

## Press release

### **Fines for overloaded trucks – soon possible with automatic cameras?**

Instead of singling out potentially overloaded trucks from the traffic flow, a new technology could use automatic cameras to penalize them

**Due to the current decline in traffic, wheel ruts, potholes and other types of road damage are becoming more visible. They cost the taxpayer billions every year and they are also frequent causes of disruptions and hazards in road traffic. Responsibility for the condition of our highways lies mainly with overloaded trucks that inflict stress on roads and vulnerable infrastructures such as bridges. To reduce wear and tear in the long term, overloaded vehicles must be detected and the culprits must be held to account.**

Consumer spending is on the increase all over the world, and online trade is setting new records. In Germany alone, three million registered trucks are on the roads to transport all the goods involved and ensure that consumers receive their supplies every day. Vast numbers of goods shipments are also driven into the country from abroad. The weight of every overloaded vehicle places a load on traffic infrastructures: the impact on the road's life expectancy is related to the vehicle's weight by a power of four. To take an actual example: a truck weighing a total of 30 tonnes causes the same wear and tear on the road as 7,500 passenger cars. The results? Lasting damage, construction sites and soaring maintenance costs. In many places, trucks are randomly diverted from traffic to a weigh station where violations of the maximum authorized mass (MAM) can be individually identified and penalized. In some cases, [Weigh In Motion \(WIM\)](#) is deployed to preselect vehicles before they are diverted. For this purpose, Weigh In Motion systems use sensors recessed into the asphalt to measure the weight of passing vehicles. However, the accuracy of these systems does not yet meet the legal requirements, so police must individually check vehicles that trigger the system's alarm. A static platform scale then confirms the result from the WIM sensors. This procedure inevitably takes up a lot of police time.

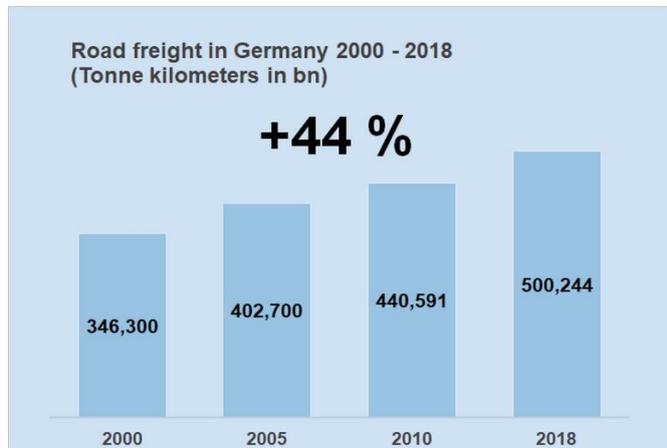
#### **Automatic notification of charges for overloaded vehicles**

Now, a technological innovation from the [Kistler Group](#) promises to remedy this situation: a new Weigh In Motion system with significantly improved measurement accuracy can use camera technology to detect overloaded vehicles automatically – just like a speed check. The notification of charges is then sent by post. This requires appropriate legislation, which has already been introduced

in several European countries. Why is this system more reliable? Because it is based on a new type of sensor that measures the vehicle's exact weight – irrespective of road quality, speed or the angle at which the vehicle passes the sensors. Data is transmitted digitally to ensure added protection against signal interference. Another advantage: the WIM system no longer disrupts the traffic flow. Drivers only realize that their truck was just weighed because of the flash from the camera. In the future, it will also be possible to use WIM systems to detect inadequate tire pressure. As well as reducing tire lifetimes, insufficient pressure makes the braking distance longer. It also entails the risk of overheating, which can cause parts of tires to become detached.

The new system has already been tested on some Swiss roads and at the Kefikon experimental center. In April 2020, it will be presented to the public for the first time at the Intertraffic trade fair in Amsterdam and shortly afterwards, it will undergo further testing on Switzerland's motorways. Deployment of this technology on main arterial routes could very quickly boost traffic safety – and it could also have a deterrent effect on trucking companies that overload their vehicles in an attempt to save money at the taxpayer's expense.

**Image material (please name the Kistler Group as picture source)**

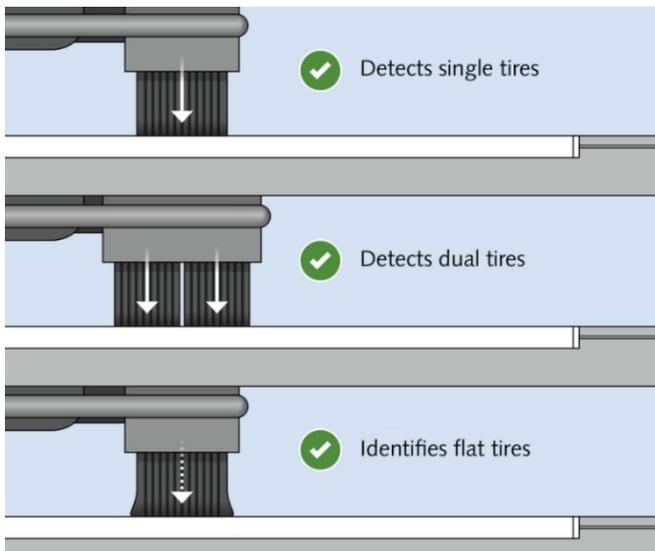


Between 2000 and 2018, road freight transport in Germany grew by 44 percent to over 500 billion tonne kilometers

Data source: Bundesministerium für Verkehr, Bau und Stadtentwicklung, DIW (Deutsches Institut für Wirtschaftsforschung)



Strip sensors recessed into the road measure the axle loads of moving trucks.



Weigh In Motion systems from Kistler can also detect the number of tires and any underinflated tires on moving vehicles.

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#### About the Kistler Group

Kistler is the global market leader for dynamic pressure, force, torque and acceleration measurement technology. Cutting-edge technologies provide the basis for Kistler's modular solutions. Customers in industry and scientific research benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. Unique sensor technology from this owner-managed Swiss corporation helps to shape future innovations not only in automotive development and industrial automation but also in many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler plays a key part in the ongoing development of the latest megatrends. The focus is on issues such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0. Some 2,200 employees at more than 60 facilities across the globe are dedicated to the development of new solutions, and they offer application-specific services at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2019, it posted sales of CHF 466 million. About 7% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.