

Drawing the Line:

How ODD Charts a Safe Course to Autonomy

Demonstrating ODD management on NDS.Live

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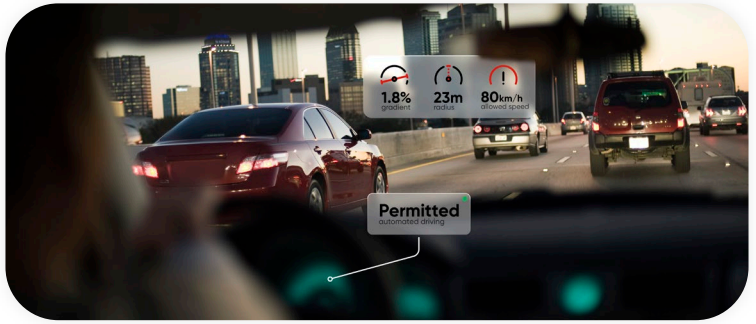
Knowing what’s happening is only half the story

FROM AWARENESS TO DECISION

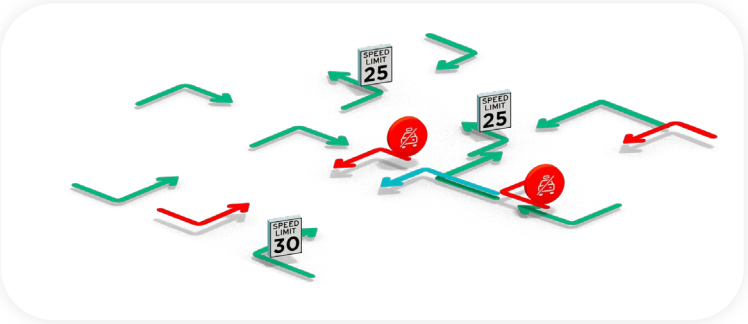
Live layers tell the vehicle what is changing on the road. The other half is a decision: can this car still drive itself here?



hands off the wheel



eyes off the road



no driver attention needed

TODAY

L2 · Hands-free

Driver assistance on defined roads

NEXT

L3 · Eyes-off

The system drives in defined conditions

WHERE WE’RE HEADING

L4 / L5 · Mind-off

More of the journey, more roads, more conditions

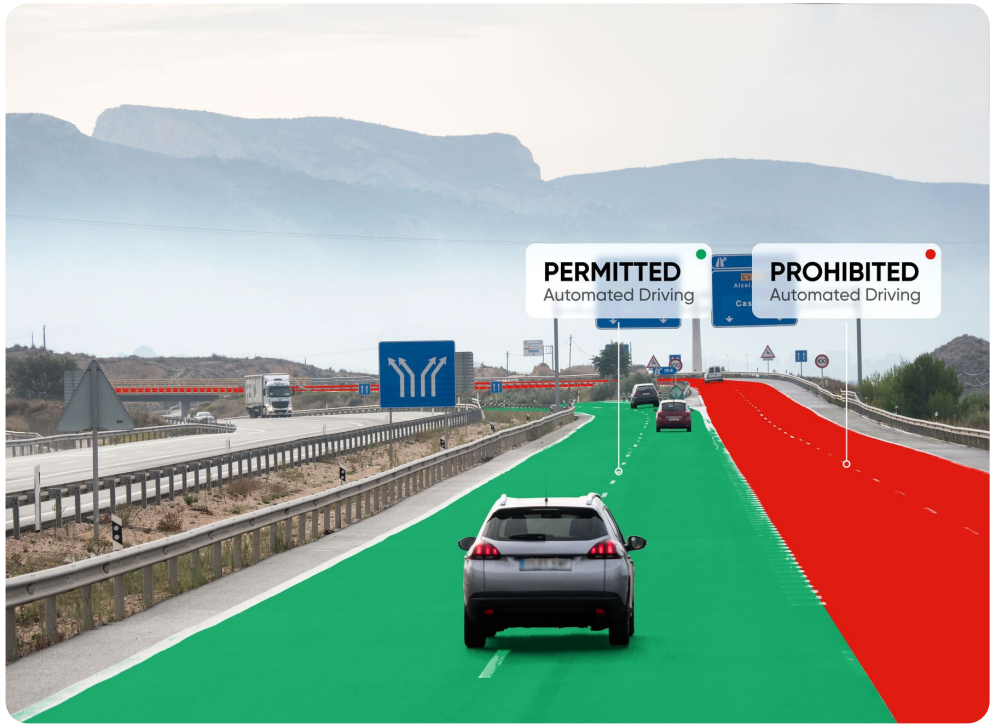
Fewer than one in four U.S. consumers are comfortable riding in a fully self-driving vehicle, and confidence has barely moved in three years.

Source: J.D. Power, 2026 U.S. Mobility Confidence Index, with the MIT Advanced Vehicle Technology Consortium (June 2026)

Clear boundaries build trust

DRAWING THE LINE

The ODD sets out where an automated function can operate, and under what conditions.



1

Confidence for drivers

They know where they can drive hands-free, and when they'll need to take over.

2

Trust in the OEM's brand

Each OEM decides where its own functions run and can set this per function and per country.

3

A safe path for the industry

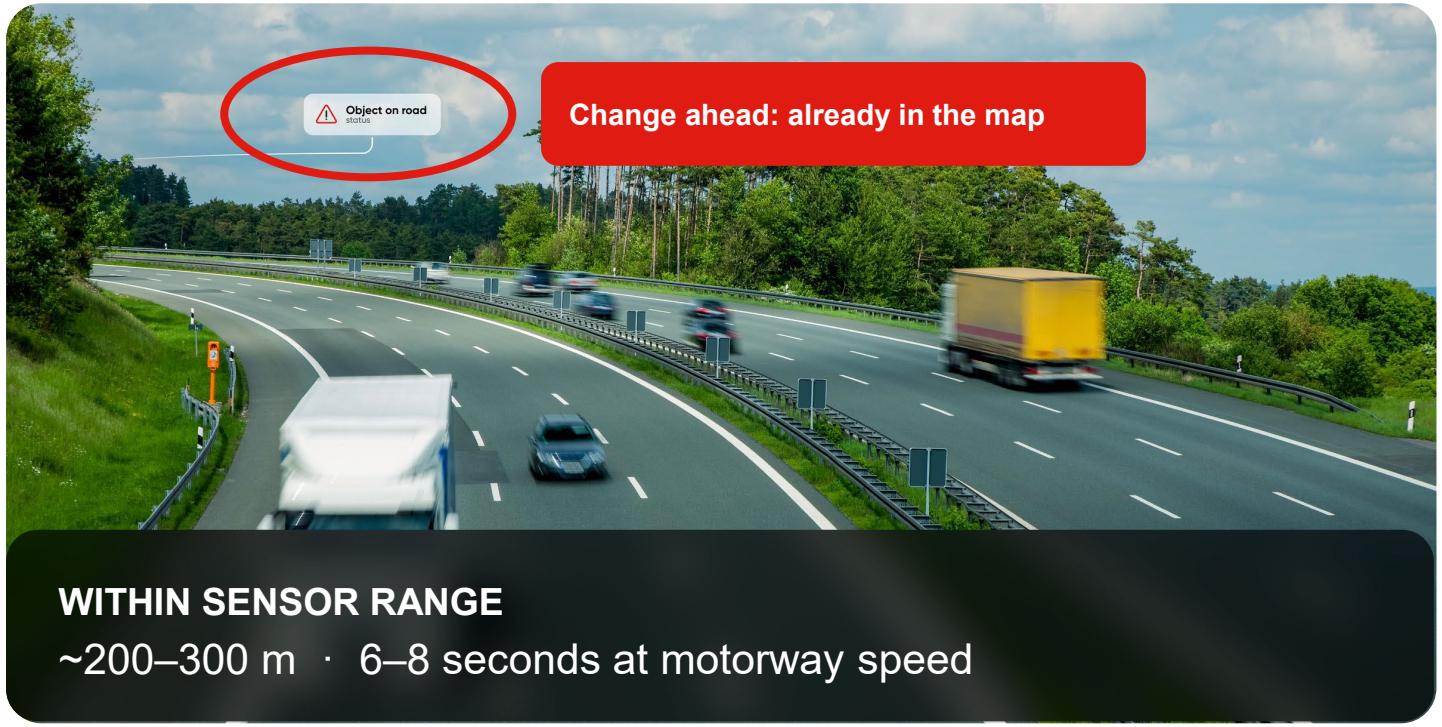
Clear limits make it easier to move from from L2 to L3 without losing public trust

An ODD = where + conditions + what the system can handle

The line doesn’t stay put

THE CHALLENGE

Sensors see what’s in front of the car. A current map sees what’s coming.



HOW FAR AHEAD CAN THE CAR SEE?

Sensors ~200–300 m · 6–8 s at 130 km/h

A current map kilometres · minutes ahead

Approval is tied to the road

Regulators approve it only on certain roads, e.g controlled access roads with no pedestrians or cyclists.

A safe hand-back needs time

Rules give the driver at least 10 s to take over. At 130 km/h that’s ~360 m: beyond what the sensors can see.

And the road keeps changing

Lanes close, roadworks start overnight, the separation ends early. The approved road isn’t the same road next week.

How does the vehicle know when and where to hand back, before it gets there?

Define once, deliver to every vehicle on NDS.Live

KEEPING THE LINE CURRENT

Define the rules once, deliver the decision to millions of vehicles over the NDS.Live interface they already use

ODD MANAGEMENT · CENTRAL

1

Define

OEM ODD rules, set in Roadcheck Live web app or via APIs on TomTom map data. Each OEM's ODD stays its own.

2

Evaluate

Rules run on the current map. Cartographers can also block a section, e.g. for roadworks.

ALLOWED PROHIBITED

DELIVERY

3

Deliver

Over NDS.Live's Rules module: standard tiles alongside the map, versioned and incremental on the existing interface.

ODD ACCESS · IN-VEHICLE

4

Consume

TomTom ADAS SDK or the OEM's own NDS.Live client provides the ODD via the electronic horizon.

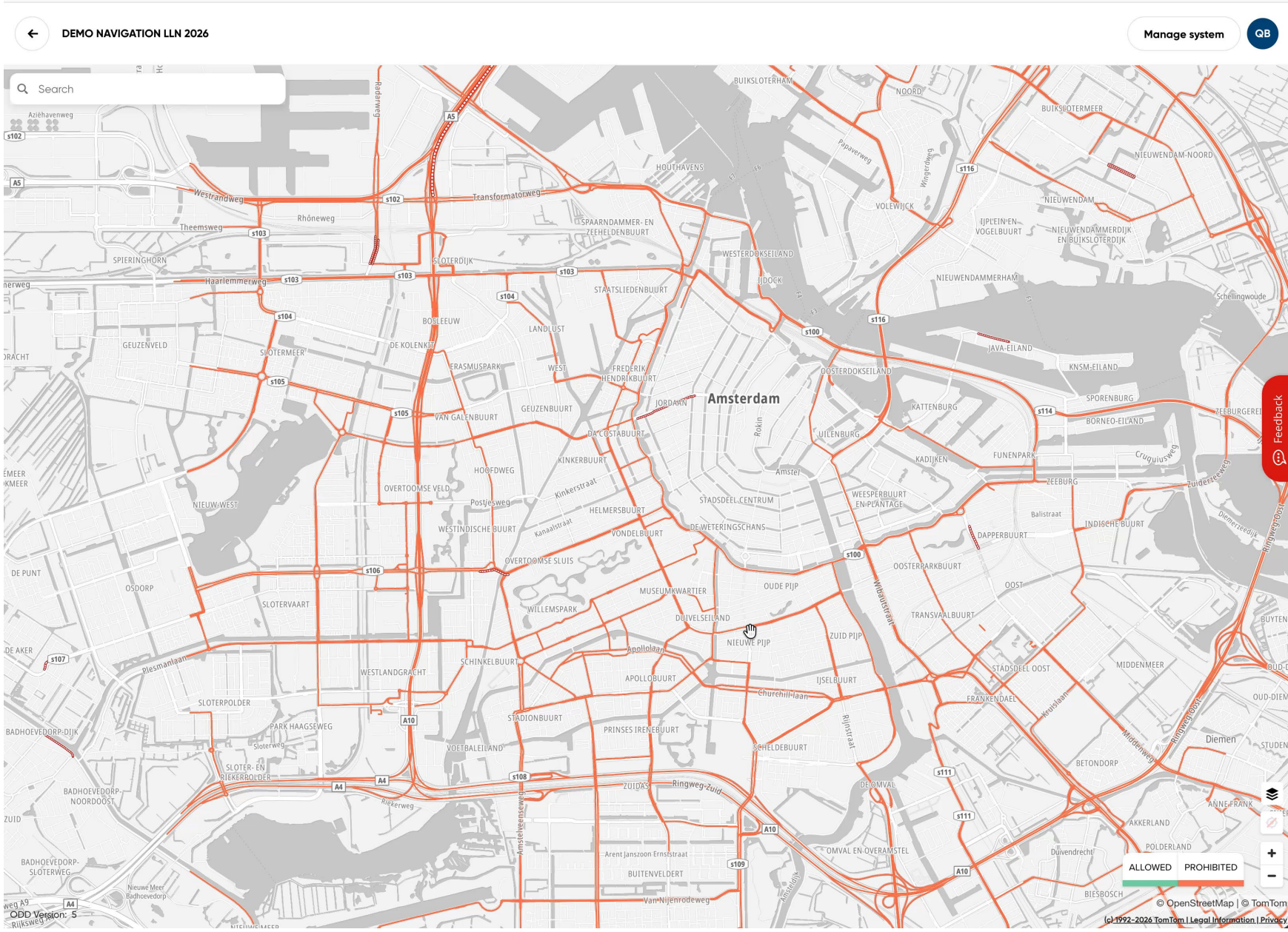
Own sensors confirm

PROHIBITED The function must not activate here.

ALLOWED ≠ GO The road isn't excluded. The vehicle still validates with its own sensors and safety logic.

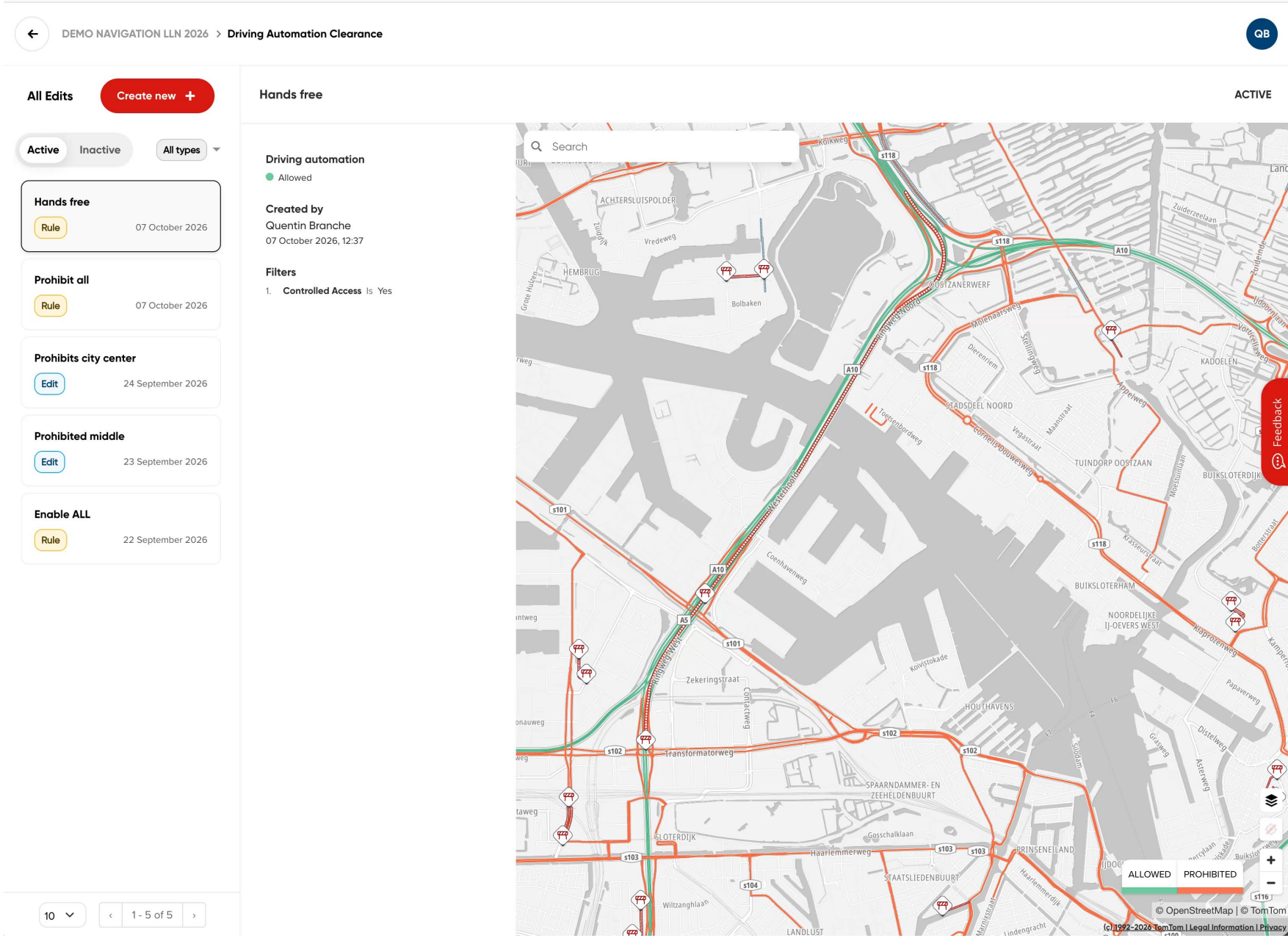
Rule definition

Enabling hands-free on motorway sections, by rule.



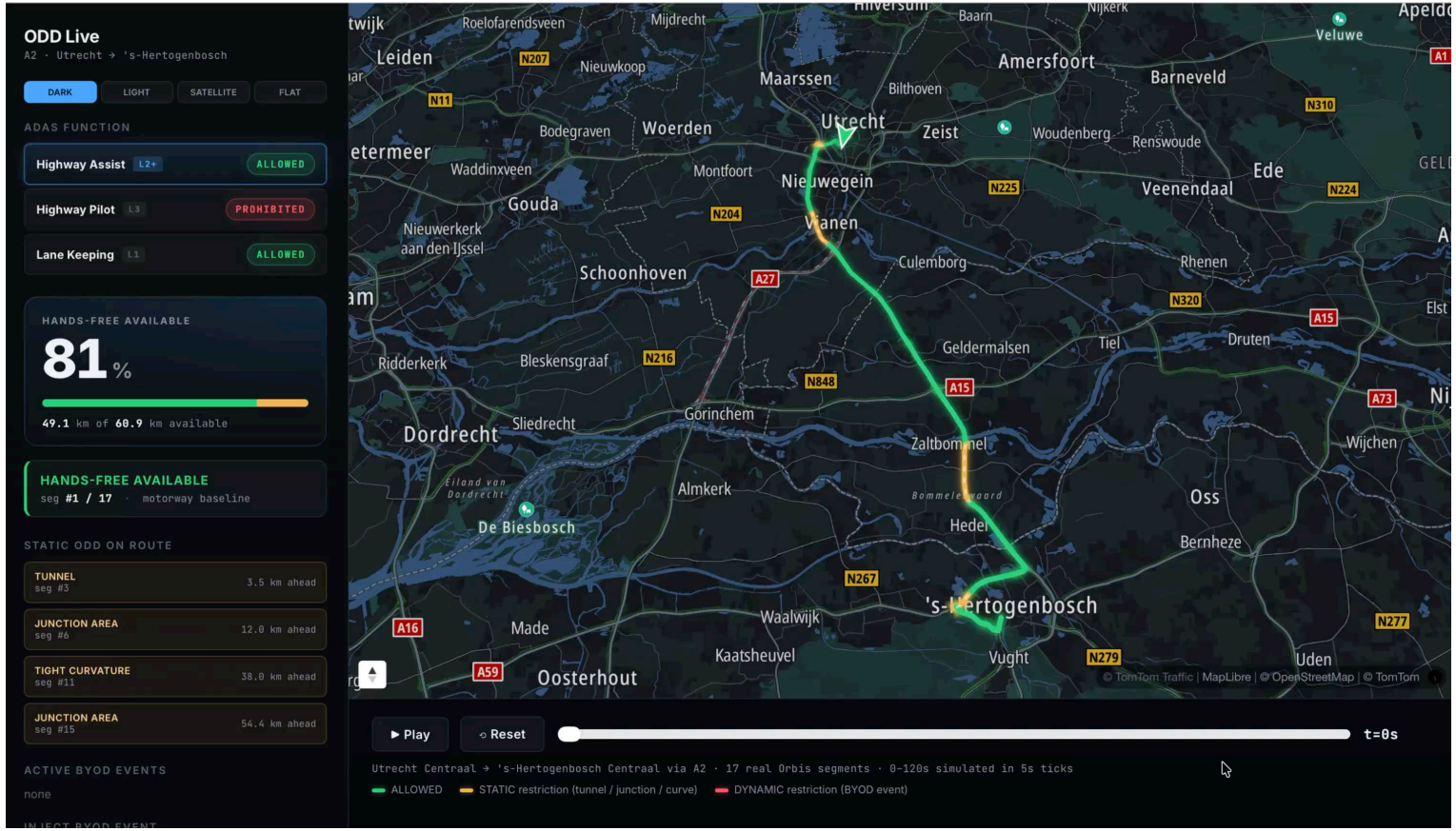
Manual edit

Prohibiting a section manually, because of roadworks.



A live ODD on a real route

DEMO · PROOF OF CONCEPT



Where we go from here

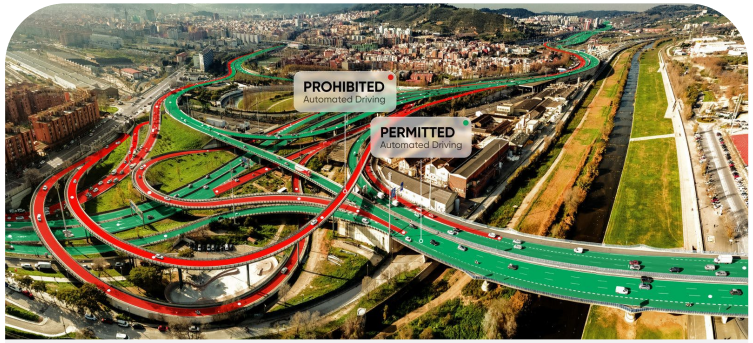
FOR THE NDS COMMUNITY

Hands-free can only grow as fast as its ODD can be managed safely. Here’s how we move the line together.



Shape the standard

OEMs and Map providers shape the standard together.



See it in action

Define a hands-free ODD in RoadCheck Live on TomTom map data, and deliver it to vehicles over NDS.Live.



Plan your next step

Taking hands-free to new roads, or moving to eyes-off? Let’s talk about how to keep your ODD current.

Request a RoadCheck Live demo →

Talk to us at the break →