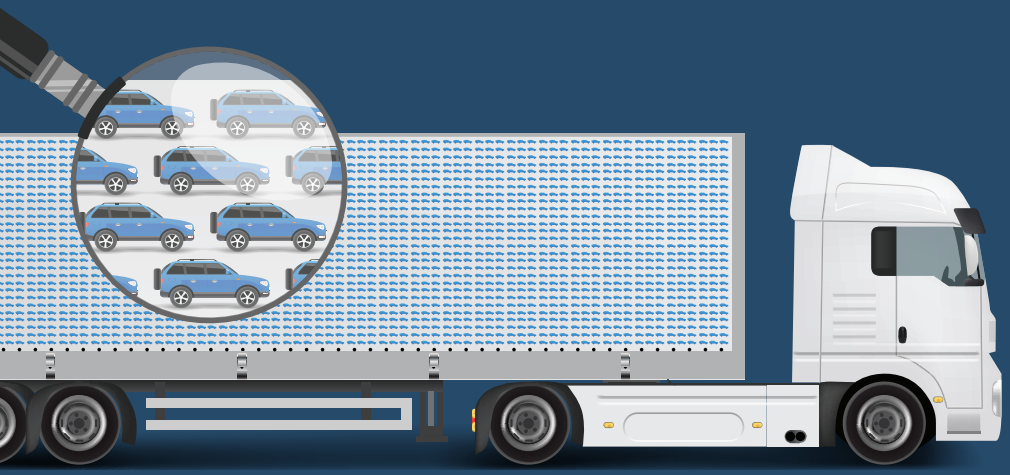
camea

Unique Customer Solutions for WEIGH-IN-MOTION

One overloaded truck causes the same road damage as 30,000 cars.



Reduce the damage with the leader in WIM DIRECT ENFORCEMENT.

CAMEA WIM Exceptionality

- First WIM certified for direct enforcement worldwide
- Speed and dimension enforcement
- Sensor independence
- Measuring between lanes
- Measuring in both directions
- Dual tire detection
- Tire pressure measurement
- Tire footprint reconstruction
- Multiple classification schemes
- Advanced validation process
- Centralized remote diagnostics

CAMEA Platform Key Components

Modular and Scalable
Measurement Unit

Smart Camera
Trainable Using AI

Analog and Digital
Weighing Sensors

Highly Optimized Software
Developed In-House

CAMEA
Environment

TOP QUALITY
PRODUCTS

EXPERT
INSTALLATION

COMPLEX
DATA

CONTINUOUS
SUPPORT

CAMEA Sensor Dimensions

Low Profile Design

Lower Installation Depth

Less Intrusive

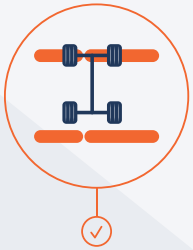
Extended Pavement Service Life

Greater Installation Depth

More Intrusive

Risk of Pavement Cracking

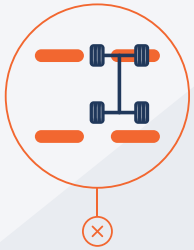
Multiple Sensor Lengths



Combining Sensor Lengths

Full Pavement Width Coverage

Prevents Weighing Avoidance



Single Sensor Length

Gaps Between Sensors

Wheels May Bypass Measurement

Our Digital WIM Sensor

Independent Load Cell Measurement

Digital WIM Sensor

Exceptional Accuracy with Reliable Results

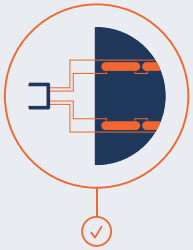
Tire Position Detection and Additional Measurements

Analog WIM Sensor

Potential Lower Accuracy

Limited Measurement Capabilities

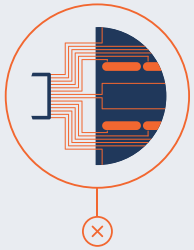
All-In-One WIM Solution



Digital WIM Solution

Eliminates the Need for Additional Sensors

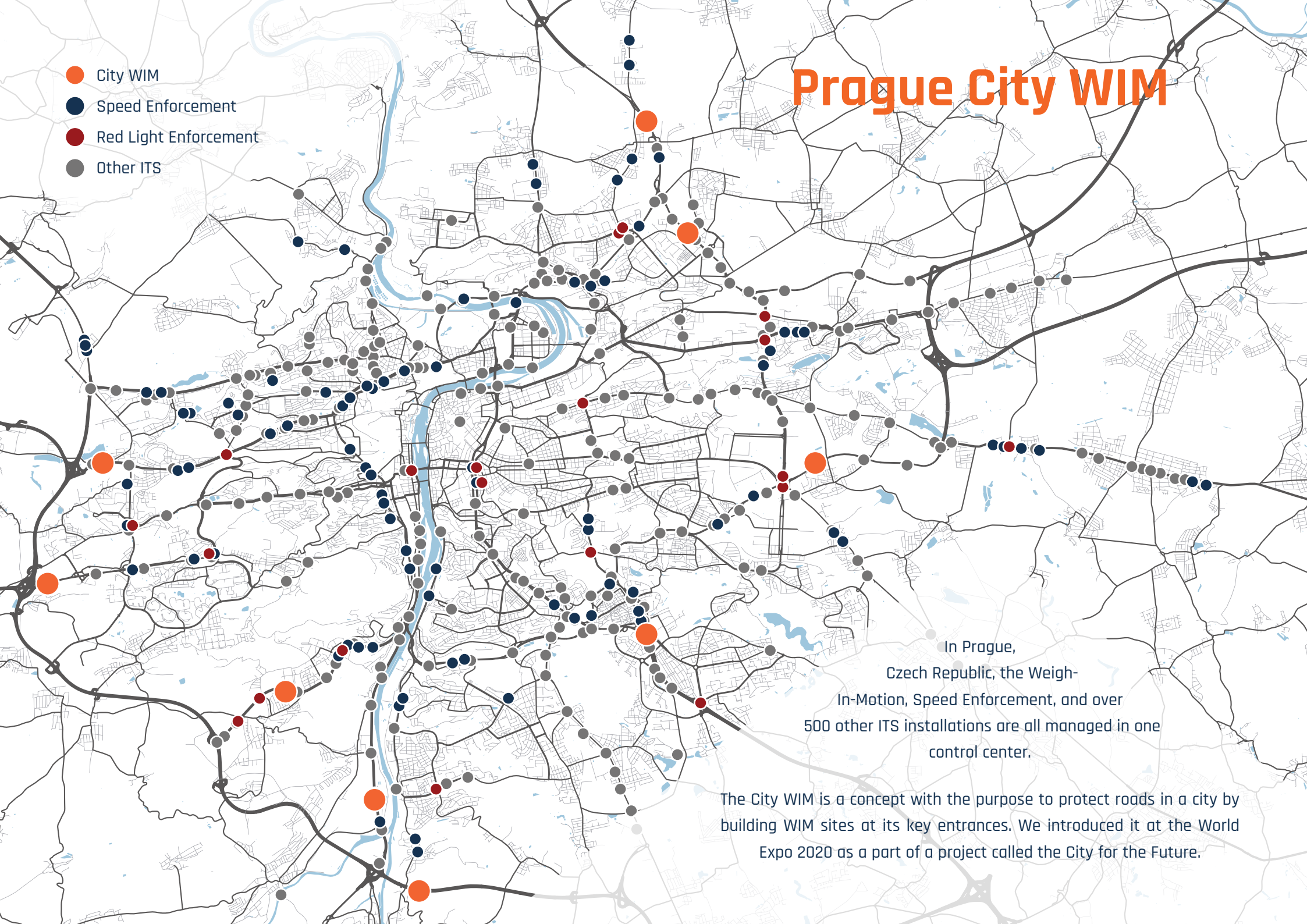
One PoE Ethernet Cable per Sensor



Analog WIM Solutions

Multiple Sensors and Cabling Required

Costly and Intrusive Installation

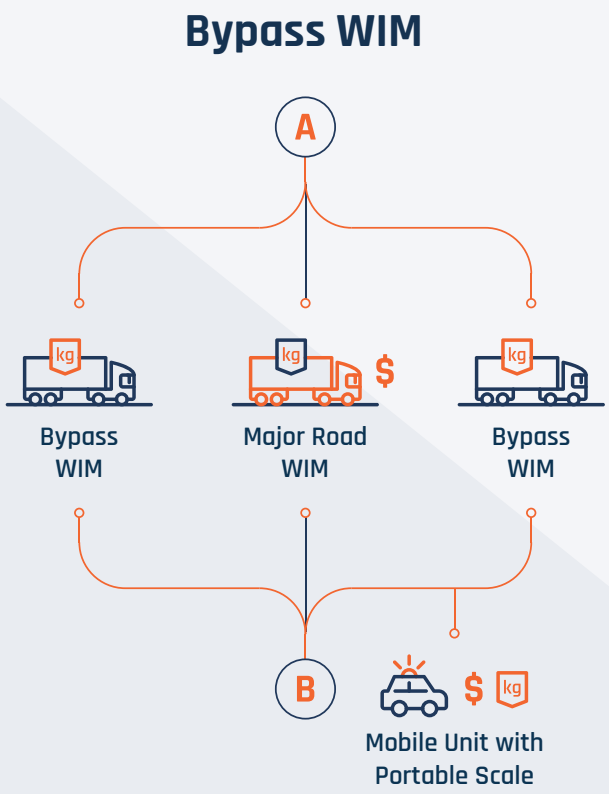


Prague City WIM

In Prague, Czech Republic, the Weigh-In-Motion, Speed Enforcement, and over 500 other ITS installations are all managed in one control center.

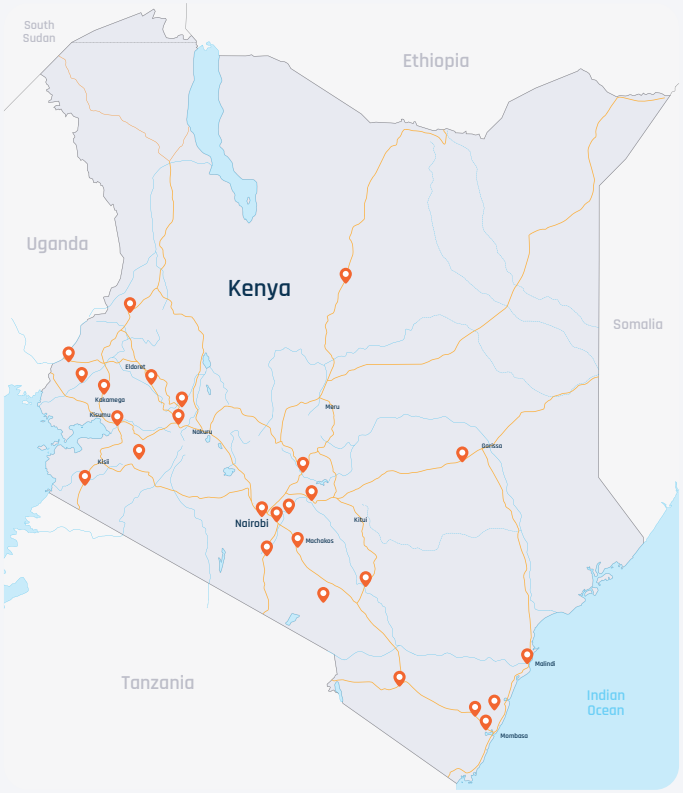
The City WIM is a concept with the purpose to protect roads in a city by building WIM sites at its key entrances. We introduced it at the World Expo 2020 as a part of a project called the City for the Future.

WIM Monitoring on Bypass Routes



Installing certified high-accuracy WIM stations on all detour routes is not economically or technically feasible, as lower-class pavements often do not meet the required standards. Cost-effective WIM systems with lower accuracy can be deployed on bypass routes to detect and document overloaded vehicles attempting to avoid motorway control. Combined with mobile enforcement units and centralized data evaluation, this approach enables efficient monitoring of both main roads and alternative routes.

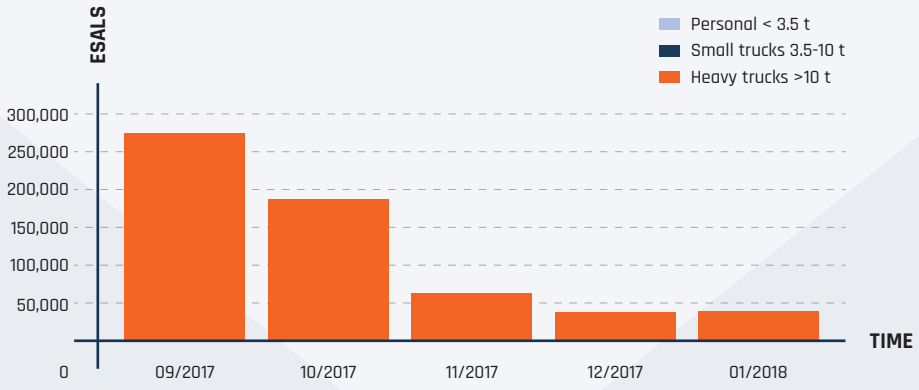
Nation-Wide WIM in Kenya



CAMEA, in cooperation with local partners, has deployed more than 30 virtual High-Speed WIM stations across the Kenyan national road network. These automated stations include weighing sensors, ANPR and overview cameras, containerized technical units, and backup power to ensure continuous operation. The system supports centralized monitoring, traffic data collection, and pre-selection for static weighing, helping reduce queues and improve overall traffic flow nationwide.

Effects of Using Direct Enforcement WIM

Local authorities often face reality when comparing the planned and true road lifetime. The planned lifetime is based on a qualified estimation of traffic intensity and structure. Yet, it is very complicated to predict the number of overloaded trucks, even though it is very important, as these vehicles are the ones causing the most road damage.



Road stress decrease in ESALs after deploying direct enforcement WIM

We carried out studies that aimed to determine the level of road damage as accurately as possible. That is by using WIM systems to measure Equivalent Single Axle Loads (ESALs) - the real cumulative road load. They also show that the real driveway conditions differ from the ones according to the original plans. Under these circumstances, it is necessary to repair the road as soon as possible, as the costs rise exponentially with time. Weighing vehicles on axles provides data accurate enough to determine the actual road load, which enables the user to plan maintenance effectively – to repair in time and avoid unnecessary expenses. Most importantly, when used for enforcing, it decreases the road damage, as shown in the chart.

Installing the CAMEA WIM system for direct fining results in a significant drop of overloading violators. That decreases the road damage to up to five times and disables illegally heavy trucks from driving through the place. They are either loaded in accordance with the rules, or they use a different path. To prevent the second option, building a dense web of WIM stations is a desirable action.

Customer Solutions

Our team has a unique combination of ITS design expertise, OEM manufacturing know-how, R&D, custom design and proficiency across a variety of traffic and industry applications required to make your next project a success.

Custom Design

This may include integration of components from various vendors or custom SW and HW implementations and modifications such as country-specific legislation issues, communication protocols or custom GUI.

Turn-Key

This approach consists in providing fully-featured solutions. The services range from civil engineering, component delivery, system installation and integration, staff training to maintenance and post-installation support by CAMEA directly or through authorized partners.

CAMEA OEM

Our products can be provided as components to resellers or system integrators who are in need of specific parts. Selling of such products under the business partner's brand is possible.

WEIGH-IN-MOTION

WIM DIRECT ENFORCEMENT

SPEED ENFORCEMENT

ITS WORLDWIDE

www.cameatechnology.com

Developed in #BRNOREGION

Version: EN20260225