

Detecting the beat





B-WIM AND MUCH MORE

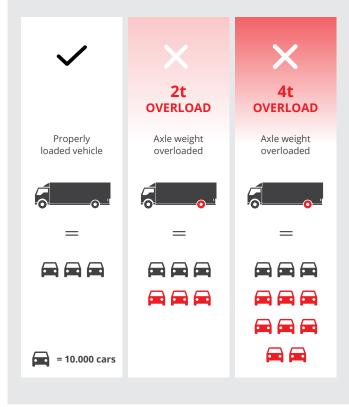
What is the real traffic loading? What is the condition of the structure? What is its carrying capacity?

SiWIM system features:

- ✓ Mobility
- ✓ No road blocks
- ✓ Swift installation
- ✓ Web access
- ✓ High accuracy level
- Stealthy setup
- ✓ Modularity
- ✓ Damage-free installation
- ✓ Simple calibration



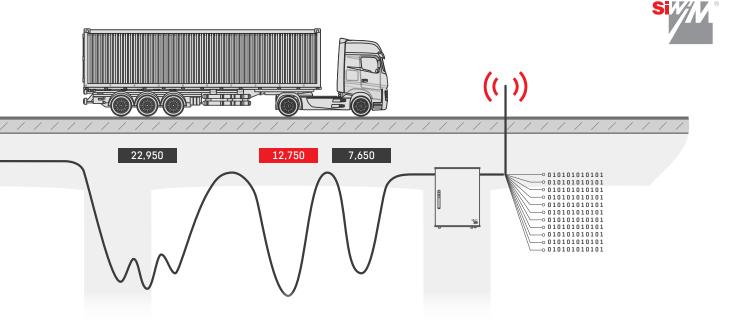
Impact on pavement rises exponentially with increasing single axle load.



SiWIM® MkIV, Bridge Weigh-In-Motion system is a fully automatic stand-alone WIM system with possibility of permanent or portable installation with the same quality of results with respect to accuracy and percentage of successful weighings.

SiWIM® system uses existing bridges from the road network as the measuring platforms. Deflections (strains) of the structures under the moving traffic are recorded and are then, regardless of the lateral position of the vehicle, through information about the **speed** and **axle distances** of vehicles, used to calculate **axle loads** and **gross weight**.

SiWIM® collects real traffic data and identifies the true behavior of a bridge through its actual influence line and load distributions, which are crucial for properly converting traffic loads into load effects and axle loads into moments and shear forces.



For maintaining and planning purposes

- Road damage calculation.
- Safety assessment of existing bridges and maximum permissible traffic loading.
- Realistic traffic loading.
- Life expectancy of road pavement.
- Use of WIM data in the reconstruction and dimensioning of roads.
- Calculation of road layer thickness.
- Methodology for penalty calculation for enforcement.
- Soft load testing of bridges.
- WIM data distribution on road network.

For police enforcement purposes

- Real-time notification with photo of overloaded vehicles.
- Analysis of freight vehicles outflow on parallel roads avoiding traffic control or tolling.
- Calculation of the traffic pattern for enforcement.
- Hourly analysis of heavy traffic.
- Dangerous goods transport analysis.
- Monitoring of the vehicles safety distance.

Remote monitoring and supervision

- Supervision of the system status and functioning of the system.
- Real-time traffic data.
- Periodical statistics of heavy traffic.
- User friendly web-based application.

Hardware

Based on simple strain gauges, precise amplifiers, fast signal converters and a reliable computer, SiWIM® system is a set of basic components, which together form a high-tech, advanced, reliable and modular system for use in a wide range of different situations, both in the areas of WIM as well as for the analysis of bridge structures.



Software

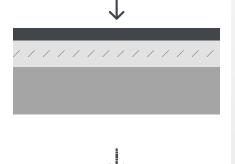
SiWIM's in-house developed software covers all of the areas of the measuring process: from processing the measured signals to presenting the end user with a comprehensible report.

Save on money not on material!

SiWIM System



974.000 vehicles of which 234.499 overloaded



Overlaying only



SiWIM system counts and weighs heavy vehicles, while traffic counter only counts.

ROAD PLANNING

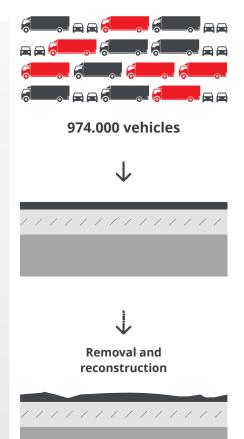
Because overloaded vehicles cause most of the damage on the pavement it is vital to use SiWIM real traffic data for proper road planning.

18 YEARS OF USE

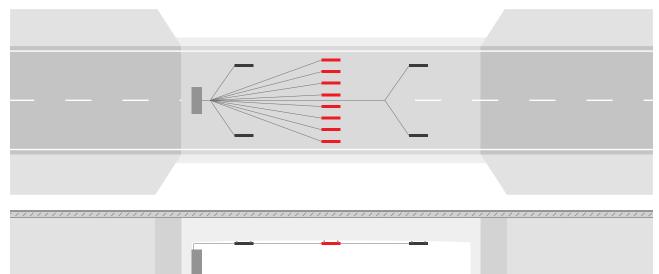
MAINTENANCE AND RECONSTRUCTION

In the long run there is a huge cost difference between maintaining or reconstructing a road.

Traffic Counter



Basic SiWIM® system installation configuration



Sensor position depends on the type of the structure, bridge dimensions and configuration of the traffic lanes.



