

NIRA Dynamics – Virtual sensor pioneers that digitalizes the road surface

Location based live road surface solutions

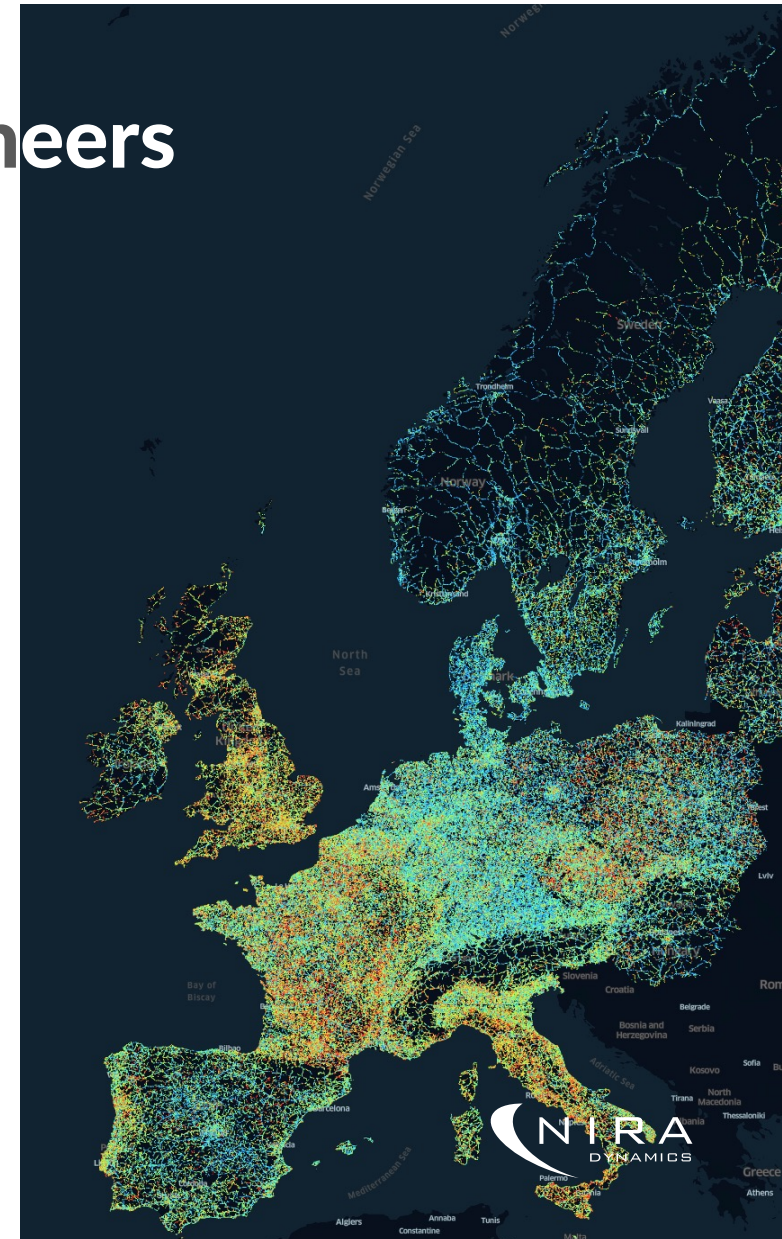
Created from data out of NIRA proprietary edge software that continuously measures the interaction between the tires and the road.

Edge software installed in high volume vehicle platforms



Our USP – hyper local measurements

In contrast to for example community-based data services and pure weather-based data services, NIRAs RSI is based on actual measurements from cars travelling on the roads, ensuring accurate and precise alerts and map layers.

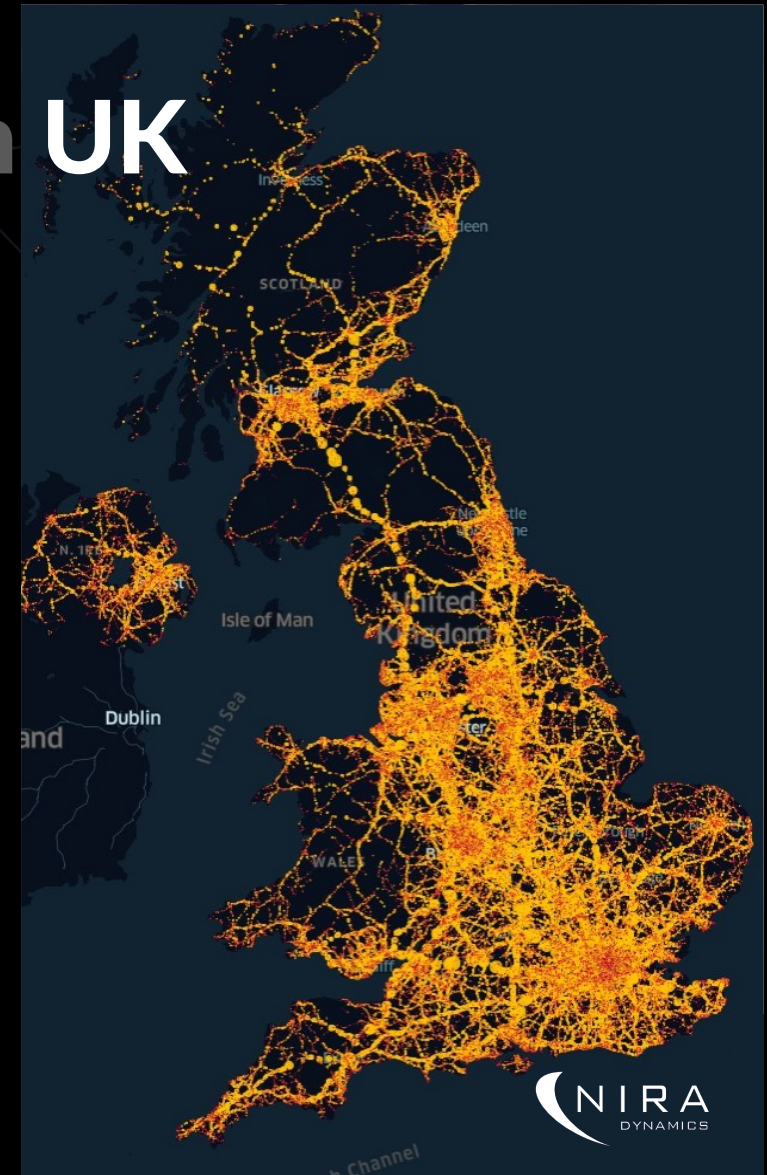


Measurements for one day in UK

About 100 000 Vehicles

Measured data

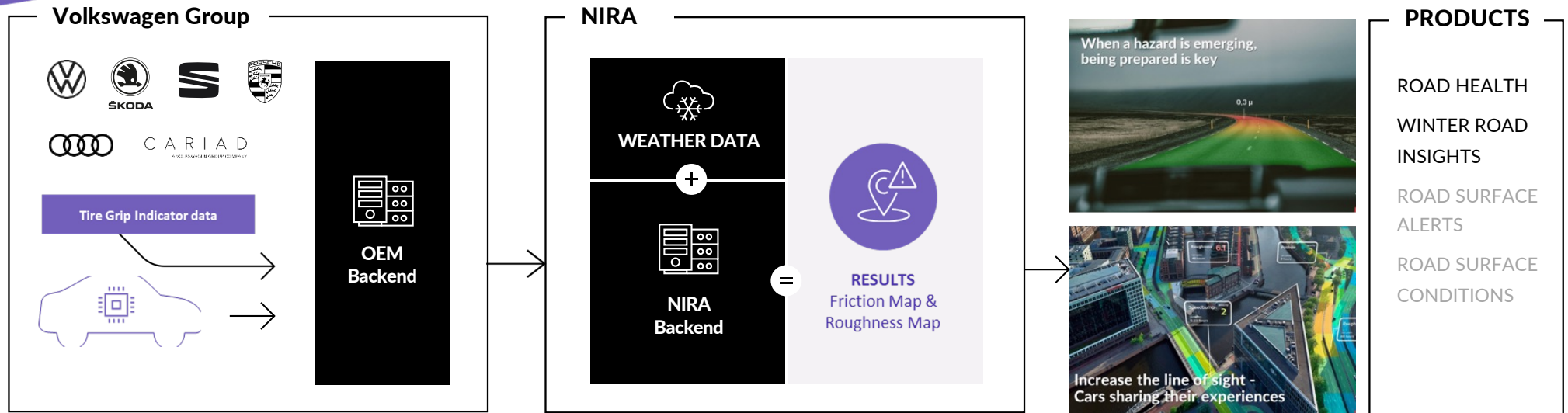
- Available Road Friction
- Ambient temperature
- Wet state
- Road Surface Temperature



Connected products

User consent before sending data

LIVE



Using the unique volume power of the Volkswagen Group with over 2.000.000 vehicles p.a.

Already available in Europe & North America



Fully anonymized aggregated data



Road monitoring

All year around

Road Health



Current
Road state



Road state
trend



Alerts



Potholes

Winter Road Insights



Follow-up
(Monitoring work)



KPI &
historical
evaluation



Live Network
status



Slippery
Alert

The NIRA data types

A MULTITUDE OF ROAD CHARACTERISTICS POWERING A WIDE RANGE OF APPLICATIONS



Slippery road



Slippery when wet



Road state



Potholes

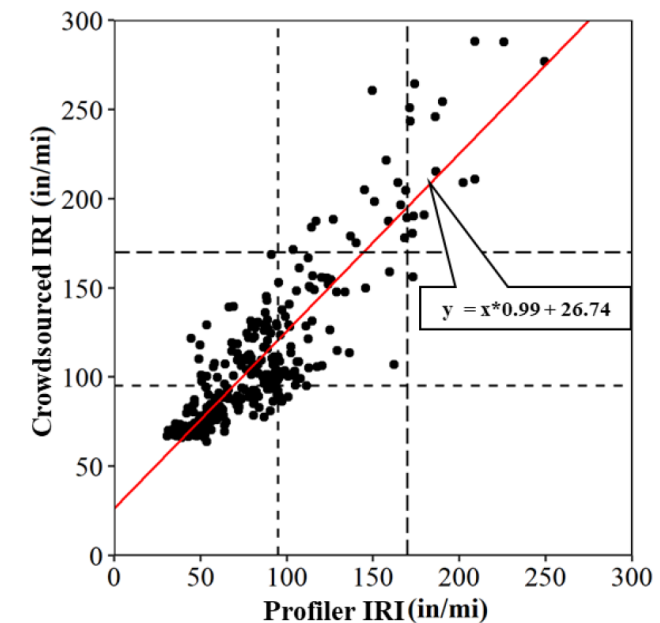
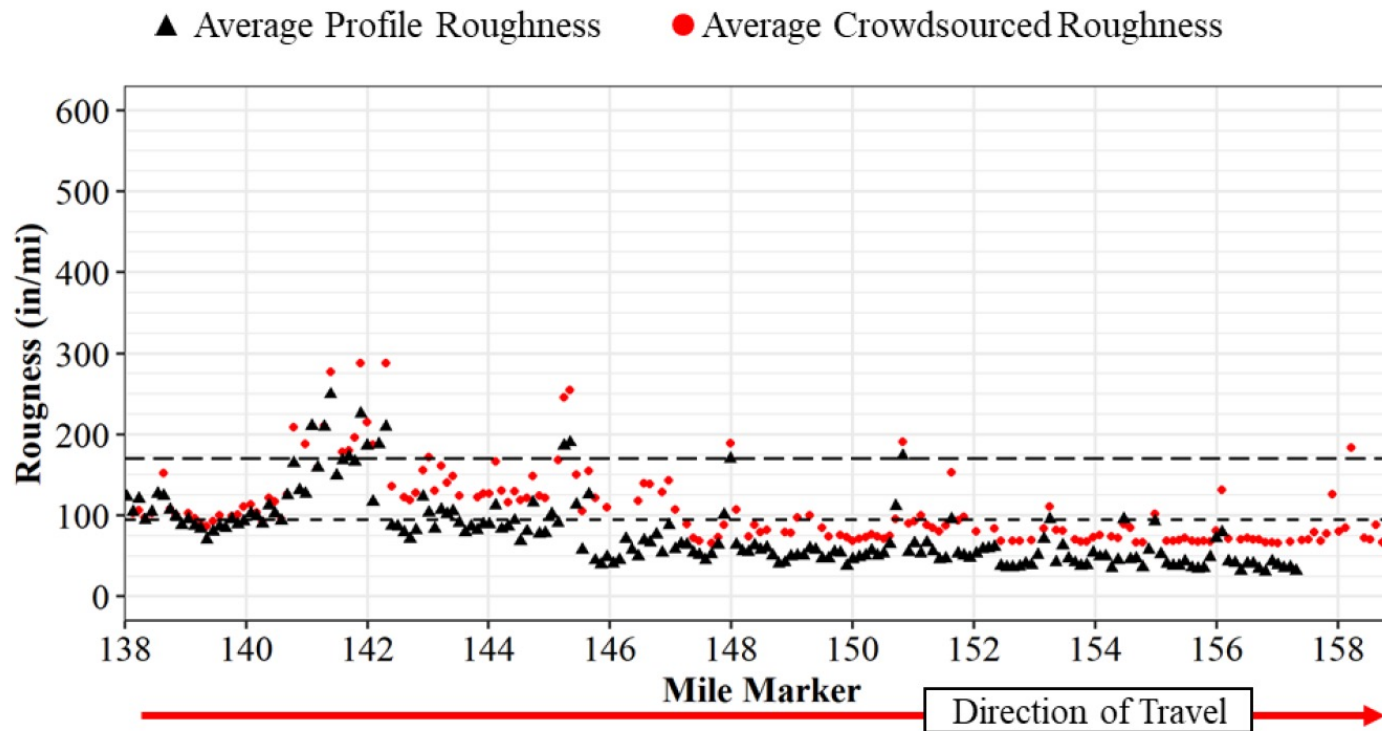


Wetness



Surface temperature

IRI Accuracy - Crowd sourcing



White paper written at [Purdue University](#), Indiana
Justin Anthony Mahlberg, Howell Li, Darcy M. Bullock, Dustin K. Leslie

Live Road Maintenance services across Europe

In Europe, NIRA customers have been consuming data for years:

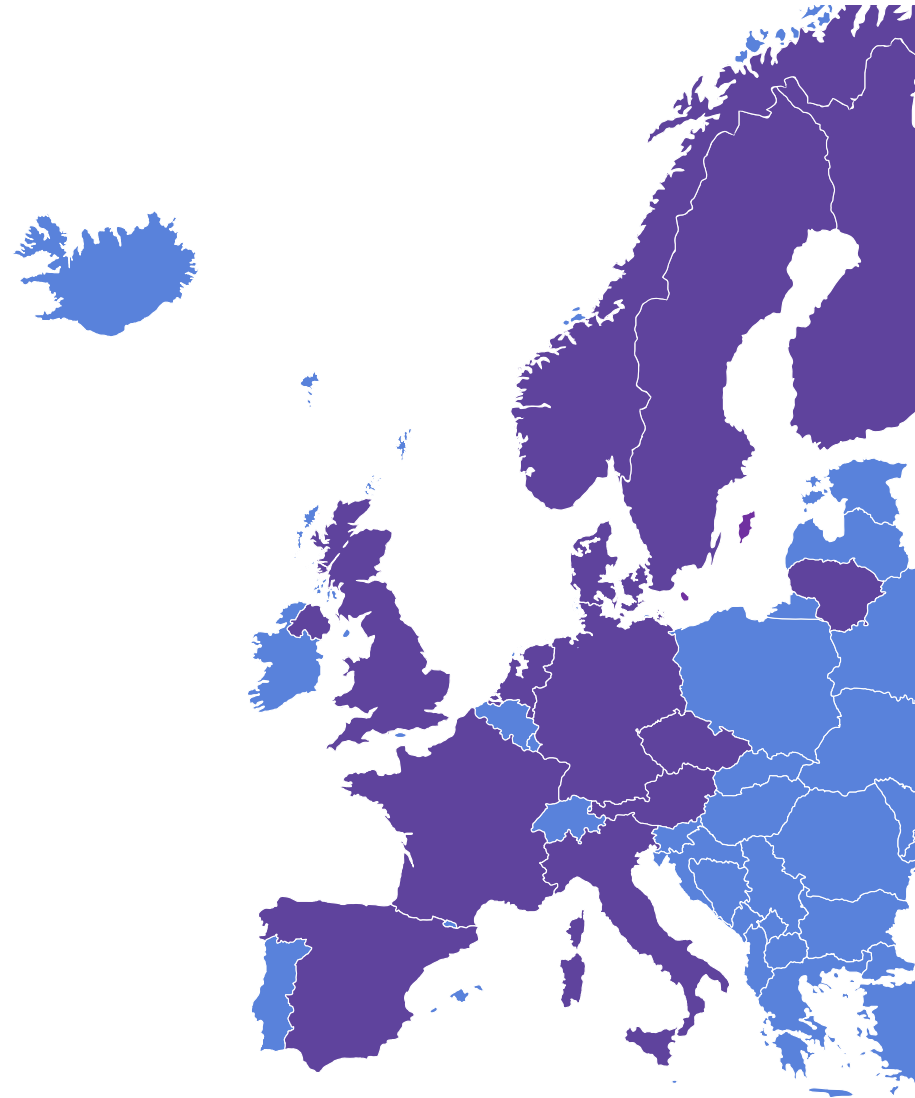
SVEVIA



PEAB



Autoliv



NIRA
DYNAMICS