



PARALLEL SESSION: DESIGNING ROADS FOR SAFETY

Session Conclusions

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1. KEYWORDS

Infrastructure, audits, inspections, safe system, road safety, road design, global targets

2. TITLE OF THE SESSION

Parallel Session 15 - "Designing Roads for Safety" Session

3. TOPIC OF THE SESSION

[Presentation of the issues that were presented, why they are important]

The aims of the session were:

- Highlight the infrastructure features that constitute a safe system
- Showcase countries and cities at the forefront of developing low-cost, high-return safe and sustainable road infrastructure
- Identify actions required to achieve the Global Road Safety Performance Targets 3 and 4 by 2030

4. SHORT SUMMARY OF SESSION

Pillar 2 of the Global Plan for the Decade of Action addresses safer roads and mobility.

The road infrastructure industry invests over US\$ 700 billion a year in the management, construction and maintenance of new and existing roads. Road design standards and layouts provide the foundation for all interactions between road users and road features. For the majority of road traffic crashes which result in deaths and injuries – head-on collisions, run-off road crashes, collisions at intersections and crashes involving pedestrians, cyclists and motorcyclists – engineering and traffic management solutions exist. The inherent safety and protective quality of road networks which benefit all road users should be prioritized, especially for the most vulnerable.

This will be achieved through the implementation of various road infrastructure agreements under the United Nations framework, independent road infrastructure assessments and star ratings in support of the Global Road Safety Performance Targets 3 and 4, and investment in safety-conscious planning, design, construction and operation of roads. Governments and road authorities should identify and eliminate all high-risk roads, by improving the safety performance for all road users.

5. OVERALL MESSAGES

It is important to truly understand the burden of injuries. Globally, 100,000 people suffer life-changing injuries every day and as an example in Bangladesh, an estimated 1,948 people are killed or injured every day, with new costs estimated at 24 million USD per day.

The safe system principles are recognized. Safe road users in safe vehicles on safe roads at safe speeds is what is ultimately needed for Vision Zero. Everything goes together: we need to maintain roads, we need to educate patrols, we need good emergency services, we need to educate drivers.

The session focused on the infrastructure and traffic / speed management initiatives and applications to provide a safe environment for mobility.

The need to plan, design and operate a road and street network that minimises risk of death or injury was agreed. The need to localise solutions was recognised to meet the safety and mobility needs of those road users present (e.g. urban road design or motorway networks) and the data and resources (expertise, budgets...) available to implement solutions.

Growing urbanization is an opportunity to build and plan streets for safety.

Safety and sustainability go together.

6. OVERALL RECOMMENDATIONS

We can **design and maintain roads for safety**.

The **solutions are known**: PIARC's online road manual and numerous reports, UN Road Safety Collaboration resources; IRF training resources; iRAP's "vaccines for roads" and star rating global standard, or the 10 principles for safe city street developed by POLIS and Euro Cities are some examples.

It starts with **planning**. This includes where facilities and services are located, the provision for all relevant road users and the consideration of safety standards and injury projections as part of all planning decisions.

Low cost treatments do exist and can be used by all countries, such as better delineation, rumble strips, traffic calming etc.

City streets are different from motorways and require a different approach to planning, design, operation and speed management.

Sustainable modes of transport, which are inherently safer, can be prioritized to optimize the safety performance of the entire journey.

Sharing knowledge is essential, especially within countries and with the support of international experts. Everyone can benefit from the experience of others.

We need to **design the transport system as a whole**. For example, the design of a metro must include the provision of safe facilities for pedestrians and other active road users to access the metro stations.

7. IMPORTANT FINDINGS (EX. TECHNICAL OR OTHERS)

[This can include key findings that have been confirmed and can be shared, as well as emerging issues that have been identified and will require more analysis.]

PIARC: we can have forgiving roads, and we need self-explaining and readable roads.

An important message from the Minister from Uganda: Every new road should focus on road safety for all users.

New roads should be properly designed, with safety of all users in mind. In Uganda, sometimes, even nowadays, international feasibility studies are done... but those new roads are not safe for pedestrians or cyclists. In Kampala the hospital has had to devote a special ward for pedestrian victims.

Global Road Safety Performance Targets have been set and agreed by Member States. Achieving Target 3 for all new roads to be 3-star or better and Target 4 for >75% of travel of roads that meet safety standards for all road users by 2030 will see more than 450 000 lives saved every year (refer <https://www.vaccinesforroads.org/>).

iRAP: The current situation is not good: 88% of pedestrian travel is on 1-2 star roads. 92% of roads where pedestrians cross and traffic flows at 40 km/h or more have no crossing

facilities. 86% of travel for bicyclists, 67% for motorcyclists and 44% for vehicles is 1-2 star: There are many examples of crashes, for which engineering solutions would have saved lives and prevented injuries.

UN Habitat: The new “Urban agenda” that was approved in 2015 incentivizes countries to focus on safe streets.

There are underlying principles the same for any city anywhere. Polis and Euro Cities have identified 10 basic principles for safe city streets that are known and can be applied. Cities are taking the responsibility.

POLIS: in cities, speed is the issue. We can design streets so that one cannot drive too fast. High speeds for motorized traffic reduces the efficiency of other modes because of the crashes. Traffic calming can be done with limited budgets.

UN Habitat: cities should be more compact, more like Barcelona than like Atlanta, with more mixed use blocks, which reduces the need to travel.

IRF: We need the motorways. We can design them so that they are safer. On toll roads in Europe we manage the infrastructure (equipment, staff, design) so that people can drive at 120 km/h and it is a safe speed. People buy time and improved safety that way. In some other countries, this is not yet feasible, and it has to be acknowledged. Today’s technology offer many possibilities for monitoring traffic and the behavior of drivers.

All counties can act. In Uganda for example, a comprehensive Road Safety Act was passed recently.

Driver education is key, and it can be a challenge. In Algeria, it is difficult to convince teenagers that speed is dangerous.

We can involve citizens. For example, involve people in designing the street “Barefoot engineers”. There are tools based on Minecraft. We can measure the stress of pedestrians walking across a city.

Investing in making sure all modes are safe delivers direct safety benefits as well as unlocking the potential climate and air quality benefits from more sustainable journeys.

8. SPECIFIC RECOMMENDATIONS FOR DIFFERENT STAKEHOLDERS INCLUDING GOVERNMENTS AND THE PRIVATE SECTOR

[This can include recommendations for future studies or future collaborations.]

Governments and Road operators

- Enforce road design and road maintenance guidelines for road safety
- Implement minimum 3-star or better performance specifications for new road projects in support of Global Target 3
- Use known solutions. There are low cost solutions that are cost effective and can be scaled across a country in support of Global Targets 3 and 4.
- Secure the appropriate level of funding for infrastructure safety improvements as the business case for safer roads and the return on investment is high

- Address all aspects of the safe system: build and maintain safer roads, ensure safer vehicles, educate patrols, develop good emergency services, educate and monitor and enforce driver behaviour.
- Consider city streets specifically, and prioritize the safety of active road users and sustainable modes of transport that deliver outcomes for many of the SDG Targets
- Understand that speed management is part of the solution
- Take part in sharing of knowledge
- Design the transport system as a whole

Funding organisations

- Do not support unsafe road projects and ensure Target 3 is achieved for all road users
- Adopt long-term financing partnerships to achieve Target 4 for safe travel on existing roads and streets
- Support sharing of knowledge and the development of local capacity and ownership
- Address the transport system as a whole
- Always adjust recommendations to the local context

International partners

- Identify and disseminate best practice
- Facilitate sharing of knowledge and the development of local capacity and ownership
- Work in partnership to apply proven solutions like the PIARC Road Safety Manual, Ten Steps for Safer Road Infrastructure and Ten Principles for Safe City Streets

<https://roadsafety.piarc.org/en>

<https://www.gtkp.com/>

[https://www.polisnetwork.eu/wp-content/uploads/2019/09/The New Paradigm for Safe City Streets 16-09-19.pdf](https://www.polisnetwork.eu/wp-content/uploads/2019/09/The_New_Paradigm_for_Safe_City_Streets_16-09-19.pdf)

9. PREPARATION OF THE SESSION

The following persons and organisations were involved in the preparation of the session:

- Nhan TRAN, WHO
- Susanna ZAMMATARO, IRF (Geneva, Switzerland)
- Rob McInerney, iRAP
- Patrick MALLEJACQ, PIARC

10. SESSION PROGRAM

Moderator: Claude Van Rooten, PIARC

11:40	Welcome (2 mns), no slides	Claude Van Rooten
11:42	Setting the scene (5 mns), with some slides	Rob McInerney
11:47	Panel discussion	All (see below)
12:27	Q&A with the audience (10 mns)	Claude Van Rooten
12:37	Summary of discussions (2 mns)	Rob McInerney
12:39	Thanks and Closing (1 mn)	Claude Van Rooten
12:40	End of the session	

Name	Position	Organization	Role
Claude Van Rooten	President	PIARC (World Road Association)	Moderator
Rob McInerney	Chief Executive Officer	iRAP	Expert
Joy Kabatsi Kafura	State Minister of Transport	Ministry of Works and Transport, Uganda	Panellist
Bill Halkias	President	International Road Federation	Panellist
Karen Vancluysen	Secretary General	POLIS	Panellist
Andre Dzikus	Director, Urban Basic Services Section	UN-Habitat	Panellist
Patrick Mallejacq	Secretary General	PIARC (World Road Association)	Rapporteur