e.g. with respect to wearing helmets, seat belts and drink driving), and infrastructure improvement. These will be complemented by an evolution in safety culture stimulated by top leadership, partnerships and exchanges of best practice.
- Overall, harmonisation was the key word that recurred throughout the session. It was highlighted by virtually all the speakers, including Jack Short, who opened the session with a recorded interview in his capacity as Secretary-General of the International Transport Forum. Alongside reducing the gap between “best” and “worst” countries and states, the harmonisation of rules, regulations and eventually roads, will be a key factor in efforts to improve road safety.

Participants:

- Moderator: Ari VATANEN, MPE
- Antonio AVENOSO, ETSC
- Jordi FOLLIA, Region of Catalonia
- Anthony KANE, AASHTO
- Jack SHORT, International Transport Forum (*recorded intervention*)

Theme 3: Sustainable Roads

PLENARY SESSION

Wednesday, May 26, 2010, 8:30-9:30 am

Lead question: What is the impact of the road industry on the environment? What are the challenges and responsibilities that the industry faces today and in the future?

- The issue of sustainability has attained huge importance as the planet approaches physically-imposed limits on growth. The pattern of exponential growth through the 20th century and the beginning of the 21st century is simply not sustainable - if the entire world had a standard of living equal to that of the United States, we would need three Earths to support it! Within this context, the road industry plays a large role in the production of emissions, and thus has enormous responsibilities today and in the immediate future.
- Sustainability involves more than environmental impacts and mitigation. Critically for the road industry, it also involves financial and economic sustainability - and the global challenge of planning and allocating adequate funding for maintenance and reconstruction of road infrastructure. This also includes factoring-in the impact on unemployment (i.e., there is an element of social responsibility, as future jobs can be affected by poor maintenance planning decisions - for each 1 million Euros of investment, 13 new direct jobs are created).
- In these challenging economic times (worldwide), the task of sustainable planning is even more difficult. Investment in operations and maintenance is under pressure worldwide, but the industry must work to ensure adequate allocation of resources for maintenance and rebuilding.
- The experience of sustainable road development in Spain shows the critical importance of involving local governments in the process of planning and ensuring economic sustainability - it is the local governments that are closest to the end-user and best-positioned to understand needs. The role of industry associations is also critical, for example, by contributing with road safety audits.
- The Spanish experience (in the Commune of Madrid), shows a holistic approach to impact mitigation, involving a number of elements that are considered at all planning phases:
 - Noise reduction (e.g., use of flexible pavements, etc.)
 - Emission mitigation (e.g., reducing CO2 and other green-house gas emissions)
 - Landscape preservation (e.g., preserving local beauty)
 - Protection of local fauna (e.g., over and under passes for fauna)
 - Use of ITS tools for optimization of infrastructure
 - Recycling of resources (e.g., use of rubberized pavements)
- The French experience in road construction has resulted in highly competitive, large (consolidated) companies that are amongst the biggest in the world. However, in sustainability they are lagging in some areas - such as recycling of paving material (23% in France vs. 80% in Holland and Germany).
- French companies are working to become more responsible environmental actors, including the adoption of environmental friendly practices and solutions, lower energy consumption, emission mitigation (e.g., use of warm mixes), etc.
- While the French industry has developed a number of sustainable solutions, there is recognition that the client MUST demand their incorporation. To educate the client, industry has developed a software tool to allow comparison of various solutions. Thus the client must actively require solutions and define the type of service needed, and the industry will provide the right solution.
- FINAL THOUGHTS: The situation today presents enormous challenges but also some real opportunities: While infrastructure must continue to be built where needed, and existing infrastructure must continue to be maintained and rebuilt, we must also demand more stringent targets, adopt sustainable policies, and fully deploy mitigation measures and technologies, such as ITS. At the same time that the industry is prepared to offer new sustainable solutions and practices and develop new ones, the client also has an important responsibility to demand and aid in choosing such solutions.

Participants:

- Jacobo DIAZ, General Manager, Spanish Road Association
- Jean-Louis MARCHAND, USIRF
- Francisco NUNES CORREIA, Full Professor, Instituto Técnico Superior
- Jose Ignacio Echevaria, Councillor for Infrastructure and Transport, Community of Madrid

Theme 4: Road Finances & Management

PLENARY SESSION

Wednesday 26th May 2010, 09:30 to 10:30

Lead question: How are the challenges for financing road infrastructure being addressed worldwide?

- Financing road infrastructure is closely linked to managing this infrastructure. In this regard, all the phases of managing road infrastructure - such as construction, maintenance, and operation - should be addressed together. Demand for infrastructure as a contributor to economic development remains high. High infrastructure demands, in turn, call for new financing solutions. By and large, most roads are financed by general tax revenues. Sometimes special taxes are earmarked for road construction (e.g. fuel taxes). Private financing of roads saw a dramatic increase worldwide in the early '90s. However, the 1997 financial crisis led to a climate of pessimism and a sharp decline in such private financing of roads. During 2005-2006, private investment in roads peaked again, almost attaining 1997 levels. The current economic downturn again had an immensely negative effect on the conclusion of PPP contracts. In essence, how road infrastructure is financed often depends on financial cycles.
- PPPs can bring several benefits in terms of financing road infrastructure. PPPs are perceived as an effective means of securing rapid delivery of infrastructure and improved service for end-users. The private sector may be willing to take up risks that are within its control to manage and/or mitigate. For risks that are not so controllable, sharing mechanisms may be applied. The share of private finance depends on how the road sector is regulated and political credibility.
- Implementing innovative technologies for constructing and maintaining road infrastructure could help address the issue of financing. Such new technologies can reduce total project costs by, for example, minimizing the effects of traffic flow and reducing the construction period.
- During the session, regulatory and financing models for road infrastructure were illustrated by reference to the examples of the USA and Portugal:
 - For the USA, it was suggested that Federal government must continue to play a strong role in investing and maintaining an integrated and multimodal national surface transportation system. States and local governments should be provided with maximum flexibility to use federal revenues from existing core sources to meet systemic transportation needs. Strong accountability measures must accompany substantially increased funding to ensure resources are spent as efficiently and effectively as possible.
 - The role of PPPs and concessions is very important in achieving the objectives of the National Road Plan in Portugal.

Participants:

- Moderator: Michel DEMARRE, European International Contractors
- Koji HASEGAWA, Metropolitan Expressway Company Limited, Tokyo
- Andreas KOPP, The World Bank, Washington DC
- Alberto MORENO, INIR, Lisbon
- Jack BASSO, AASHTO, Washington DC

Theme 5: Techniques & Innovations

PLENARY SESSION

Thursday 27th May 2010, 08:30 to 09:30

- It is the common interest of both public and private sectors to reduce any negative impacts of roads. In this respect, the development of products can provide new solutions for management, maintenance and addressing environmental problems. Mr. Corte pointed out that innovation involves changes and progress in the areas of regulation and standardisation.
- Technical inventions are not always profitable innovations. There is a pathway from invention to innovation. It requires an evaluation of the technique and demand for the product. Mr. Poirier suggested looking at one specific case: from a patent to road application the example of warm mix which brings us to a potential savings of energy and reducing the temperature and then the CO2 emission.
- Warm mixes require lower energy at the production, this provides an answer to the need for decreasing temperatures and reducing the impacts of road construction activities. A sound knowledge of the materials is needed to be able to tap into their potential for the long term. Nanotechnologies might have an important impact in the coming years. Roads have to be accepted by society, however, so laboratories and marketing departments need to be aware of this dimension and work hard to promote enhanced awareness.
- Mr. Steudle gave an overview of the state of the art of Intelligent Transportation Systems in Michigan, USA. ITS increases the efficiency of the mobility system. “Intellidrive” is a programme that aims to promote mobility in a safer and more environmentally friendly manner. Some specific examples were provided. For example, the “DUAP Research Programme” aims to eliminate slippery conditions by integrating mobile monitoring. This will provide for more efficient maintenance of roads during winter conditions. Another example, the “Critical Highway Infrastructure Monitoring Programme”, enables the monitoring of bridges by allowing engineers remote access to real time information. ITS leadership requires a stable programme direction complemented by specific actions. The Technology exists but takes time to deploy. Industry responds to market opportunities, however, which should speed the implementation of necessary solutions.
- Panellists were asked about the risks inherent in the deployment of ITS products by private companies. In Mr. Poirier’s opinion, more appropriate contractual frameworks, including for example PPP and performance based models, could form part of the solution. Any given State, must be able to assess risk levels on the basis of expert advice. Mr. Steudle highlighted, however, the impossibility of eliminating *all* risk and, thus, the need for individual leadership to manage it.

Participants:

- President: Jean-François Corte (PIARC)
- Moderator: Jean-Claude Roffe (COLAS & USIRF)
- Jean-Eric Poirier (COLAS)
- Kirk Steudle (DOT Michigan)

IRF/PARC Session

PLENARY SESSION

Thursday 27th May 2010, 09:30 to 10:30

Lead Question: Does the Industry Have an Image Problem that Affects Workforce Recruitment & Retention? How Do IRF and PIARC Propose to Solve the Problem?

- There is evidence that in many countries [particularly in the developed world] careers in the transportation industry are not considered “sexy” or attractive enough, and as a result, road and other transport agencies are experiencing increasing problems attracting and retaining qualified personnel.
- The long term trends are exacerbating the problem: ageing populations in most of the developed world will translate into increasingly tough competition for scarce qualified engineers among diverse industries, and has already resulted in relatively older workforces at road agencies (about 40% of staff are over 50 years-old).
- This is a low profile issue - little or no international cooperation exists, and it is even lacking at the national level. And yet, it is widely accepted that the human resource is the main asset of an organization, whether public or private. What can organizations such as PIARC and IRF do to help?
- The Transportation Research Board (TRB) of the United States has funded a number of studies on the subject. A number of trends have been identified, including the following:
 - Increasing complexity of job requirements across all professions; future workforces will need a wider variety of skills and mastery of technology and IT tools.
 - Wide adoption of technology is leading to networked teams (and close interaction between direct hires and outsourced staff).
 - Reduced hurdles to leadership development.
 - Multi-generational teams working together - as many as four generations of staff working together. Increased importance of adequate succession planning.
 - Performance will be measured based on broad ultimate outcomes, not individual projects.
 - Individual performance will become more important.
 - Recruitment increasingly more difficult - the industry will have to improve the “brand” and show there are exciting careers in transportation, reach out to minorities, and rely on tools such as web recruitment.
 - Competition for well-qualified candidates becoming tougher, resulting in retention problems. The industry will need to offer careers that are more fulfilling and rich.
 - Active knowledge management for the benefit of the organization.
 - Workforce training: knowledge increasing exponentially will require continuous training and education.
- A number of state DOTs in the United States have adopted solutions to recruitment and retention problems. At the national level, AASHTO¹ has developed a “Workforce Tool Kit”; at the state level, there are some interesting ideas such as a supervisor academy, and new branding through social media such as YouTube and Facebook.
- Research in Australia shows similar trends: an increasing mismatch between skilled labour demand and supply brought about by demographic and branding challenges.
- A marketing campaign was developed and implemented in Australia and New Zealand. The approach was to promote increased awareness of careers in transport through a combination of social media and more traditional communication channels, to advertise more widely, and to help influence the choice of specialisation at an early age by enhancing the profession’s image

¹ American Association of State Highway and Transportation Officials.

- While the results are difficult to assess (i.e., difficult to isolate from other factors at work), it is probable that the marketing campaign had a positive effect on recruitment.
- In France, the experience is similar: the pool of available qualified engineers is getting smaller and most top graduates are choosing careers outside of transportation.
- There is disagreement about whether or not the problems that afflict the public sector also affect the private sector. For various reasons (i.e., mostly greater compensation potential, ability to hire internationally, greater workforce mobility and others), the private sector may not be experiencing a recruitment problem. However, it is clear that the private sector is experiencing a retention problem that is significant enough to affect the bottom line.
- The IRF has been actively involved helping to attract and nurture the best young minds to the road industry since 1948. Through its Educational Foundation, IRF has provided educational grants for graduate studies in transportation for over 1,200 students from 112 countries. Many of these fellows have become road sector leaders in their respective countries.
- It was pointed out that the proportion of women in transportation is still far smaller than it should be. Simply attracting a higher proportion of women engineers to the industry would alleviate many of the recruitment problems.
- In conclusion, the entire industry [in the developed countries] is experiencing an increasing problem of retention, and the public sector in particular is experiencing a problem of recruitment as well. All panellists agreed that initiatives such as the Australian campaign are very positive, as they raise awareness and promote pride in the profession.

Participants:

President: Paul VAN DER KROON, Chairman, PIARC Technical Committee B1

Moderator: Jean-Claude ROFFE, COLAS & USIRF

Speakers:

- Mac NORMAN
- Brendan NUGENT, NWS Roads and Traffic Authority

Panellists:

- Anne-Marie LECLERC, PIARC
- Brian HARRIS, Chairman, IRF WPC
- Jacobo Diaz, ERF & AEC
- Antonio Pinello, CRP

Journalist: Manuel BATTISTA, World Highways