



PIARC
GLOBAL ROAD SAFETY
KNOWLEDGE EXCHANGE
DATA

PIARC TECHNICAL COMMITTEE ON ROAD SAFETY

PIARC's Technical Committee for Road Safety recognizes that 90% of traffic deaths occur in Low- and Middle-Income Countries, and uses this information to assess, identify and share best practices of road safety activities for LMICs by developing documents and case studies highlighting international practices and lessons learned. In addition, the technical committee is focused on making proven countermeasures that are effective in reducing the likelihood and severity of crashes, available to LMICs for consideration in safety project development.

PIARC DATA

A key dissemination tool for road safety developed by the PIARC Road Safety Technical Committee is the Road Safety Manual (RSM). The PIARC RSM is designed to help countries at every stage of infrastructure development to fulfill road safety objectives. PIARC recognizes the importance of data collection, analysis and evaluation to increase road safety levels, better plan transport interventions and improve travel experience. Therefore, PIARC has produced and made available data-related reports, case studies and documents. The documents include detailed information and up-to-date recommendations on the collecting, processing and using all types of road-related data.



Data Fundamentals



Efforts to reduce crashes in developing countries are hampered by a lack of accurate crash and casualty data which hampers the ability to effectively plan, design and operate the road system safely. In addition, LMIC road administrations struggle to successfully adopt efficient ways to manage their assets due to limited resources. Data collection helps

governments prioritize funding more effectively, monitor the impact of investments, and strengthen inter-agency collaboration and efficiency. Data quality is important, as misleading data points or other pieces of information can lead to wrong conclusions and ineffective decisions.

Data Types and Collection Methods

The relevant data types to increase road safety and better plan transport systems are:

- Crash Data: Collected through police, emergency, and trauma data
- Road and Roadside data, collected through an inventory of data, including in-field reviews, light detection and ranging (LiDAR) data collection, video, photo and other digital methods
- Road condition and Maintenance related data: collected via in-vehicle sensors, smartphones, unmanned aerial vehicles (UAVs), and recorded sound levels.
- Traffic-related data: collected using traditional sensors, smart sensors, CCTV systems, GPS signals, and UAVs.
- Large-scale data on travelers behaviors: collected via GPS systems, cellular networks, social media services, Automated Fare Collection Systems.
- Road safety-related data: collected via sensors, smartphones, ultrasonic sensors, GPS, and GMS.
- Data from connected and automated vehicles.
- Data related to road technology applications.

Data Recommendations



Improved access to data on the effectiveness and costs of establishing road safety interventions can lead to ongoing improvements and support for their broader application.

Data is a key factor in analyzing and evaluating investments. This is especially important with limited budgets, as the effectiveness of road safety

measures should be demonstrated and inefficient use of limited funding or an increase in crash risk should be known.

Read More

- [Road Safety Manual. Road Safety Management. Safety Data](#)
- [Road related data and how to use it](#)
- [Utilizing data to optimize road network operations. A PIARC collection of case studies](#)
- [Proceedings of the PIARC International Seminar on: “Road Safety in Low- and Middle-Income Countries: Issues and Countermeasures”](#)
- [Proceedings of the World Road Congress 2019](#)
- [Proceedings of the Internal Workshop “Policies and Programs for Road Safety Management”](#)