NDS Public Conference 2026

Gothenburg · 2026-10-15

Navigating the Future:

Trends Shaping the NDS Roadmap

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Navigation Data Standard

PDG workstreams 2026

In the order the PDG took them up

Adoption & positioning



01
Opening NDS.Live



02
Future NDS Interface Strategy



03
NDS SDV Positioning

Regulation & automation



04
Regulatory & Compliance Landscape



05
Highly Automated Driving

Live data & services



06
Connected Navigation Services



07
Emergency & Safety Alerts



08
Vehicle-Sourced Map Intelligence

Starting point: the priorities from last year's survey

Opening NDS.Live

Workstream 1 · would opening NDS.Live foster greater adoption?

Barriers

Technology is ready – overhead slows adoption

- entry effort for new implementers
- overhead in multi-party projects
- friction with open SDV and tool ecosystems

Adopters

- **OEM & supplier teams**
- **ADAS / AD stacks**
- **Map & data companies**
- **Tooling & simulation**
- **SDV initiatives**
- **Research & public sector**

Guardrails

- **One compatibility contract**
- **Clear conformance signal**
- **Protected NDS brand**

15:10

NDS.Live Opening and Membership Model Update

Martin Pfeifle, NDS Chairman

The goal is adoption – opening NDS.Live is a means, not the end

Future NDS Interface Strategy

Workstream 2 · NDS vs. abstraction layer positioning

Application APIs

routing · search · rendering · ADAS functions

Feature-centric map access

a road with its geometry, attributes and links – in one call

NDS.Live data layers & services

Smart Layers · tiles · paths · objects

Foundations

zserio · tiling scheme · coordinate encoding

Members' products

New: reference implementation

Standard

Common basis

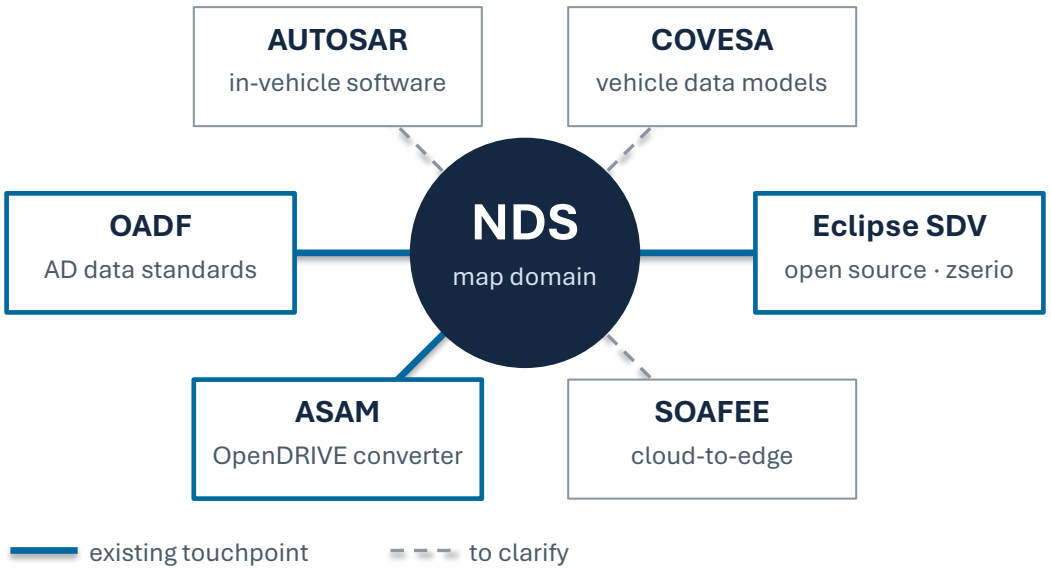
What users asked for

- Lane- & object-level access
- Onboarding & PoC
- Validation & debugging
- Analytics & AI training
- Simulation input

Sweet spot: feature-centric map access – reference implementation first

NDS SDV Positioning

Workstream 3 · the map domain in the software-defined vehicle



Interfaces, not scope
NDS covers the map domain, not the SDV stack

One map domain, many users
navigation · ISA · ADAS · EV · automated driving

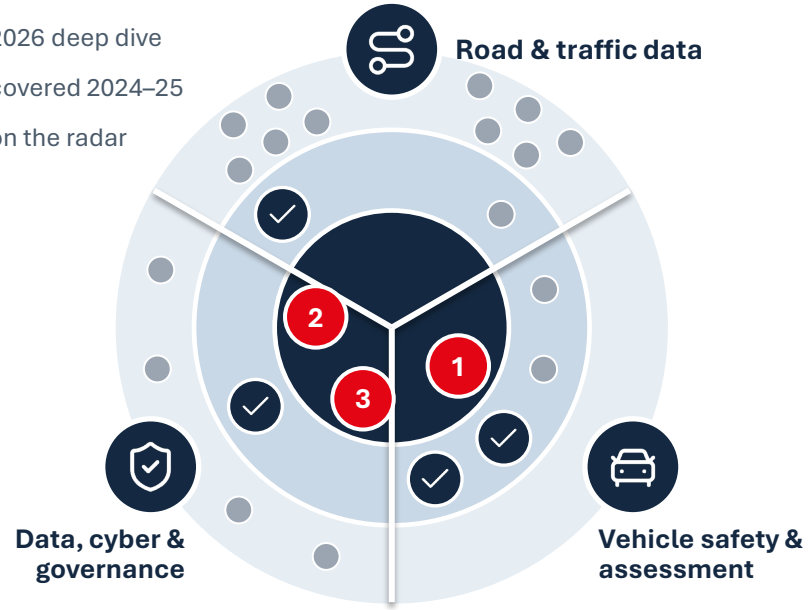
Next: positioning paper
clearer NDS.Live messaging, validated with OEM input

NDS speaks for the map domain – and connects to the SDV stack

Regulatory & Compliance Landscape

Workstream 4 · a living inventory, reviewed monthly

- 2026 deep dive
- covered 2024–25
- on the radar



Covered in 2024 and 2025 – reported at past conferences

2024 Safety-related traffic information · data security (UN R155 / R156)

2025 Data privacy · Euro NCAP 2026 protocols · Euro NCAP Assisted Driving

1 ADS type approval
ODD and road-context building blocks exist – gaps likely in evidence and quality metadata

2 Data Act
indirect relevance via OEM and service-provider roles – role matrix and guidance

3 Cyber Resilience Act
most actionable for NDS tooling – vulnerability handling, SBOMs

24 topics on the radar – covered step by step since 2024

Highly Automated Driving

Workstream 5 · L4 readiness baseline for NDS.Live

Robotaxi | Shuttle | Hub-to-hub truck | Motorway pilot | Valet parking



28 supported

3 implementable today

4 partially supported

3 outside the scope

Capability assessment of the specification – not a readiness score for any product

31 of 38

L4 map needs covered by existing NDS.Live capabilities

Open questions

- **ODD taxonomy (ISO 34503)**
- **Quality & integrity metadata**
- **Temporary-change lifecycle**
- **Versioning & provenance**

31 of 38 L4 map needs covered – open questions: semantics and lifecycle

Connected Navigation Services

Workstream 6 · coverage check against the current specification

Real-time traffic	Routing & ETA	Online search	Dynamic speed limits	Hazard warnings
Road weather	EV charger availability	Speed cameras	Toll costs	Low-emission zones
Satellite imagery	Off-street parking	On-street parking	Traffic light info	EV charging prices
Fuel prices	General weather	Public transport		

11 supported · **3** partial · **3** not covered · **1** out of scope

Draft PDG position

- **Road-bound data**
  Smart Layers remain the model
- **POI-bound data**
  prices & occupancy via query services
- **Reuse standards**
  map to TPEG2, DATEX II, OCPI – don't reinvent
- **Document what works**
  many services are already covered

Most connected services are covered – the main gap is price information

Emergency & Safety Alerts

Workstream 7 · from road hazards to public warnings

Traffic hazards

safety-related traffic info · Euro NCAP local hazards

Emergency vehicles

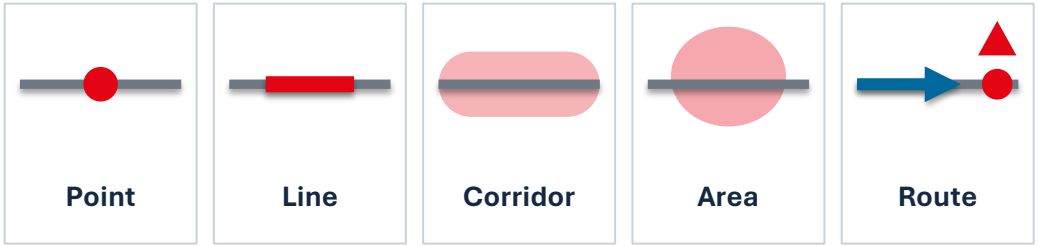
approaching · stationary at an incident scene

Public warnings

flood · fire · storm · evacuation – via CAP, TPEG2-EAW

from road-bound events to area-wide warnings

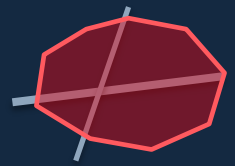
Geographic relevance decides whether a driver is warned



NEW **NDS.Live Traffic module 2026.06**

Hazard areas as polygons

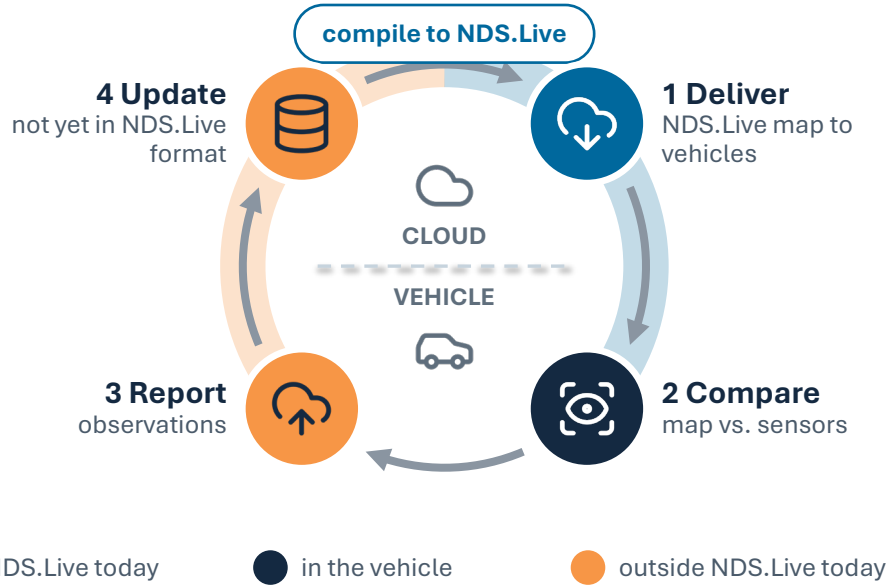
wildfire · flooding
fog · black ice …



Right warning, right place – new: hazard areas as polygons

Vehicle-Sourced Map Intelligence

Workstream 8 · closing the live-map loop



Already in NDS.Live

source: fleet data | confidence | age

Where could NDS.Live connect?

A **Keep out of scope**
delivery only – document the boundary

B **Map referencing**
observations reference NDS.Live features

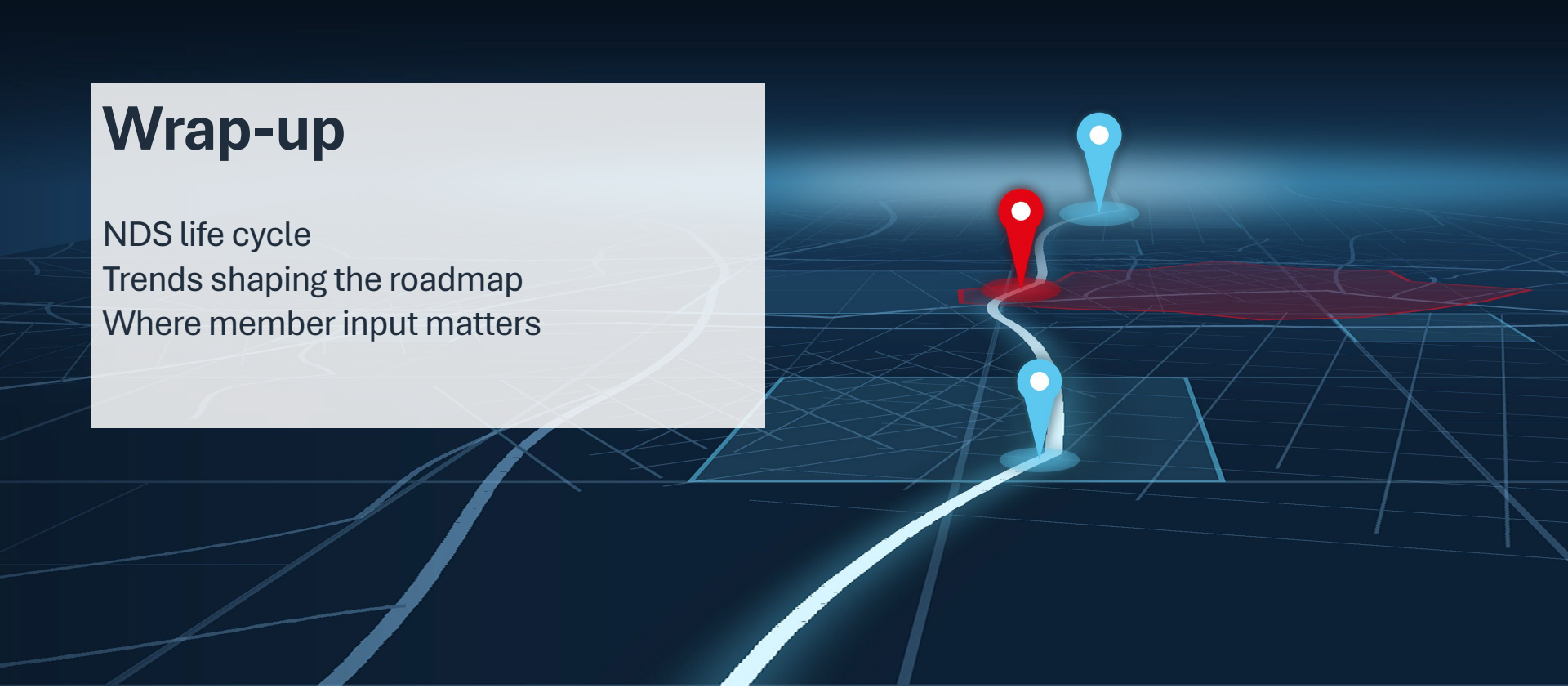
C **Cloud-to-cloud ingestion**
aggregated observations, NDS.Live types

D **Vehicle-to-cloud interface**
NDS.Live topics for observations

NDS.Live covers delivery – the return path is open for discussion

Wrap-up

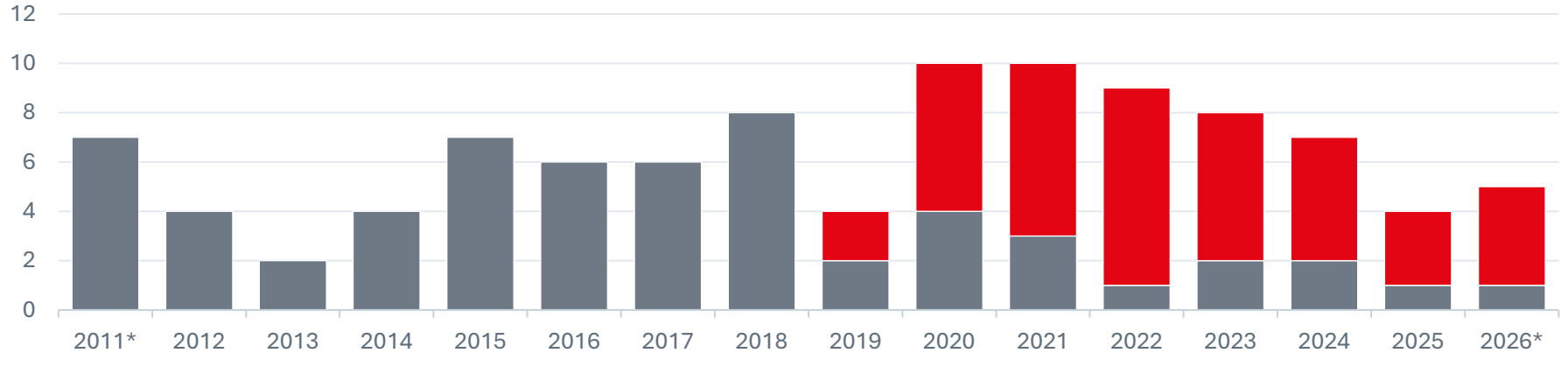
NDS life cycle
Trends shaping the roadmap
Where member input matters



Navigation Data Standard

NDS.Live: from building to fine-tuning

Wrap-up · specification releases per year, NDS.Classic and NDS.Live



** 2011 from July · 2026 until September*

NDS.Classic · new versions → extend & refine

NDS.Live → build → extend & refine

Extend & refine: NDS.Classic since 2019, NDS.Live since 2023

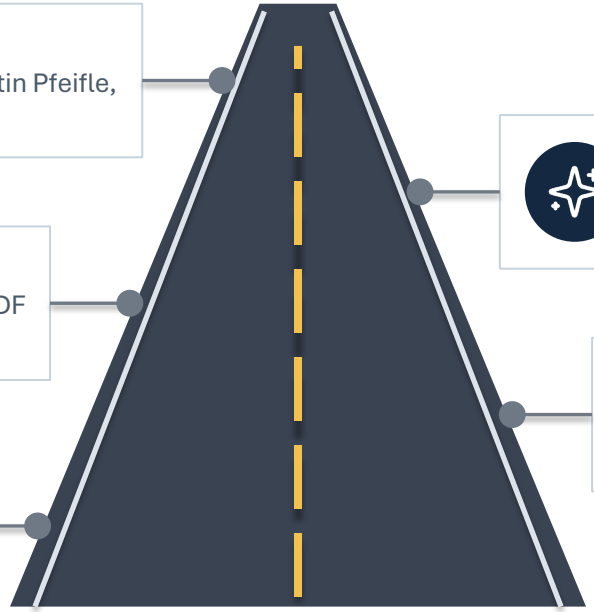
Trends shaping the NDS roadmap

Wrap-up · what the 2026 workstreams point to

Openness drives adoption
lower barriers for implementers – Martin Pfeifle, 15:10

Alliances over scope
SDV organisations, ASAM and our OADF partners

The live-map loop
map delivery meets vehicle-sourced intelligence



Developer experience & AI
feature-level access, tooling, LLMs that know the spec

Regulation as a driver
ADS type approval, Data Act, CRA, Euro NCAP

Outlook: from building the standard to growing its adoption

Thank you

Questions & discussion

Where member input matters most

OEMs & ADS developers
prioritise the L4 open questions

Map & service providers
price data · feedback-loop options

All members
contribute to the SDV positioning paper

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