

TS3 RISK MANAGEMENT: NEW APPROACHES TO IMPROVING SAFETY

Every day, roadway users, operators, and workers face risks that can threaten the safety and security of life and public assets. Although there is a strong awareness of these risks, it is only recently that transportation managers have been taking a more systematic approach to identifying, evaluating, and addressing this theme. From this respect, the World Road Association's sponsorship of this session was very timely since it provided an understanding of the fundamentals of risk management, as well as examples on how those principles can be applied in the roadway community to improve safety. The audience of nearly 150 participants well as their engaging questions was a testimony to the interest in this topic.

Risk is a reflection of the uncertainty of what may or may not occur in the future. However, by systematically assessing both the **likelihood** and the potential **consequences** of those risks we can make better decisions regarding the prioritization of needs as well as investment decisions. This was demonstrated very well by Quebec's evaluation of the risks associated with waterway crossings. Using a 10-step process, it was demonstrated how multiple factors can be simultaneously considered as a tool for making decisions. This process also demonstrated how both objective (quantitative) and subjective (qualitative) factors can be considered in this process.

The presentations from the United Kingdom and the United States highlighted the concerns that terrorists actions posed to safety and security, but also noted how planning and preparing for natural disasters had many of the same characteristics. Although the likelihood of such events may be fairly rare, a systematic consideration of the vulnerability of transportation systems can help identify opportunities for cost-effective actions to mitigate that potential. One of the points that all these presentations emphasized was the need to take an integrated approach to looking at risks. It was apparent that looking at just one category of risks or only one range of issues, did not fully reflect the context of potential solutions.

The application of risk management to roadway safety issues very much reflected these same themes. The global impact of roadway crashes is staggering and the World Bank made a very compelling argument for the need to bring the principles of safety and risk management to developing countries where these issues were only expected to grow in the decades ahead. In addressing these roadway safety issues, it was also recognized that although there was much we could learn from each other, each jurisdiction needed to determine what the right approach for their roadway system was. Specifically, developing countries needed tools that were appropriate for the unique challenges they faced in collecting and analyzing traffic and crash data.

One theme that emerged was the importance of taking a "holistic" approach to addressing roadway safety risks. Both Japan and the Netherlands showed how they had been able to reduce fatalities by looking at the driver, the roadway and the highway together, and identifying new opportunities to create an integrated response. The Netherlands also recognized that changing public attitude and behaviors was extremely difficult, but needed to be part of any systematic approach to safety. This meant that a whole new group of stakeholders and partners were needed if a significant impact was to be made. It is also important to break down the "walls" that keep us from looking at these issues using multiple disciplines. As an example, health care professionals, judges, community outreach specialists, and teachers all have the potential to help address roadway safety issues, but we need to look beyond engineering to embrace those roles.

The importance of data was also clear. Data is not only extremely valuable for assessing past trends, but is also the means through which performance can be evaluated after changes are instituted. The value for using data to evaluate the technical aspects of risks was fairly well recognized, but there is also a need for better information/data regarding less technical areas such as assessing public opinions, values and priorities. This is an area where further research could be beneficial. Likewise, it is important to continue to support efforts to develop more meaningful performance measures that can be used to evaluate success and opportunities for improvement.

In summary, this session highlighted the importance of risk management, but also the fact that it is a concept that is neither well understood nor applied in the roadway sector. PIARC could play an important role in this by:

- Charging the Risk Management Technical Committee to look across all disciplines for opportunities to help identify and share best practices. In this regard it should be clear that the scope of the Committee extends beyond simply “operations” since the panel clearly showed the broad potential benefits of risk management. Likewise, the Committee should work towards developing a “primer” on the fundamental principles of risk management and how those might be applied in the roadway community;
- In cooperation with the Technology Exchange and Development Commission and other international organizations (e.g. the World Bank), encourage the development and application of tools that would be appropriate for Developing Countries and those with Economies In Transition; and,
- Urge all of the PIARC Technical Committees to look at ways to integrate Risk Management concepts into their work.