



camea

Why We Are the Right Choice for
Your Projects in **AFRICA**

Weigh-In-Motion • Dimension-In-Motion • Speed Enforcement • Traffic Counters • Smart Cameras



We Are Experts in Direct Enforcement



We Have Extensive Experience Worldwide



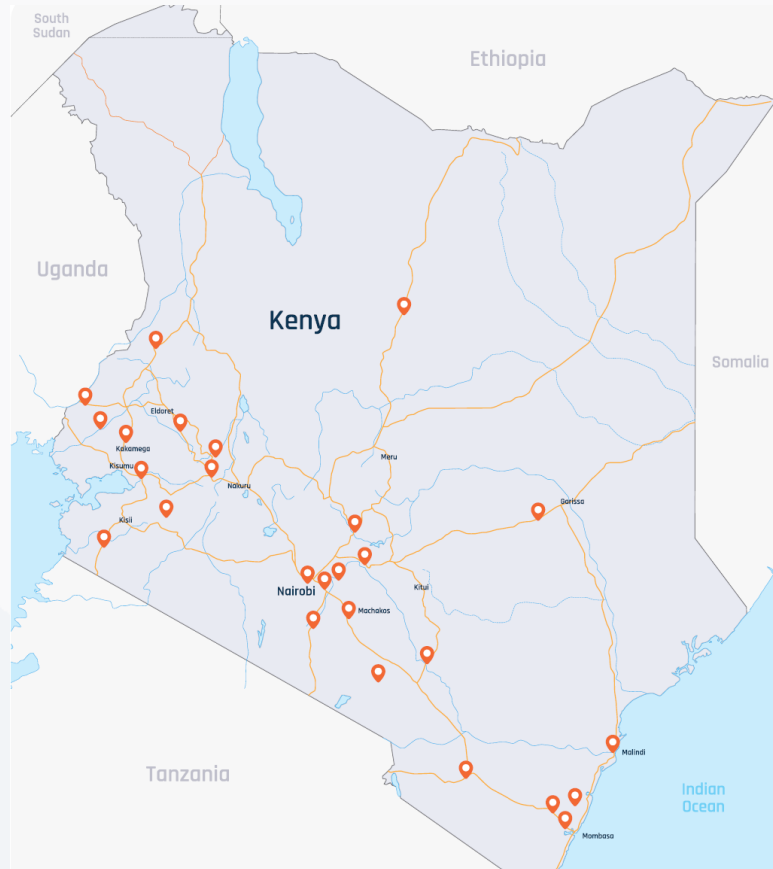
We Have References in East Africa

- More than 30 stations used for various purposes:
 - Data collection for WIM statistics
 - Pre-selection for static scales
 - Enforcement soon to be deployed
- Monitoring in a single data center
- More stations to be installed in 2023/2024

“We are pleased to report the observed reality on Kenyan National roads. Queues at the static weigh stations are significantly shorter, compared to before implementing the Weigh-In-Motion. The Weigh-In-Motion solution, both at the static and virtual weigh stations, helps reduce overloading, facilitate trade, and protects both infrastructure and people in the long run.”

ENG. MUITA NGATIA, DEPUTY DIRECTOR,
ROAD ASSET MANAGEMENT, 2020
Kenya National Highway Authority (KeNHA)

We Have 30+ Stations in Kenya



Our Virtual Weighbridge Solution in Kenya



Our Pre-Screening Weighbridge Solution in Kenya



We Have a Pilot WIM Station in South Africa

- Pre-selection for the Mantsole Weighbridge on the **TRANS-AFRICAN HIGHWAY NO. 4** near Pretoria
 - WIM in the slow lane
 - Detection of avoiding drivers in the fast lane and road shoulders
- CAMEA provided consultancy for the planned law documentation for direct enforcement



Our Technology Tailor-Made for Africa



We Have Regional Presence

CAMEA East Africa Ltd

- Our branch in Kenya with local staff to regularly take part in local conferences and workshops, as well as provide local support for your projects.
- Spare parts will be available on stock for timely repairs by Q3 2023.

Birdi House - Off Mombasa Rd
P. O. Box 57933-00200
Nairobi, Kenya

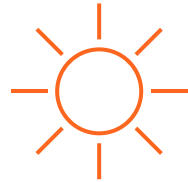
Operating in East Africa



We Are in Similar Time Zones

CEST and CET grant easy communication with EAT.

SUMMER TIME



-1 hour (CEST)

WINTER TIME



-2 hours (CET)

We Train Local Teams

We are making sure East Africa has local and regional support.



SERVICE LEVEL TRAINING FOR LOCAL EXPERTIZE



INSTALLATION AND MAINTENANCE



WORKSHOPS FOR PARTNERS AND END USERS

We Produce the Key Components



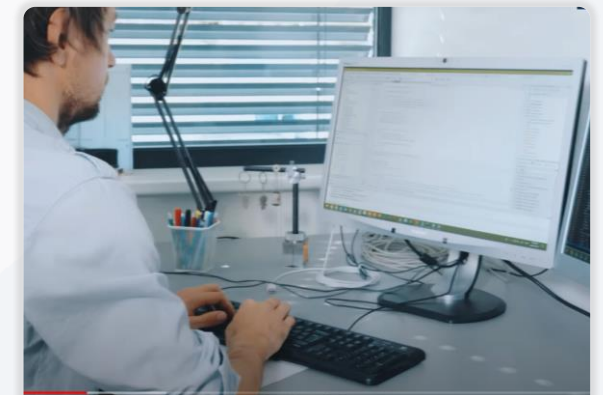
MEASUREMENT UNIT



SMART CAMERA

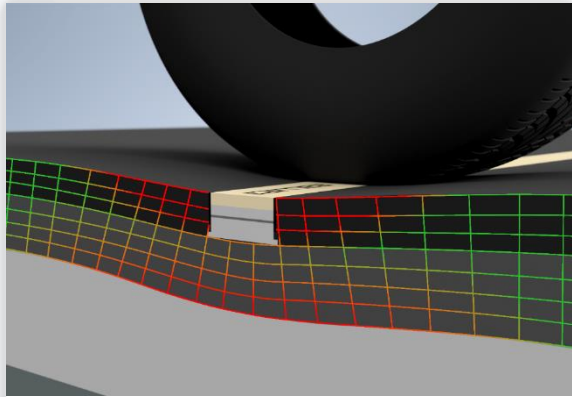


WEIGHING SENSOR

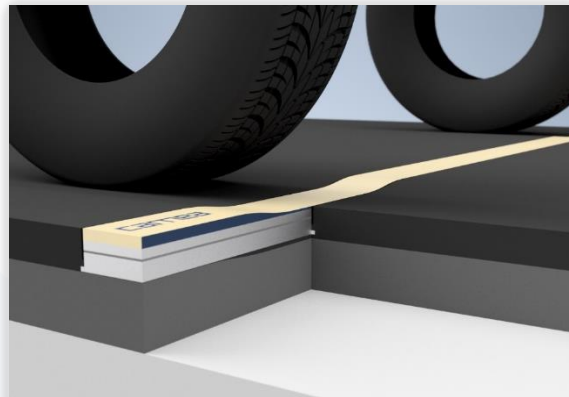


CAMEA SOFTWARE

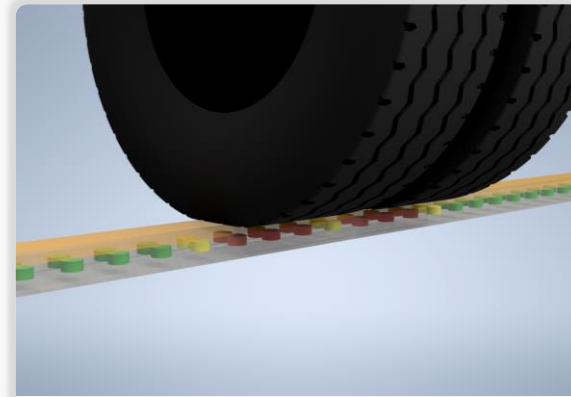
CAMEA Digital Sensor



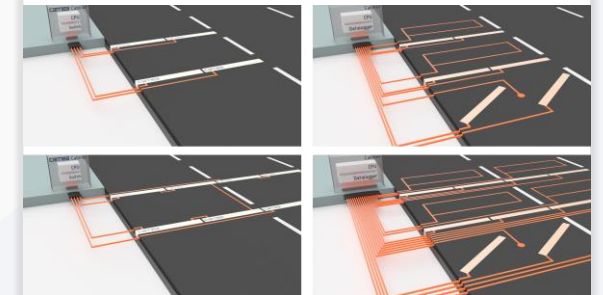
Low Height
Less Road Damage



High Abrasive Layer
Long Lifetime



Tire Position
Dual Tires &
Wheelbase

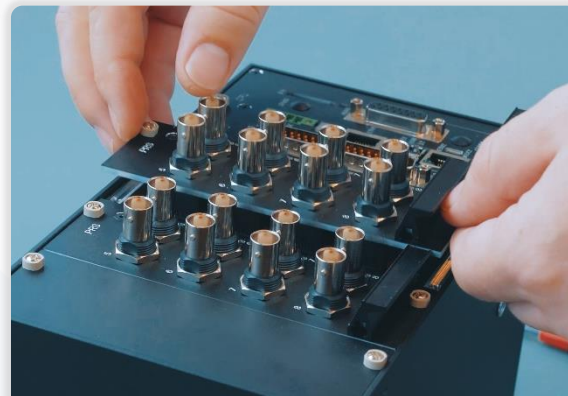


Cheap & Easy Cabling
Less Cutting

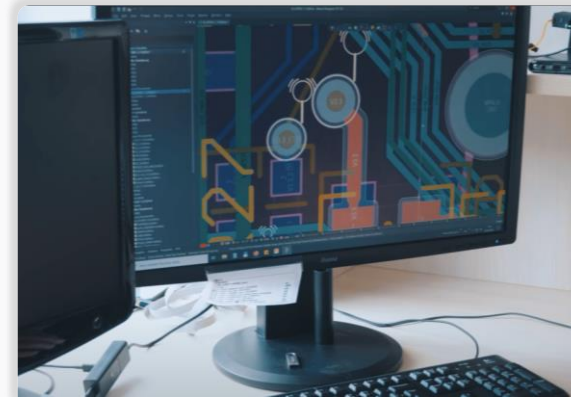
We Make Cutting Edge Solutions



IN **#BRNOREGION**
SINCE 1995



**R&D ORIENTATION
COOPERATION WITH
UNIVERSITIES**



**CONTINUOUS
IMPROVEMENT AND
CUSTOMIZATION**



**MINIMUM
OUTSOURCING & FULL
CONTROL**



**TOP QUALITY
PRODUCTS**



**EXPERT
INSTALLATION**



**COMPLEX
DATA**

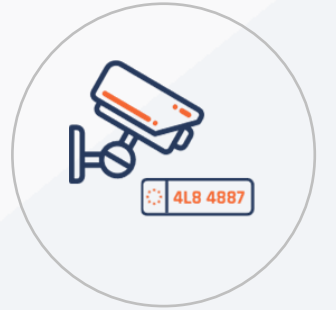
**CAMEA
Environment**



**CONTINUOUS
SUPPORT**



We Have a Wide Portfolio of Traffic Systems

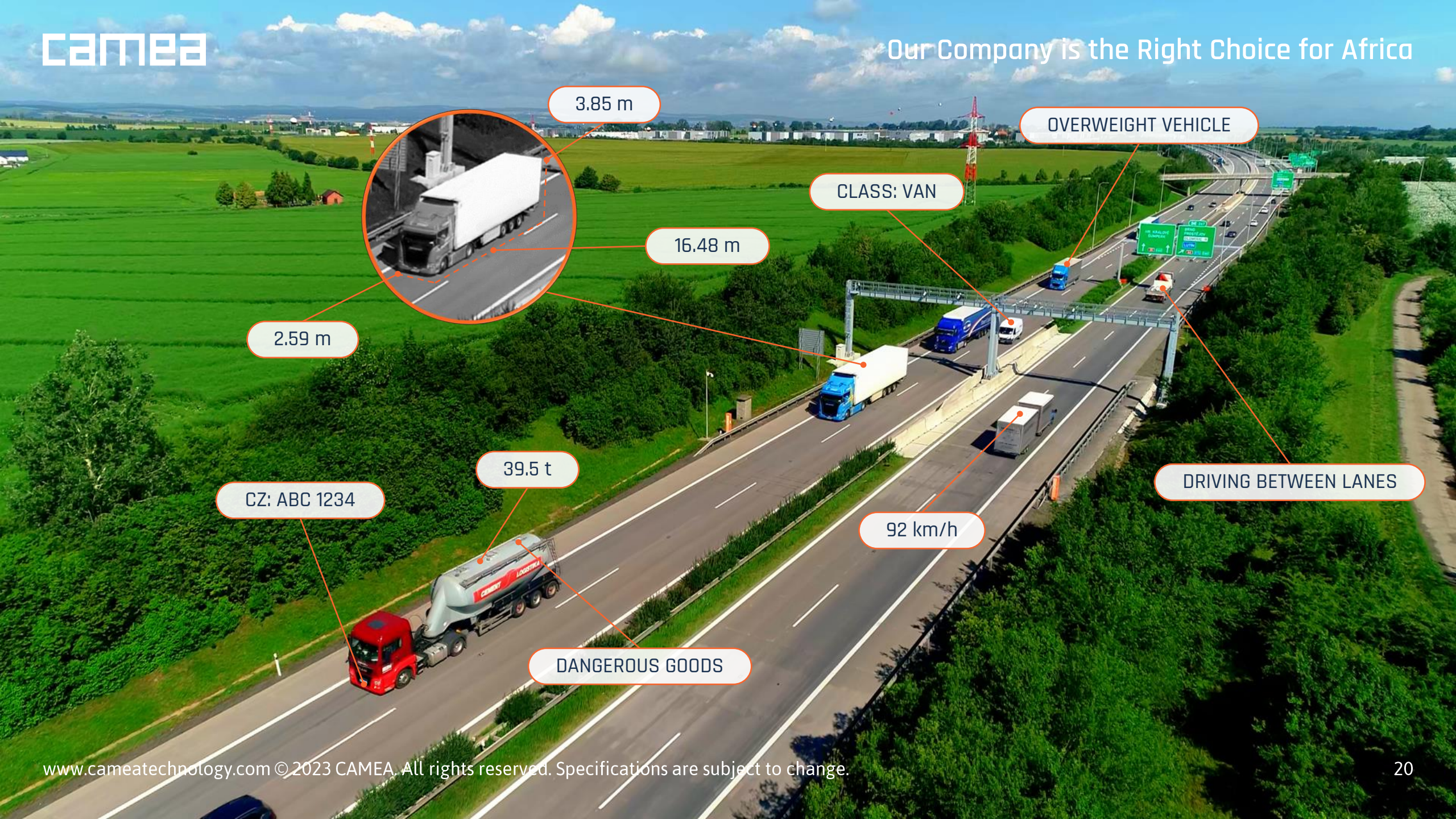


SCALABLE PLATFORM

- Various sensor technologies, counts and combinations
- Upgradeable from simple to the most complex solutions

SYNERGISTIC EFFECT

- Improving performance by combining output data of multiple ITS
- Sharing components for high cost-efficiency



3.85 m

OVERWEIGHT VEHICLE

CLASS: VAN

16.48 m

2.59 m

39.5 t

CZ: ABC 1234

DRIVING BETWEEN LANES

92 km/h

DANGEROUS GOODS

CAMEA Prague City ITS (CZ)

- City WIM
- Speed Enforcement
- Red Light Enforcement
- Other ITS

We are the World's Leader in WIM Enforcement





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Overview of Our Solutions for **INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**

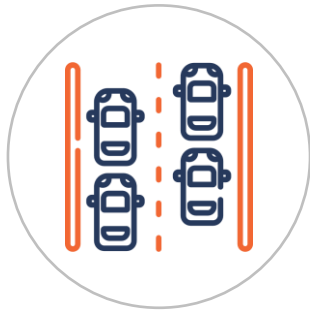
Weigh-In-Motion • Dimension-In-Motion • Speed Enforcement • Traffic Counters • Smart Cameras

CAMEA Weigh-In-Motion

World's leading solution to road damage by getting rid of overloading.



Preserving
Road Quality



Keeping
Traffic Fluent



Improving
Road Safety

CAMEA WIM Exceptional Features

- ✔ Most enforcement stations worldwide
- ✔ Sensor independence
- ✔ Low-speed and high-speed package
- ✔ Speed and dimension enforcement
- ✔ Measuring between lanes and road shoulders
- ✔ Measuring in both directions
- ✔ SW-defined free-flow weighing
- ✔ Dual tire detection
- ✔ Wide range of classes and schemes
- ✔ Full control and minimal outsourcing
- ✔ Fine-tuning of the functionality
- ✔ Advanced validation process
- ✔ Centralized remote diagnostics
- ✔ Central data server support

CAMEA Traffic Counters

Cost-efficient data collection for improved infrastructure construction and maintenance.



**Reliable and
Verified Technology**



**Collecting
Valuable Statistics**



**Reasonable
Investment Costs**

CAMEA Traffic Counters



Standard Classification (Magnetic Profile)

- Inductive loops installed in the pavement.
- Recognition of 9+1 vehicle classes.



Advanced Classification (Magnetic Profile + Axle Detection)

- Inductive loops and pressure sensors.
- 200+ vehicle classes can be recognized.



Weighing

- Upgradeable to WIM by adding weighing sensors.
- Various setup and accuracy possibilities.

CAMEA Smart Camera System

Top video detection built on 25+ years of enforcement experience.



**Trainable for
Superb Accuracy**



**Versatile Use
for Multifunctionality**



**Compact Design
to Save Costs**

CAMEA Smart Camera System



Automatic Number Plate Recognition (ANPR)

- High recognition accuracy even under challenging conditions.
- Country, state, province and plate type recognition with support of vanity plates.



Transportation of Dangerous Goods (ADR Labels)

- Recognizing specifications of dangerous substances.
- Particularly useful for the fire department in tunnels.



Make and Model Recognition (MMR)

- Advanced vehicle classification.
- Suitable for bus lanes or stolen vehicles and license plate search.

CAMEA Smart Camera System



Traffic Sign Mapping

- Surveys and inventories of traffic signs and their state (broken, missing, etc.).
- Sign recognition, classification and exact location.



Road Condition Surveys

- Mapping of road conditions (potholes, cracks, etc.) and markings.
- Cost-effective and low effort usage for efficient maintenance.



Vehicle Tracking, Traffic Surveys

- Tracing vehicle movement, stolen/wanted vehicle search.
- Journey time estimations, origin-destination studies.

CAMEA Vehicle-Mounted Camera System



CAMEA Speed Enforcement

Field-proven systems for safer roads and calmer environment.



Lower Speed



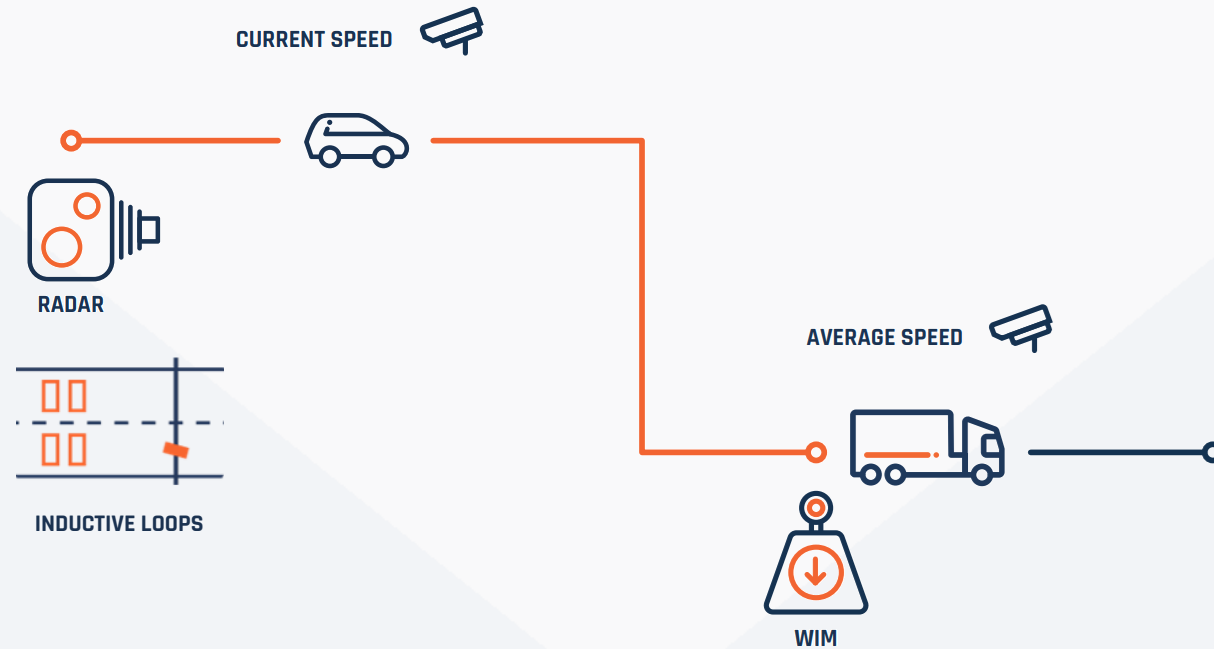
Less Noise



Cleaner Air

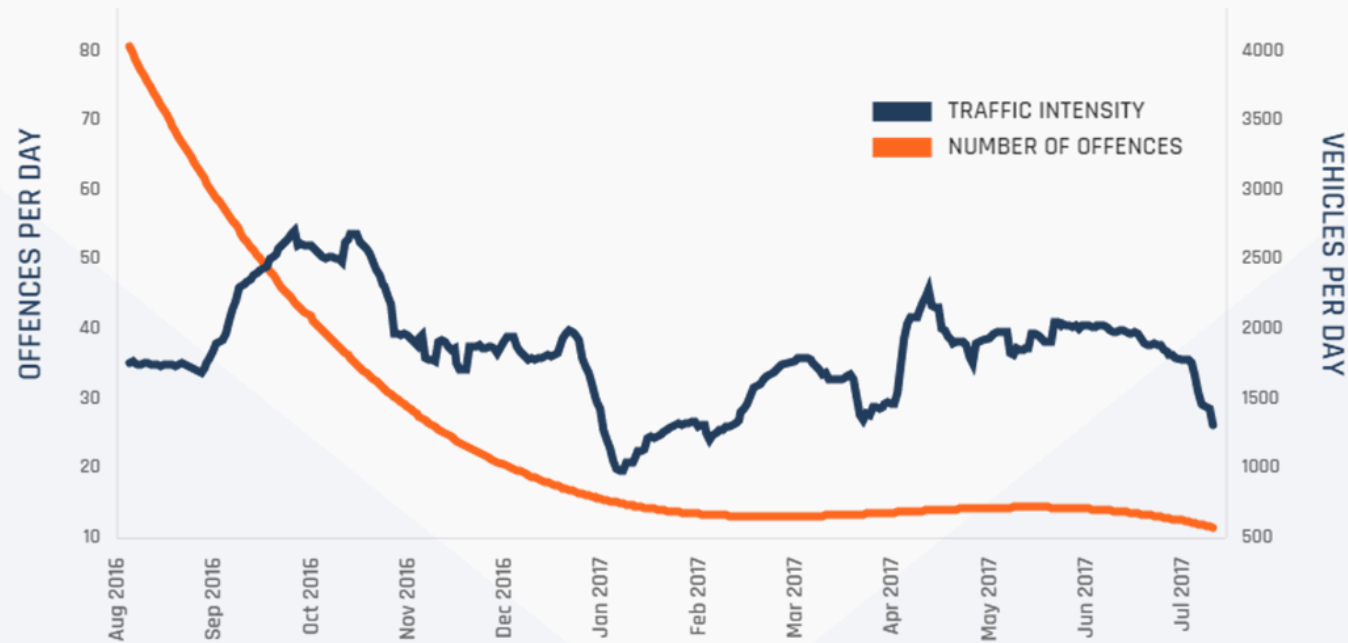
CAMEA Speed Enforcement

Measurement of current or average speed for **SAFE AND FLUENT TRAFFIC.**



CAMEA Speed Enforcement

The number of speeding drivers is typically reduced by around **80 %** within a **FEW MONTHS** after the installation.



CAMEA Speed Enforcement Installation



CAMEA Dimension-In-Motion

Controlling oversized vehicles with no impact on traffic flow.



**Infrastructure
Protection**



**Precise Classification
and 3D Models**



**Protecting
Other Drivers**

CAMEA Dimension-In-Motion



Vehicle Outline and Dimension Measurement

- Precise vehicle dimension measurement to prevent infrastructure damage.
- Vehicle outline including mirrors, antennas etc.



Separating Closely Driving Vehicles

- Separation by inductive loops can be problematic (magnetic profile).
- 3D laser scanners can be used as a non-intrusive replacement.



Vehicle Classification

- 3D profile used to classify vehicles based on shape.
- Specific vehicle type recognition (cisterns, truck body types).

Our Solutions for Ports and Logistics Centers



Automatic Number Plate Recognition (ANPR)

- Country, state, province and plate type recognition with support of vanity plates.
- Tracing vehicle movement, stolen/wanted vehicle search.



Transportation of Dangerous Goods (ADR Labels)

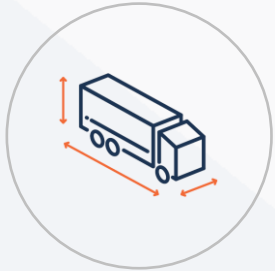
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Vehicle Classification

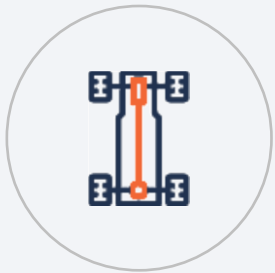
- Advanced vehicle classification.
- Useful for various access rates or statistics.

Our Solutions for Ports and Logistics Centers



Vehicle Dimension Measurement

- Precise vehicle dimension measurement to prevent infrastructure damage.
- Detection of uneven load distribution.



Vehicle Chassis Scanning

- Detection of unusual objects on the vehicle chassis.
- Restricted area access control (embassies, military).



Vehicle Weighing

- Only correctly loaded vehicles can leave (not overloaded, evenly loaded).
- Checking of correct cargo weight declarations.

CAMEA

Thank you!

WWW.CAMEA.AFRICA