

Press release Intertraffic World

Reducing road deaths by managing and improving the safety of road infrastructure

Many countries target to decrease the number of road casualty.

There was decline in the number of fatalities on Switzerland's roads throughout the last couple of years. Switzerland is one of the countries with the fewest road accident victims per population. Nevertheless, considering the constant traffic increase, the "Via sicura" programme of measures (Via sicura is Italian and means safe roads) aimed at enhancing road safety in Switzerland was launched. The "Via sicura" is aimed at influencing the factors "awareness of social problems", "behaviour of road users" and "safety of motor vehicles as well as road infrastructure".

In the EU the basis of every action for improving safety on the trans-European transport network is based on the Directive 2008/96/EC of the European Parliament and of the Council of 19 November 2008 on road infrastructure safety management. Safety performance of existing roads should be increased by targeting investments for road sections with the highest accident concentration and/or the highest accident reduction potential. Network safety ranking has a high potential immediately after its implementation. Once road sections with a high accident concentration have been treated and remedial measures have been taken, safety inspections, should assume a more important role. Regular safety inspections are an ordinary periodical verification of the characteristics and defects that require maintenance work for safety reasons. Hence, they are an essential tool for preventing possible dangers for all road users.

Potential actions for enhancing the road infrastructure are, among others, the improvement of visibility under different weather and light conditions, coherence, visibility, readability and position of road markings, signs and signals, grip/roughness of pavements, changing the alignment, changing width of road, adding hard shoulders, upgrading the road to current design standards, restoring or replacing pavements etc.

Many of these actions require certain knowledge of the visibility of the road markings and signs. An intelligent maintenance strategy is based on measuring values and supported by a clever evaluation software. Minimum requirements for the performance of road markings and signs are standardized in national and international standards and local regulations, making an objective assessment easy: with the help of the measuring values it can be decided whether the sign or marking still meets the requirements and whether it can well be seen by road users.

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The Swiss manufacturer of precision instruments Zehntner GmbH Testing Instruments offers a variety of retroreflectometers suitable for every user's needs and budget. For road markings the user can choose between the budget-priced basic ZRM 6006 and the professional-grade ZRM 6014 with many options up to the far-reaching vehicle-mounted dynamic measuring system ZDR 6020. Traffic signs can be measured according to all international standards with the various models of the ZRS 6060 Retroreflectometer.



Zehntner's retroreflectometers for all needs and budgets.

Furthermore, many non EU-countries have started road infrastructure projects in recent years. E.g. Argentina has started a road network development project in 2011. Within four years, the company *Safecontrol Nuevas Tecnologías SA* has measured the whole Argentinean road network using two ZDR 6020 vehicle mounted dynamic retroreflectometer produced by Zehntner. In other words, within a year more than 100'000 km have been measured.

In the traffic flow, the vehicles equipped with ZDR 6020 measuring heads travel at speeds of up to 150 km/h (93 mph) without impeding traffic. Reliable measuring values are constantly recorded, photographed and can later easily be evaluated on a PC/laptop on a digital map, or on a spreadsheet completed with the photographic record. Considering the enormous data volume, it becomes obvious that a smart evaluation and data management software is needed.

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ZDR 6020 Dynamic retroreflectometer R_L for all types of road markings at normal traffic speed without obstructing the traffic.

Zehntner offers the mapping and data analysis software "Mapping Tools" free of charge. Using this software, the retroreflection measurements of road markings, traffic signs and safety garments can be analysed according to individual specification, and results are displayed on a map. For maximum compatibility with existing systems and procedures, measuring reports in several languages can be generated as pdf or xls files and data can be exported to external GIS.

This area-wide analysis method offers a great overview of the marking conditions and enables a systematic and intelligent application of maintenance management methods. The budget will only be used in areas where it is necessary to improve the quality of the road infrastructure in order to meet the countries safety targets.

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