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measure. analyze. innovate.

Paving the way towards safer enforcement & infrastructure

CVSA®

ISWIM

DRIVEN BY SAFETY

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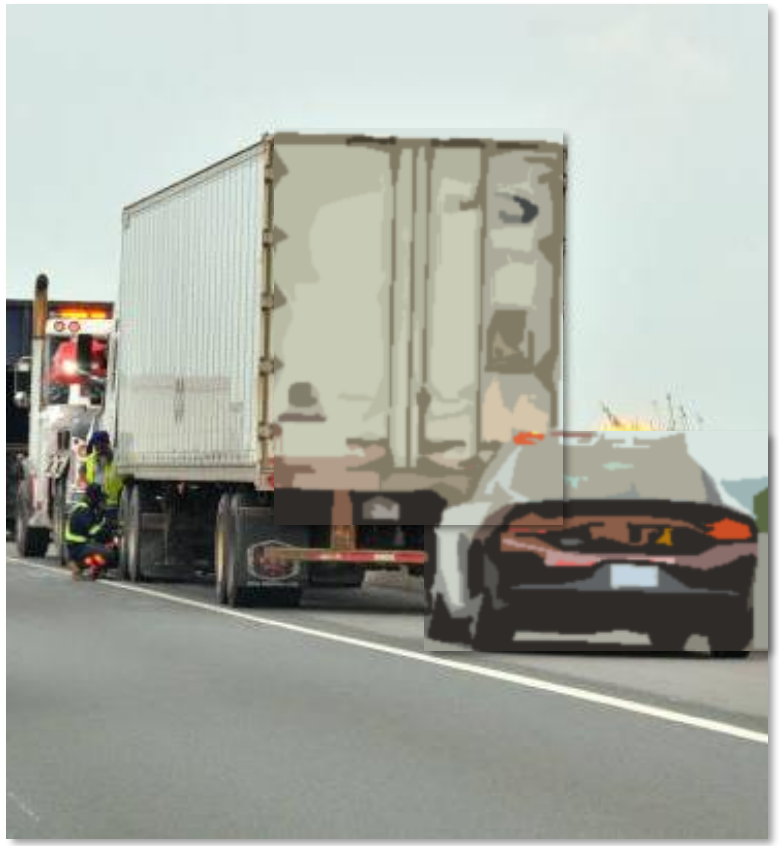
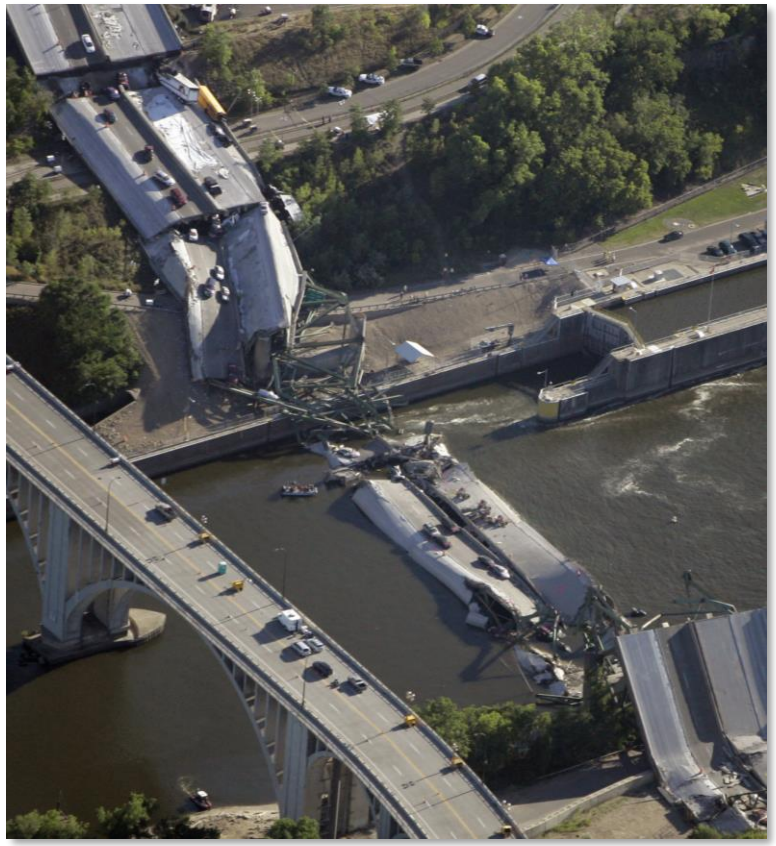
Driver Safety



Roadside Enforcement



Infrastructure Protection

KISTLER HISTORY

- **1950s:** Founded in Buffalo, NY USA
- **1990s**: Lineas® Quartz WIM introduced
- **2000s**: Early adoptions with US DOTs
- **2010s**: Global market maturity (3,000+ units)
- **2020s**: Direct enforcement (1,500+ lanes today)

100,000+ Lineas sensors installed

30+ years of quartz innovation

50+ countries worldwide

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Latest generation KiTraffic Digital WIM

ENFORCEMENT CHALLENGES

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- Lack of national framework (USA)
- Accuracy & threshold disputes
- Uneven pavement issues
- Weight transfer dynamics
- Jurisdictional differences
- Admissibility concerns
- Calibration/validation concerns (W&M)

WHY DIRECT ENFORCEMENT?

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- Captures 100% of traffic
- Overcomes spatial constraints
- Achieves maximum throughput
- Eliminates logistics hurdles
- Minimizes traffic disruption
- Protects our infrastructure
- Improves enforcement tracking

Brooklyn-Queens Expressway (BQE)

NEW YORK CITY DOT

DIRECT ENFORCEMENT GLOBALLY

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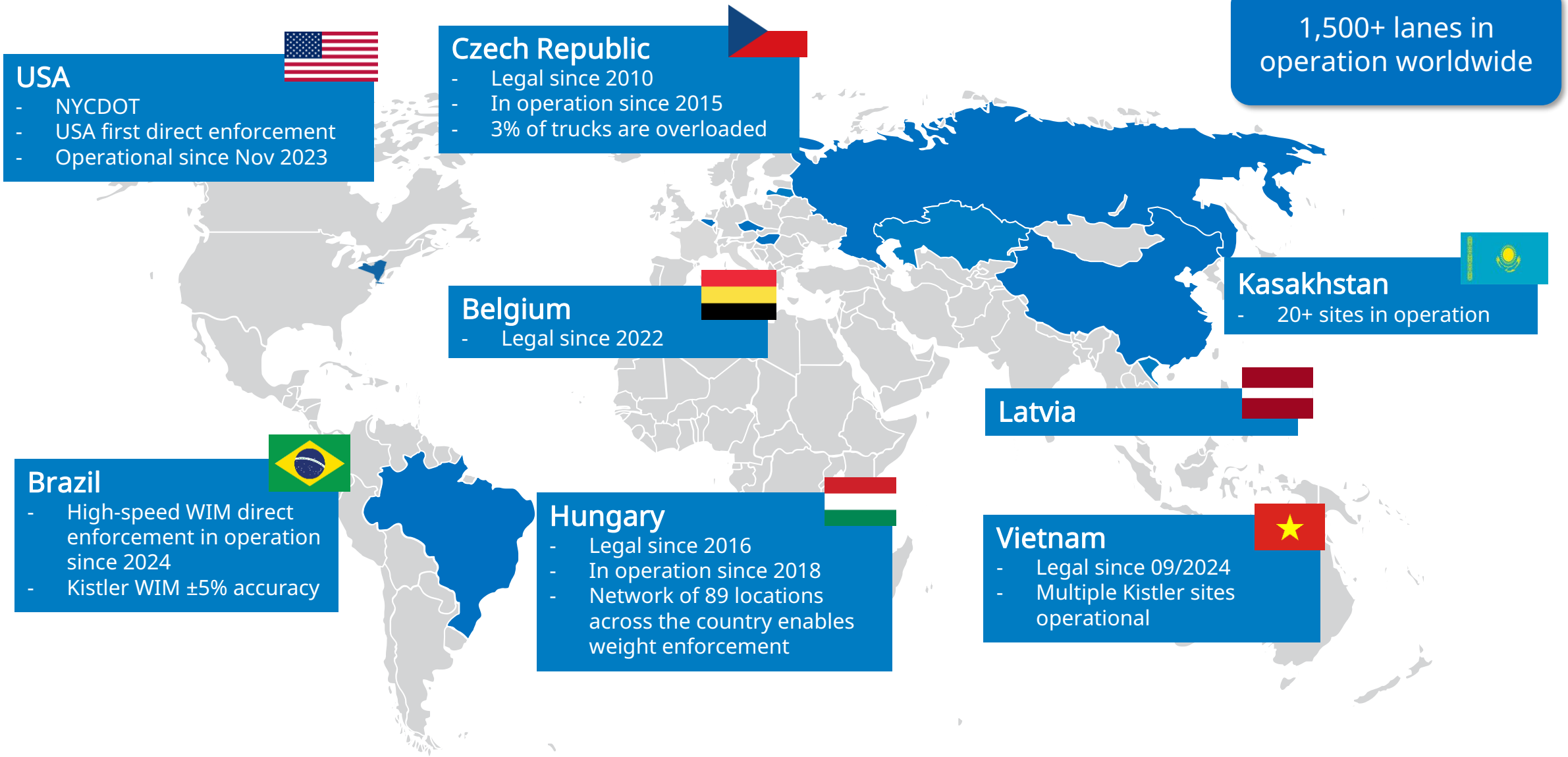
1,500+ lanes in operation worldwide



USA
- NYCDOT
- USA first direct enforcement
- Operational since Nov 2023

Czech Republic
- Legal since 2010
- In operation since 2015
- 3% of trucks are overloaded

Belgium
- Legal since 2022

Kasakhstan
- 20+ sites in operation

Latvia

Brazil
- High-speed WIM direct enforcement in operation since 2024
- Kistler WIM ±5% accuracy

Hungary
- Legal since 2016
- In operation since 2018
- Network of 89 locations across the country enables weight enforcement

Vietnam
- Legal since 09/2024
- Multiple Kistler sites operational

WHAT'S NEEDED: ACCURACY & VALIDITY

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Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Institute of Metrology METAS

Member State
Switzerland

OIML Certificate No.
R134/2006-A-CH1-2022.01

OIML-CS CERTIFICATE ISSUED UNDER SCHEME A

Issuing authority
Name **Federal Institute of Metrology METAS**
Conformity Evaluation Body METAS-Cert
Address Lindenweg 50, 3003 Bern-Wabern, Switzerland
Person responsible Gulian Couvreur, Head of METAS-Cert

Applicant
Name **Kistler Instrumente AG**
Address Eulachstrasse 22, 8408 Winterthur, Switzerland

Manufacturer The manufacturer of the certified pattern is the Applicant

Identification of the certified type
KiTraffic Digital Weigh-In-Motion System
Type **9845A**

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 134-1, edition 2006
for accuracy classes
5 with 3 or 4 sensor rows
10 with 2 sensor rows
for axle load
F

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

This document is only valid and reviewable in its electronic form.
Please observe the information given on www.metas.ch/oiml

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METAS
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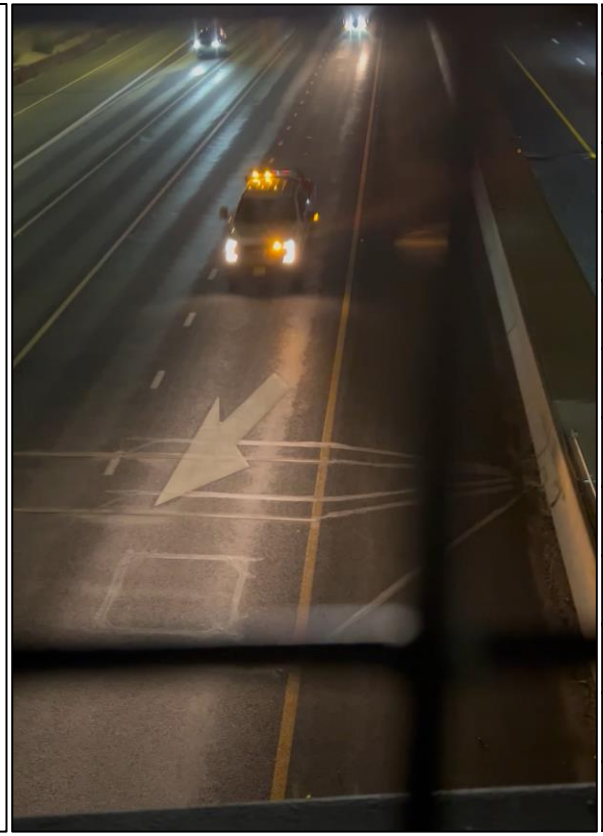

Lane	AE %
EB OFF	2.1%
EB ON	0.7%
EB 1	1.0%
EB 2	1.9%
EB 3	0.2%
EB 4	1.0%
WB 1	1.2%
WB 2	1.5%
WB 3	1.2%
WB 4	2.5%
AVG	1.3%

CALIBRATED

OIML R134 ✓ | ASTM E-1318 ✓ | COST 323 ✓ | NIST HB44 WIP

WHAT'S NEEDED: DYNAMIC SOLUTIONS

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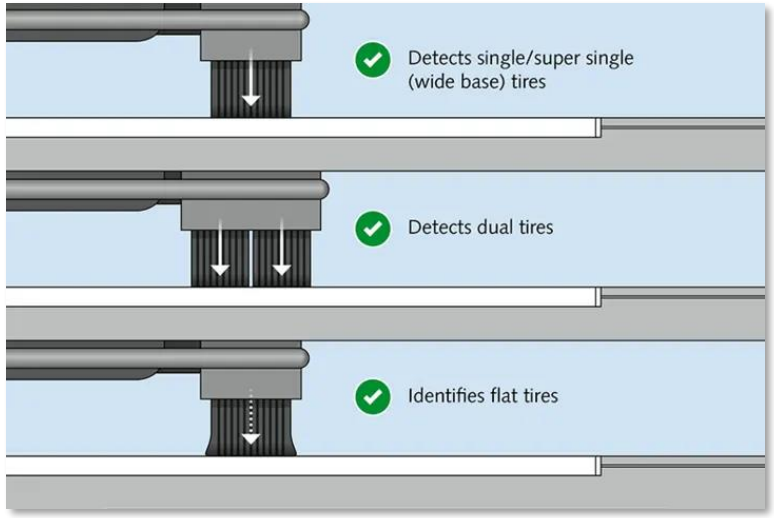
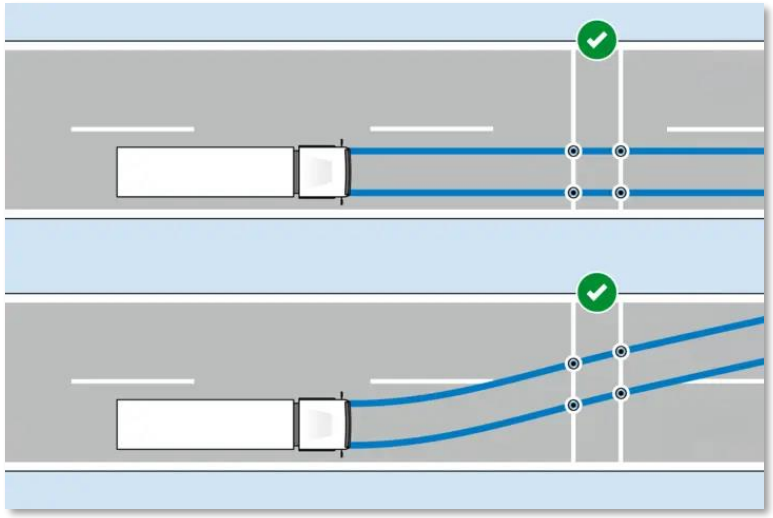


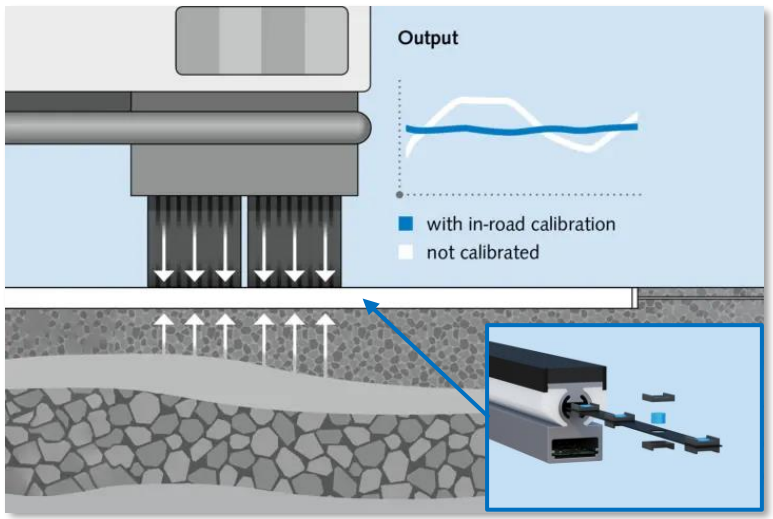
Automated Tire Screening (ATS)

- Detects tire size & inflation
- Identifies missing tires
- Helps to promote road safety



Interlane Driving Detection

- 100% roadway coverage
- Equal precision as inlane
- Designed for direct enforcement



Smart Sensor Calibration

- 60+ embedded sensing units
- Compensates for road conditions
- Advanced validity feature

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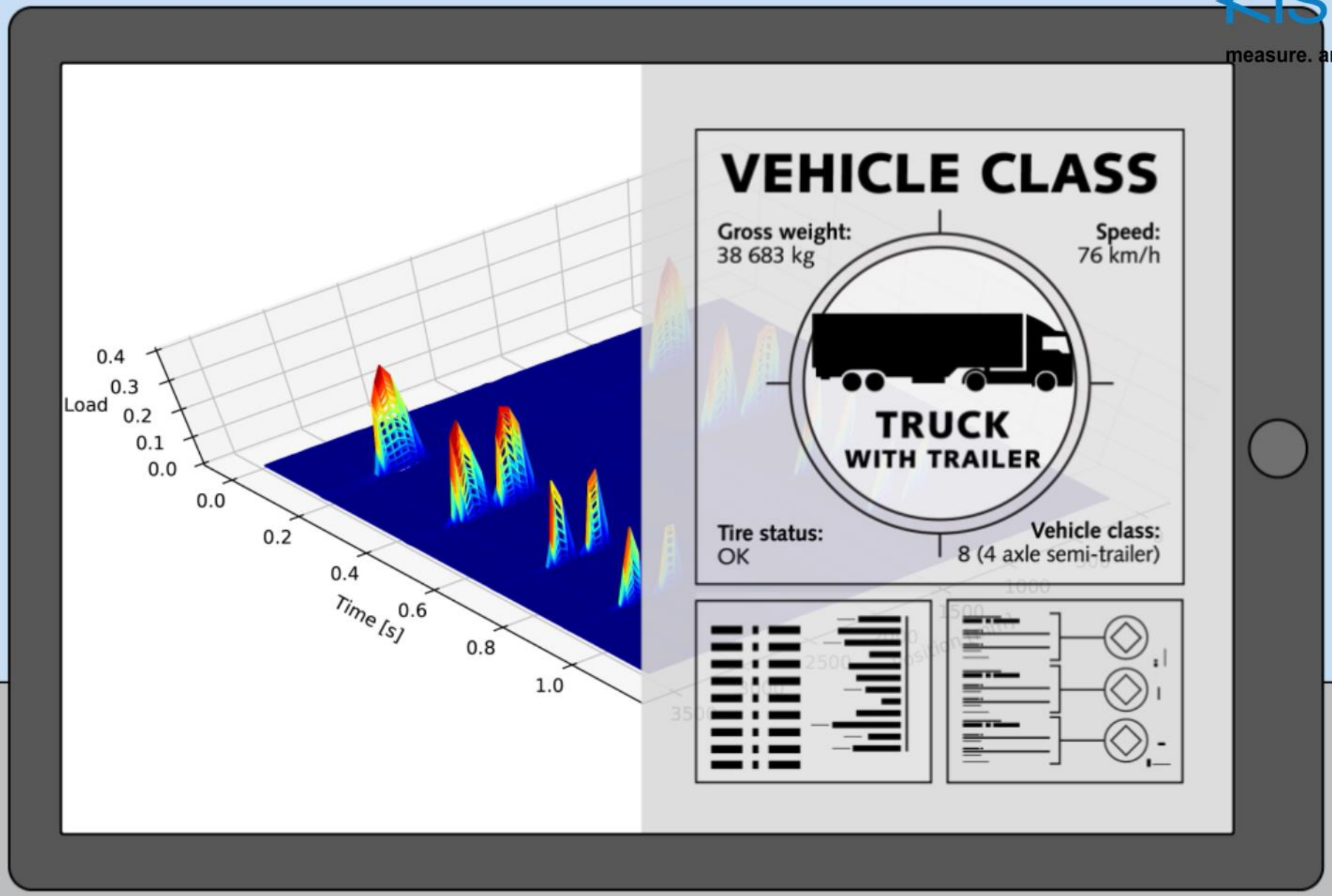

PROJECT SUCCESS STORY: BRAZIL

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Phase 1: Electronic Toll Collection

- Four (4) KTD systems in operation for Multi-Lane-Free-Flow sites across Brazil
- Six (6) more sites being installed

Phase 2: Direct Weight Enforcement

- Homologation of KTD in Q4 2025
- Upgrade of MLFF sites with additional sensor rows (4 → 6 sensors per lane)

Phase 3: Direct Speed Enforcement

- Negotiations with Customer and authorities to allow WIM for ongoing speed enforcement

PROJECT SUCCESS STORY: USA

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RI dot

Problem

- In December 2023, the westbound span of the Washington Bridge in Rhode Island was abruptly closed due to a critical structural failure

Need

- To maintain traffic flow during construction, lanes were added to the eastbound span, requiring close enforcement of both traffic loads and structural integrity of the bridge

Solution

- Kistler's digital WIM and SHM systems were installed across 10 lanes, featuring over 200 sensors (strain, acceleration, inclination and weather monitoring)

Result

- Authorities track traffic and structural data with automated alerts for overweight trucks or integrity changes — enabling smarter enforcement and lowering risk of bridge failure

Washington Bridge, Rhode Island

IN CONCLUSION

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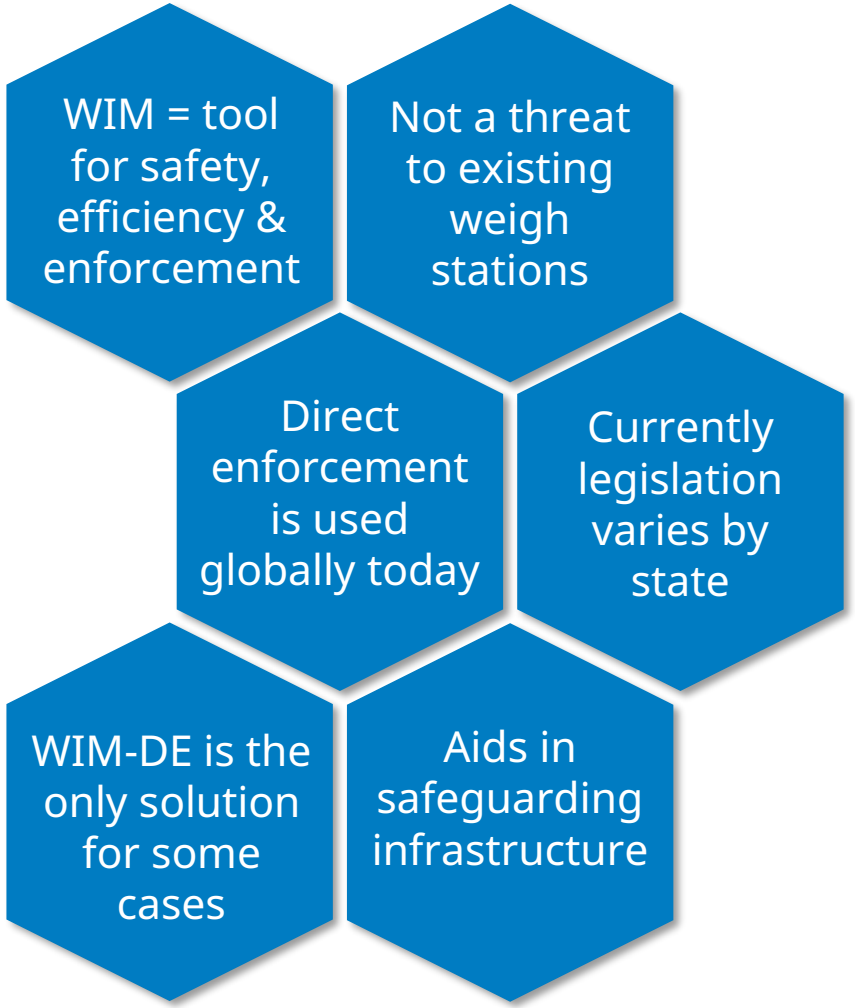

- WIM is an **effective & efficient safety tool** for road users, enforcement and infrastructure protection alike
- Direct enforcement is a **compliment (not replacement)** to conventional enforcement programs
- Authorities are using **direct enforcement globally** today, and our **technology meets the requirements** for the US
- For **certain projects** like BQE, direct weight enforcement may be the **only possible solution**
- Screening of records can be augmented by **ML** and **AI** – using **best practices** from enforcement
- **Legislation is needed** and remains a challenge – each state must approach it individually until standard is updated
- Increasing need and concern with **critical infrastructure** like bridges – **forcing function for enforcement**

THANK YOU!

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VISIT US AT BOOTH #213!