



# Fordonsdata och Digital Vinter, hur gick det sen?

# NIRA Dynamics quick facts

software solutions for next level of mobility



01

Founded in 2001 as a spin-off from Linköping University



02

HQ in Sweden, global presence  
130 employees, offices in US, Brazil, Germany, China, Japan



03

Software and virtual sensor pioneers  
On the market since 2006, in all VW Group models



04

Ownership: CARIAD (100%)



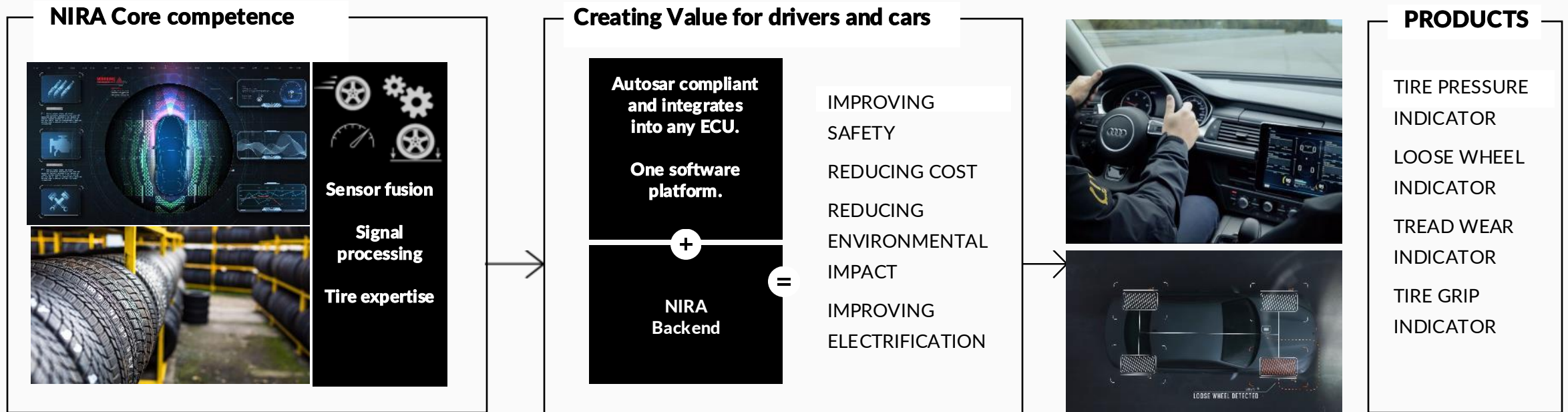
05

Annual turnover ~30M €

**120 million+**  
vehicles equipped with  
onboard analytics.

**2 million+**  
connected vehicles  
gathering road surface  
data.

# Embedded in-vehicle products



By working with tire related software...

...We learned a lot about road surfaces.

## DRIVER SUPPORT

Increasing driver safety, using a combination of in-vehicle and connected vehicle functions

## VEHICLE ASSISTANCE

Improved, dynamic vehicle assistance functions, using sensor fusion and connected vehicle data.

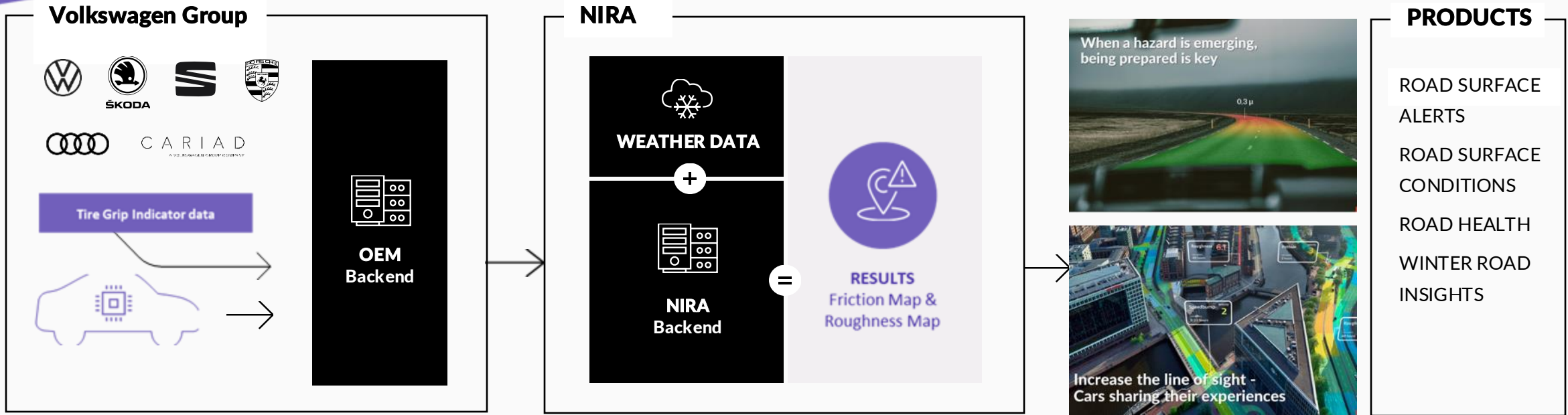
## TIRE PRESSURE INDICATOR

TPI by NIRA is the world-leading indirect TPMS solution with over 110 million installations.



# Connected products

LIVE



Now at 60-65k connected cars in Sweden

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

Already available in Europe & North America



GDPR-compliant anonymized aggregated data



Roads are for  
its road users.

Cars are  
road users.

We give cars a say in how  
they experience roads.



ŠKODA

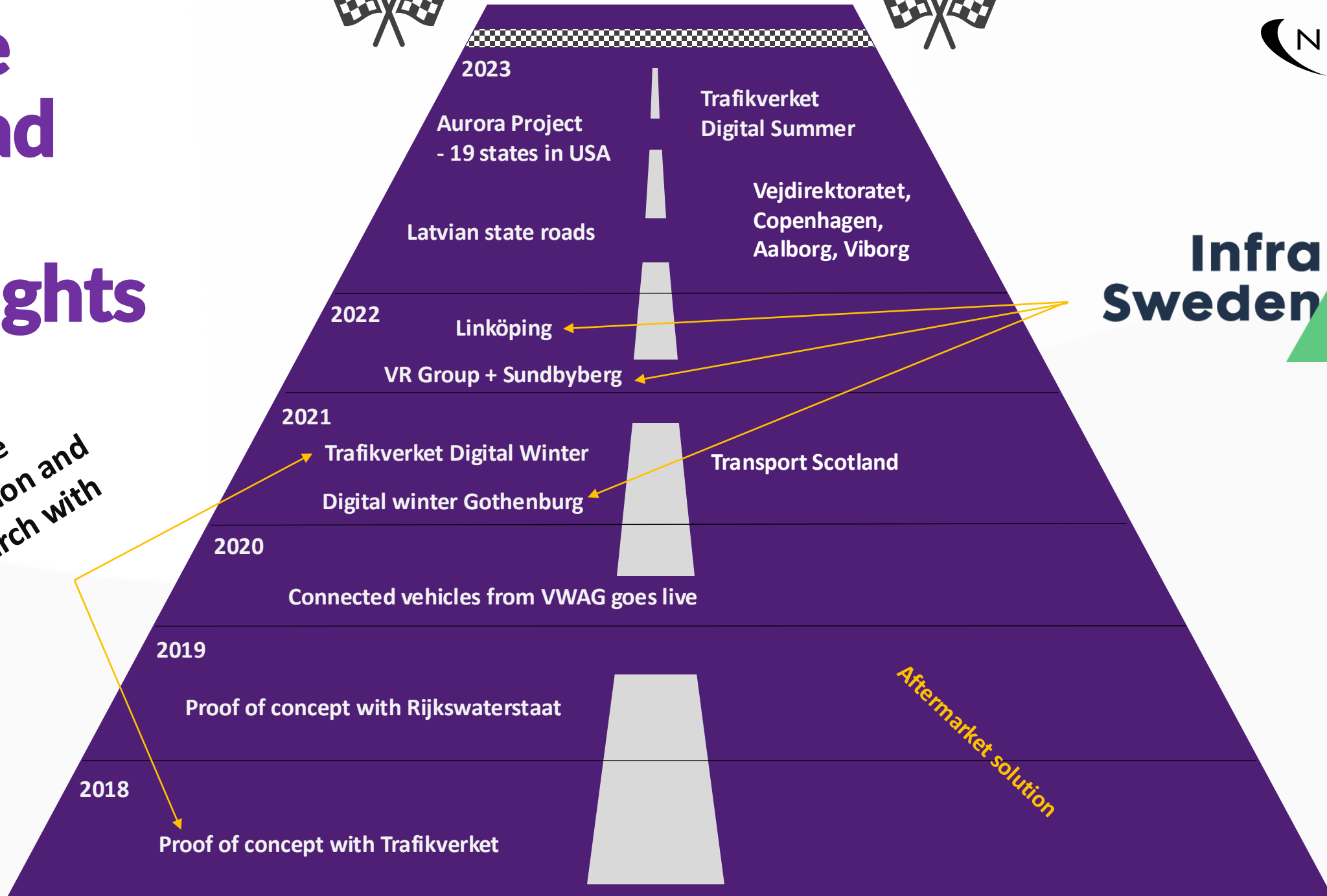


SEAT



PORSCHE

# The Road To Insights



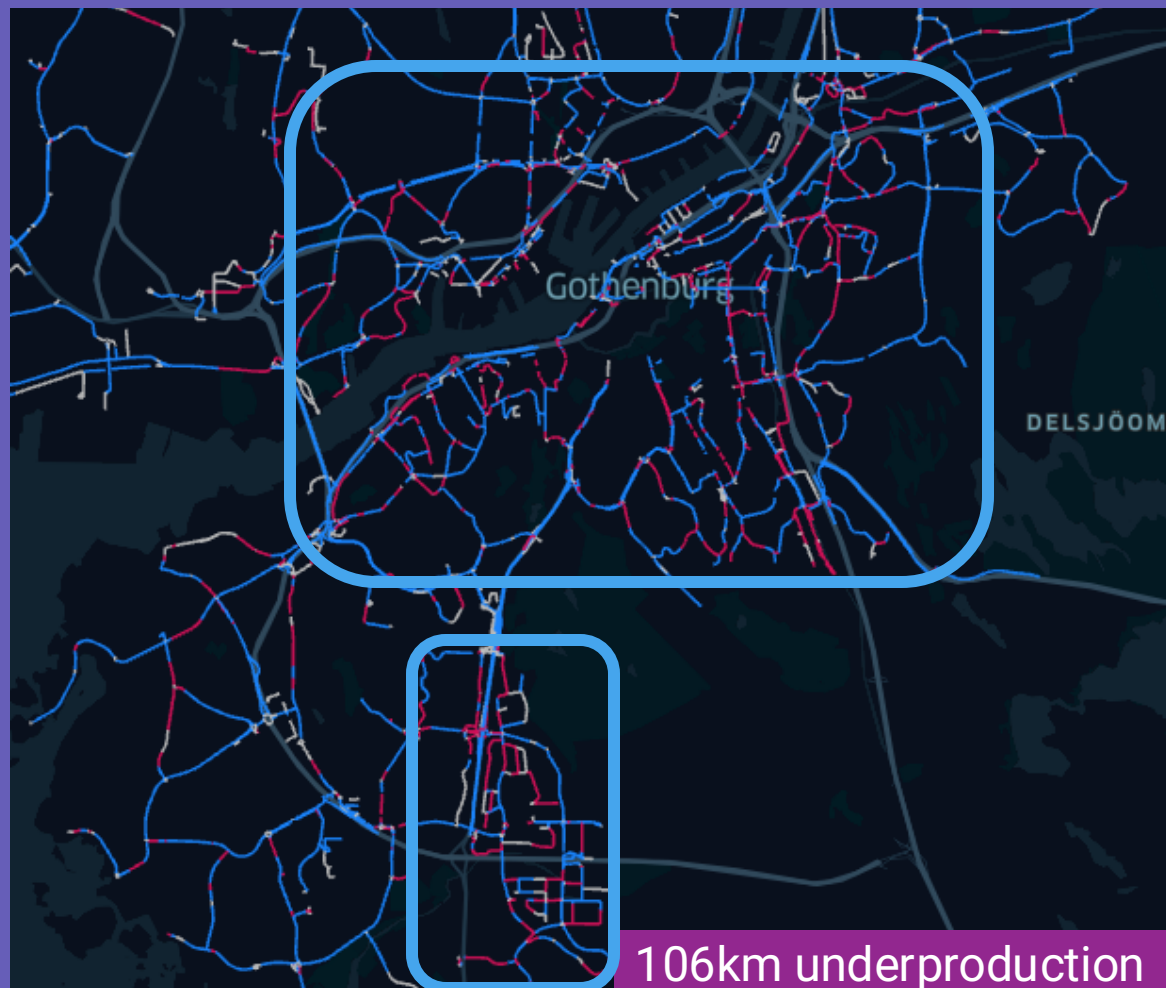
Extensive validation and research with LTU

Aftermarket solution

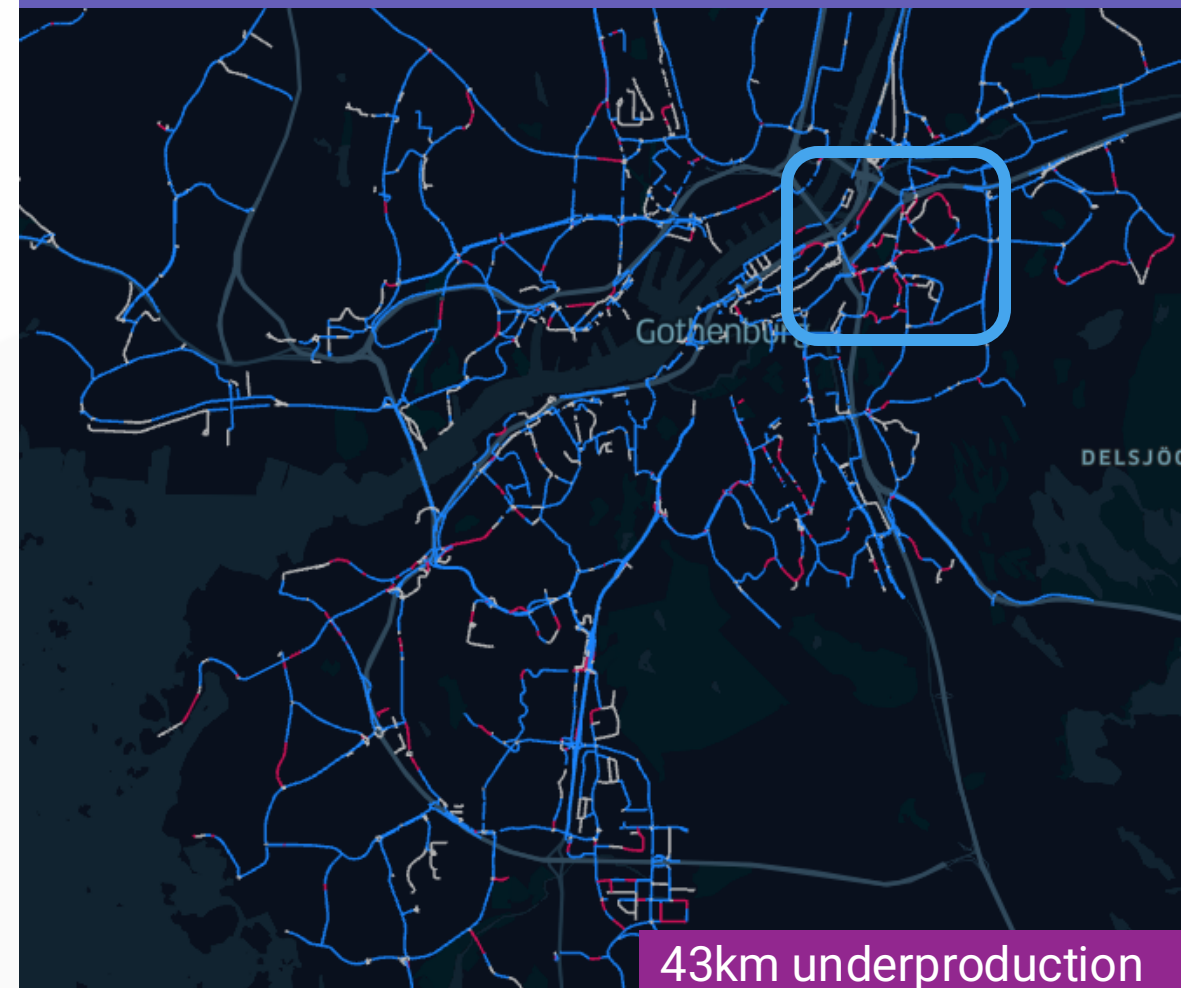
# Gothenburg WM performance

Gray = not enough data  
Blue = approved  
Red = underproduction

Underproduction 21/22



Underproduction 22/23





# Winter Road Insights

## Measuring winter maintenance.



### Strategic support

**True performance evaluation of winter maintenance and road safety.**

With a large-scale data collection, it is possible to evaluate winter maintenance on a network level to make strategic improvements



### Situational awareness

**Enables regional overview and quick action at relevant locations.**

Immediate feedback on the results of winter maintenance and weather effects.



### Slipperiness Alerts

**Quick slipperiness alerts directly to operators, independent of location.**

Every minute counts, alerts decreases the likelihood of an accident occurring.



### Mobile RWIS

**Real-time access to road weather properties.**

By fusing data from connected cars with road weather models, Mobile RWIS gives a continuous coverage not limited to the location of sensor stations



# Road Health



## Road Network Status

With daily updates you have always an up-to-date Road Network status

Compare the status now and then or status between different sub networks



## Road State Trend

Utilize the daily updates to find the trends in our Road network.

Use deterioration rate, seasonal sensitivity etc. as input to your maintenance prioritizing.

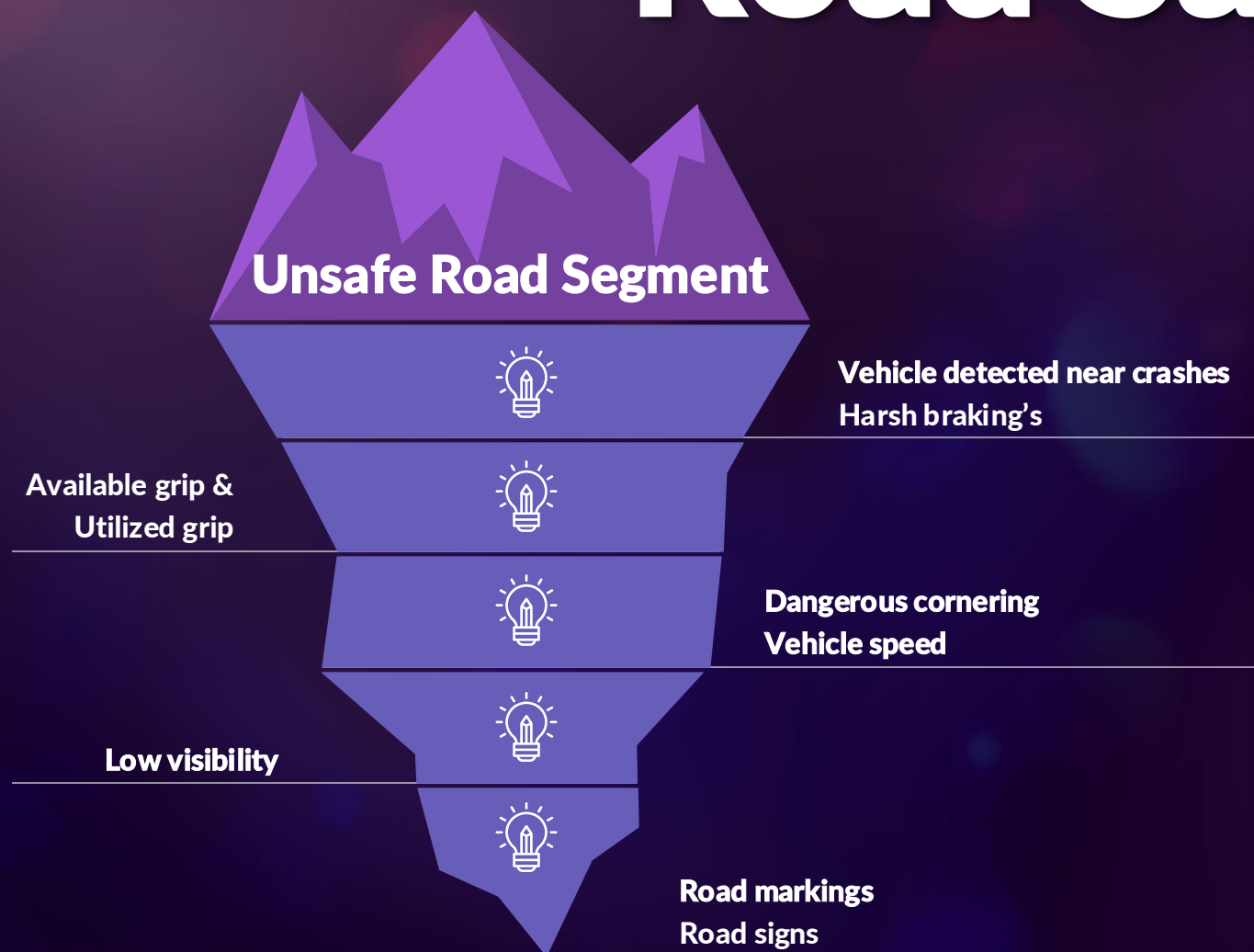


## Alerts

Potholes and roughness change alerts inform you when unexpected events occur in our road network,

Focus our inspections and actions where there are needs as must.

# Road Safety



- Road Safety Modules
- Contribution to unsafe road segment
- Risk score for every road segment

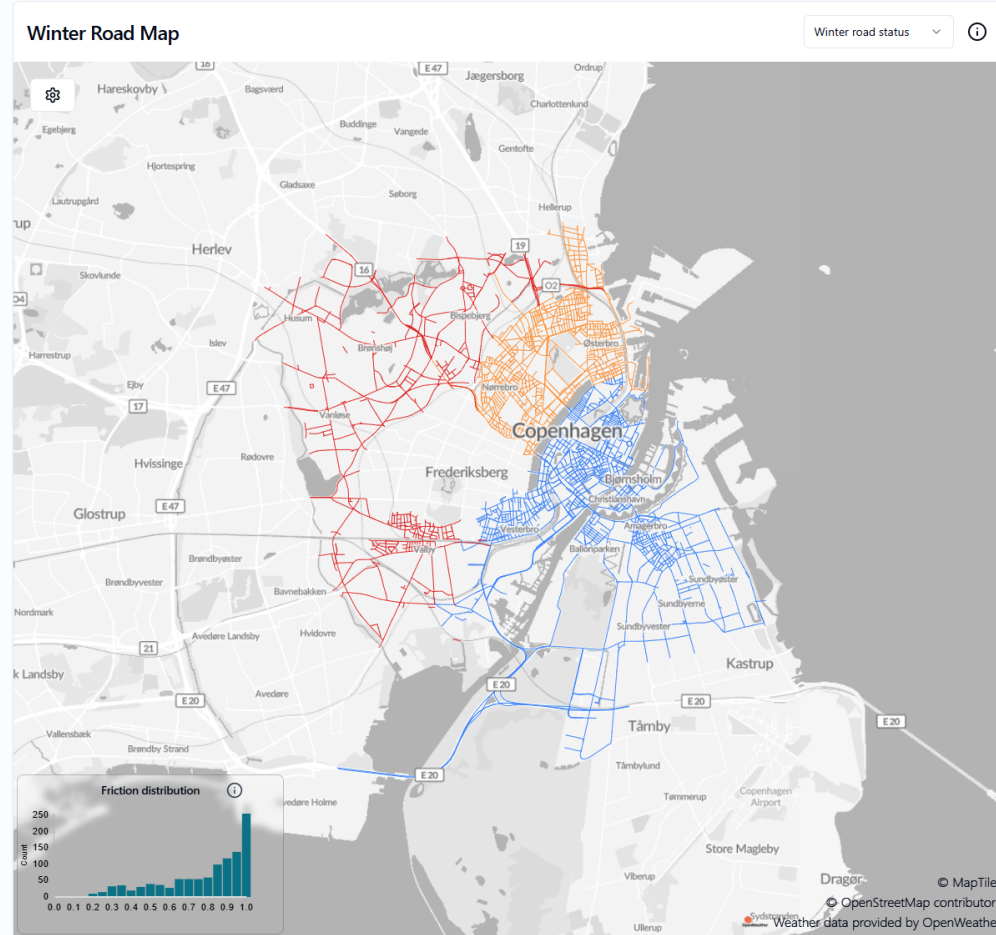
# Release of RoadInsights

## October 1 2024



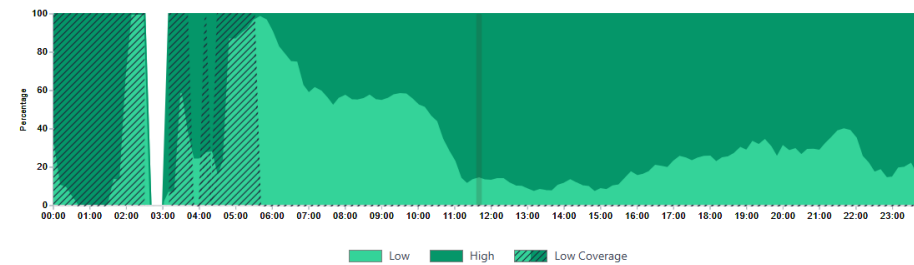
Network

January 4th, 2024 23:50

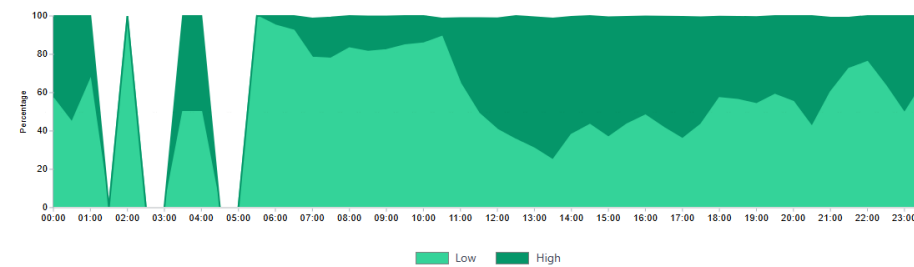


### Charts

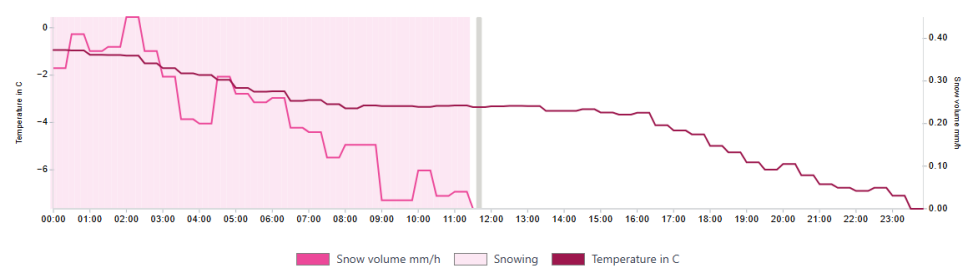
Chart settings ⌵



### Reference network



### Weather



## Winter Road Insights



Sweden  
Denmark  
Norway  
Latvia  
Italy  
Germany  
Switzerland



Minnesota  
Pennsylvania  
Colorado

## Road Health



Sweden  
Latvia  
Italy  
Germany  
Spain  
Scotland  
Greece  
Switzerland



Arizona  
Minnesota  
Indiana  
Texas  
Georgia

## Road Safety



Sweden  
Germany  
Italy



Indiana  
Texas



**Tack!**