

# **Welcome to the 3<sup>rd</sup> NDS Public Conference!**

**8. June 2021, Online**

**Start at 08:00 (CEST)**

# 3<sup>rd</sup> NDS Public Conference

Time (CEST)		Subject	
08:00 – 08:20	1.	Welcome Notes, Introduction to 3rd NDS Conference	Martin Schleicher, NDS Chairman
08:20 – 08:45	2.	Introductions of New NDS Members: Hitachi, Momena	Keisuke Ampo, Hitachi Xiaolin Feng, Momena
08:45 – 09:15	3.	NDS Navigation and ADAS Applications by Renault	Khadim Dieng, Renault
<b>09:15 – 09:30</b>	<b>Break</b>		
09:30 – 11:00	4.	Achievements of NDS.Live Joint Development Team <ul style="list-style-type: none"><li>• ISA / ADAS use case</li><li>• SmartLayerPath services</li><li>• Service interoperability</li></ul>	F. Klebert, NDS HERE, NavInfo, TomTom, Elektrobit, Harman, JOYNEXT, NNG
<b>11:00 – 11:15</b>	<b>Break</b>		
11:15 – 11:30	5.	Sustainability with NDS	Philip Hubertus, HERE
11:30 – 12:00	6.	Use of NDS in new Mercedes S-Class	Nihat Küçük, Daimler
12:00 – 12:20	7.	NDS Roadmap	Georg Horn, NDS
12:20 – 12:30	8.	Closing Remarks	Martin Schleicher, NDS Chairman

## Why do we organize „NDS public conferences“?

- Communicate NDS strategy and benefits publicly
- More visibility and awareness for NDS
- Discussion and feedback with the industry



> 300 registrations  
for today!

**NDS is THE worldwide  
standard for map data  
in automotive eco-systems**

# NDS is THE worldwide

worldwide coverage and global adoption

# standard for map data

one specification with enough flexibility  
for a customized user experience

data model (structure & semantics),  
storage format, interfaces, protocols

# in automotive eco-systems

in-vehicle applications, companion applications, cloud applications, vehicle related services,  
supporting navigation, driver assistance and autonomous driving

# NDS Association Members

NDS specification is defined by the members of the NDS association:  
OEMs, system vendors, solution providers, and navigation data providers.

## Navigation Data Standard



Over 40 articles – over highly relevant 1,200 followers on LinkedIn

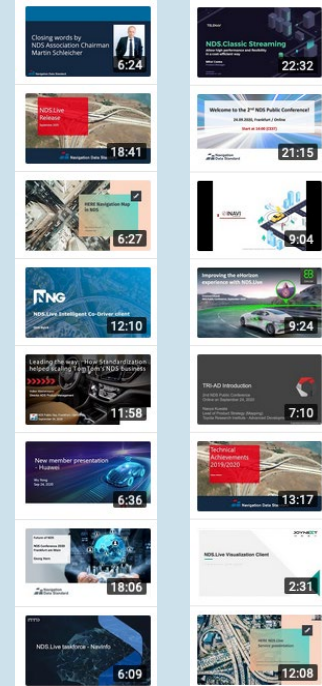
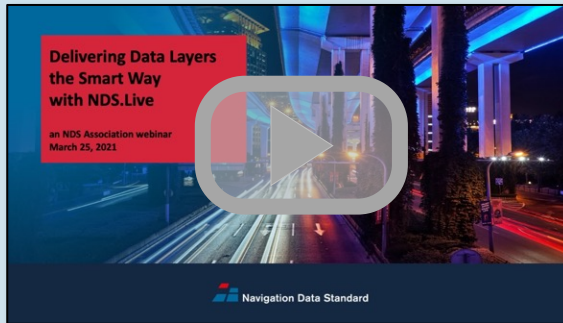
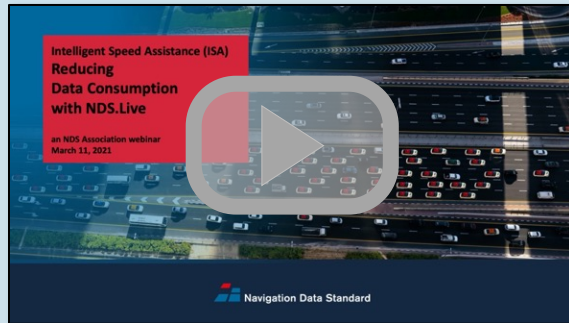
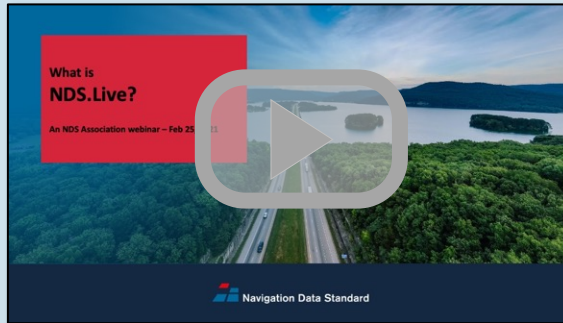
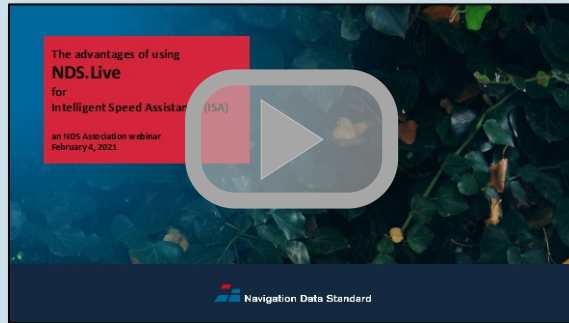


Navigation  
Data Standard



# NDS.Live Webinar Series – Recorded Videos on YouTube

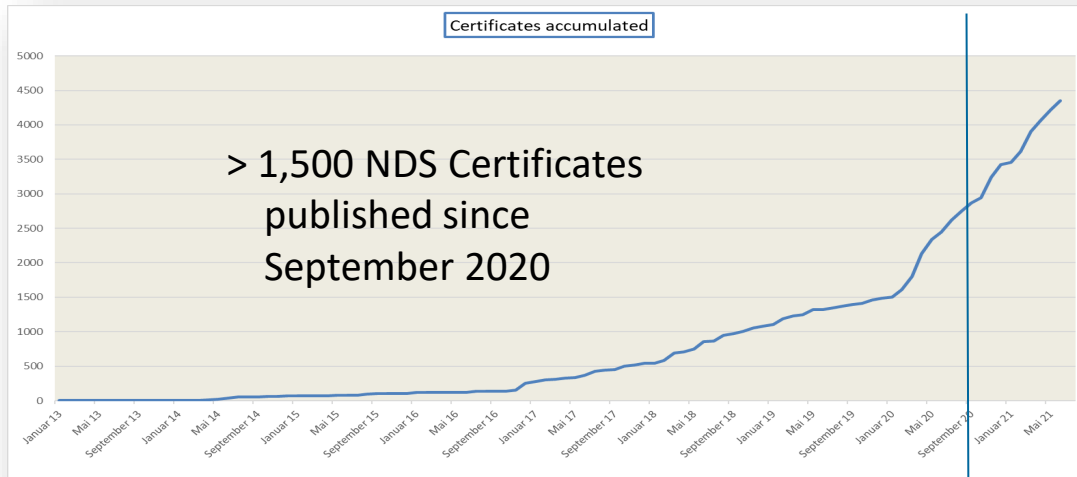
Over 2,500 views across all NDS videos



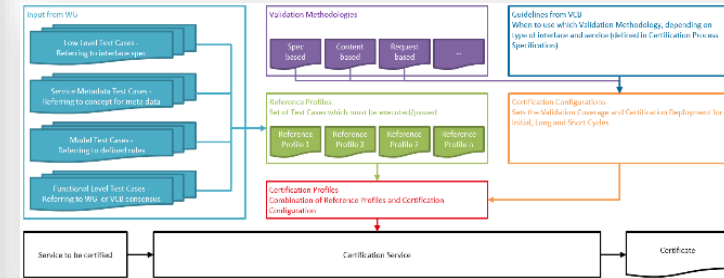


# NDS Certification

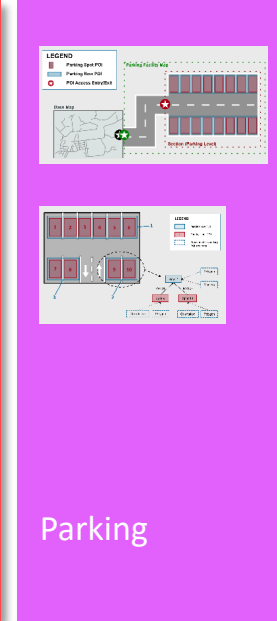
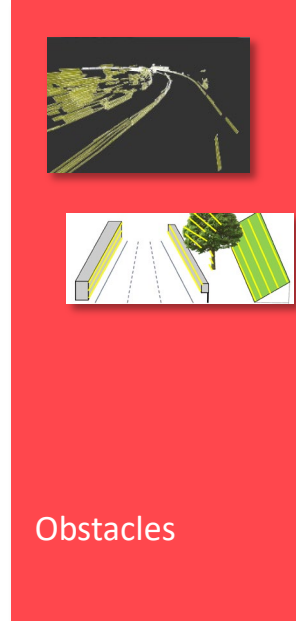
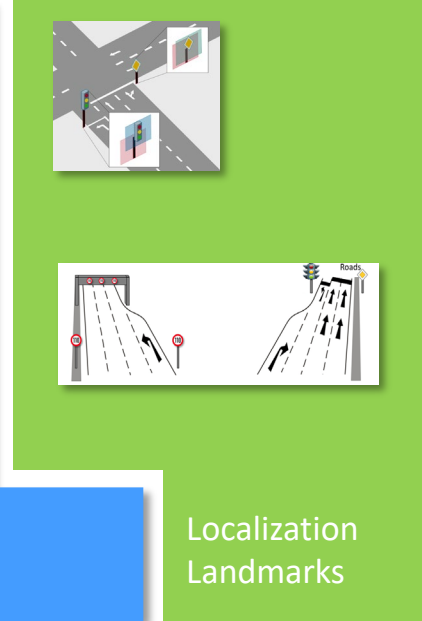
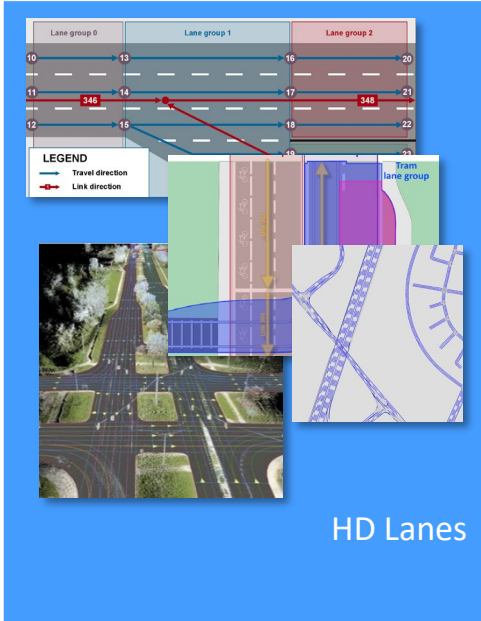
- Three major updates of Certification Bench
- New contractor for Certification Bench Development on-boarded
- NDS.Live certification concept further developed, and pilot implementation started



Sept 2020





# NDS.Classic HD Map Features



# NDS.Classic HD Maps for AD - Availability

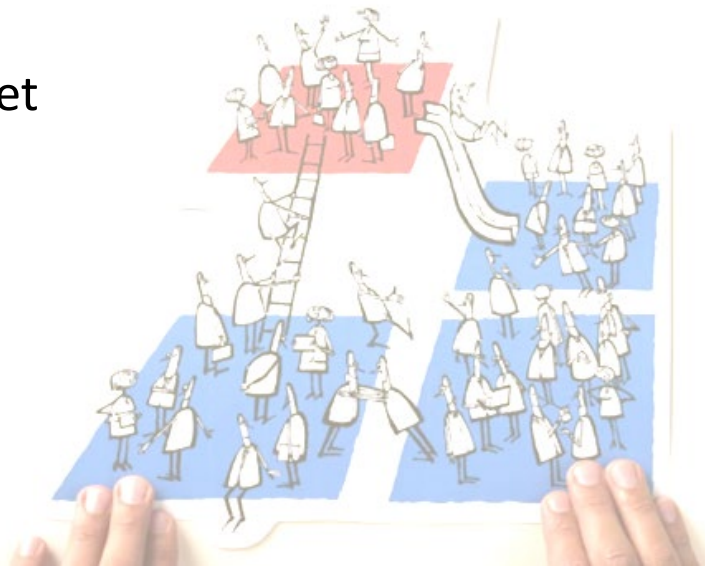
Who	Statements on Coverage
Amap Software	China: All highway and expressways, city normal roads of 4 cities until end of 2021
Baidu	China: All highways and expressways, some cities urban road and industrial park roads with full features
HERE	North America and Western Europe: Ongoing global coverage roll-out
Kuandeng	China: Over 300 cities and highway and urban expressway Germany and Korea: Several hundred kilometers including highway and urban roads
NavInfo	China, HD Pro: 100% highway and urban expressways nationwide (300,000+ km) HD Lite: China, rollout of structured roads, provincial roads, and national roads
Navis-AMS	South Korea: All highway and city expressways, all 4-lane roads
TomTom	United States, Canada, Western Europe and Japan: ongoing global coverage roll-out
Zenrin	All highway and expressways in Japan

# Map Data Needs: Uses Cases and Data Freshness

		Freshness 		
Use Cases / Shelf-life		Static Data that stays valid for long periods of time, with typically only small fractions changing over time. This is what classical versioned map data is about.	Dynamic Changing data with limited temporal validity (days/hours). Age checks must be used to determine if the dynamic information can be applied.	Live Transient data with momentary validity. For example, such data may be a vehicle's state/e-Horizon, a route, or a search result. Applications either use it right away or discard it.
	<b>Universal</b> Data that is generally relevant for a broad set of use cases or as a general reference for all other data	Roads or display data	Construction sites	Traffic light phase Variable Message Signs
	<b>Collective</b> Data is relevant to a specific group of use cases. Examples for this are ISA, ADAS, navigation as well as vehicle types (cars vs. trucks), engine types (electric vs. fuel)	POI (OEM brand specific)	EV charging station avail.	Dynamic speed limits, Parking spot availability (automated valet parking)
	<b>Individual</b> For specific use cases, data could be generated/bundled based on individual requests.	Indoor parking map	POI (sport event)	MPP, routing, search

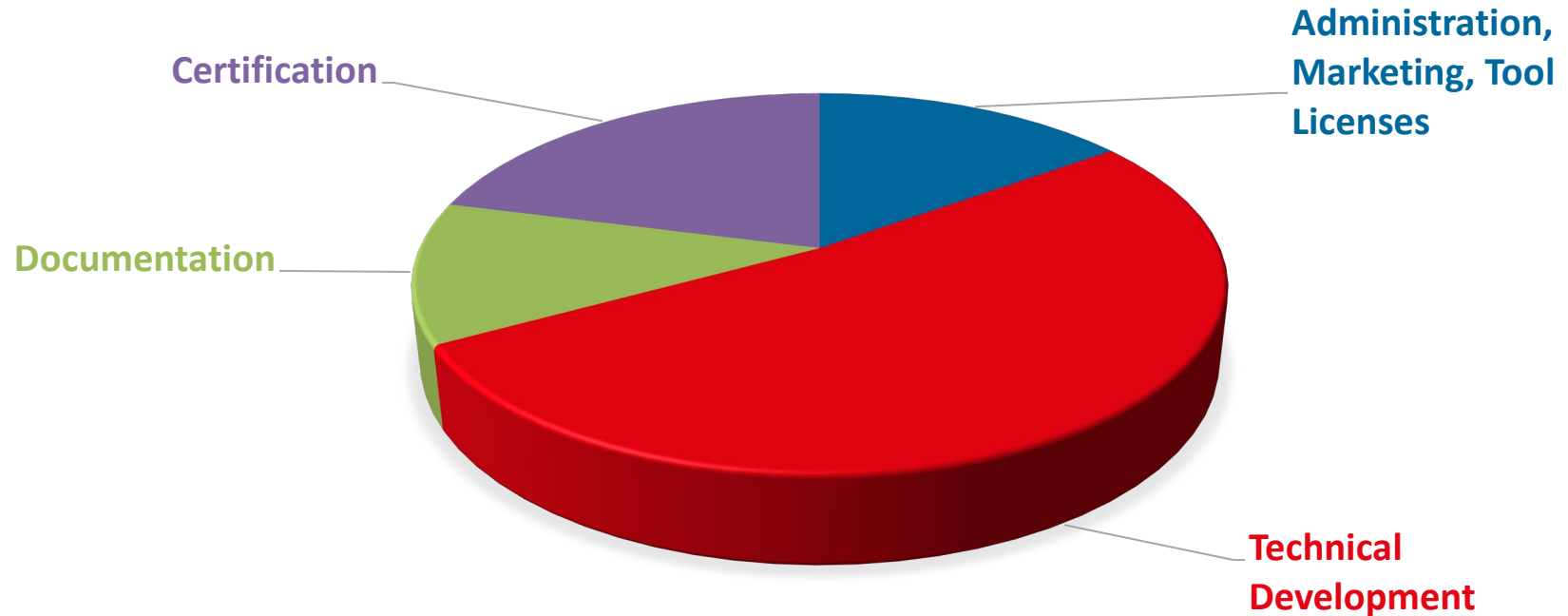
# Why to Become NDS Member?

- **Access to NDS specification and documentation,** to **NDS Support Team** and to a **lively NDS community**
- **Access to NDS tools** supporting the development of NDS compliant products
- **New business opportunities**, as there is a high demand for NDS compliance in the market
- **Avoid duplicate work** from the collaboration within NDS at development and testing
- **Cross-license** of other **NDS members' IPs** for own NDS products
- **Influence on the future development** of the NDS standard to the benefit of own business



# How are Membership Fees used in NDS?

The NDS Membership fees are well invested!



# Evaluation Terms for NDS.Live



NDS.Live

Evaluation  
License for NDS.Live  
§



NDS Community

- NDS.Live evaluation terms will allow 3<sup>rd</sup> parties to
    - review the NDS.Live Specification and Tools and become acquainted with it
    - contribute requirements for use cases
    - build demonstration application for convincing customers
    - check potential business cases with NDS.Live in detail before joining the NDS Association
  - Contract for Evaluation terms delayed due to legal complexity of topic:
    - Background: NDS.Live specification is jointly owned by NDS members - and not by NDS Association
    - Hence legal experts had to agree on terms under which NDS Association is allowed to grant evaluation license to 3<sup>rd</sup> parties
    - The resulting terms are now being signed by all members
- Commercial use of NDS.Live requires to become NDS Member and to accede the NDS Member Cross License Agreement



# Call to Action

- We are interested your feedback regarding:



Visibility of NDS and marketing activities



Product definition and roadmap



New product structure with NDS.Live and NDS.Classic



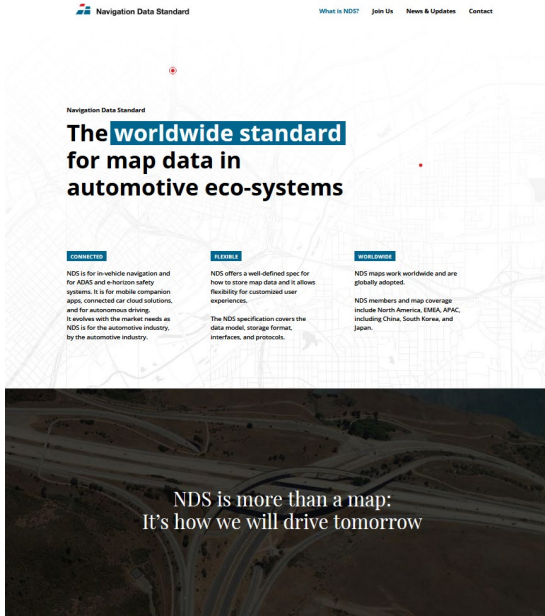
Software layer wrapping database



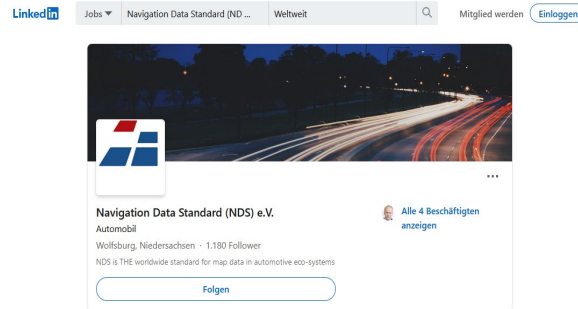
Simpler access to NDS for non-commercial use

- We are available: Fabian Klebert, Markus Junker or myself.

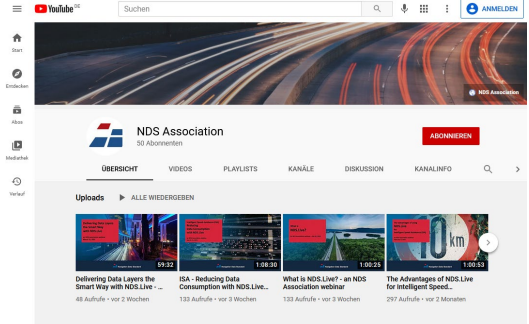
# Further Information



[www.nds-association.org](http://www.nds-association.org)

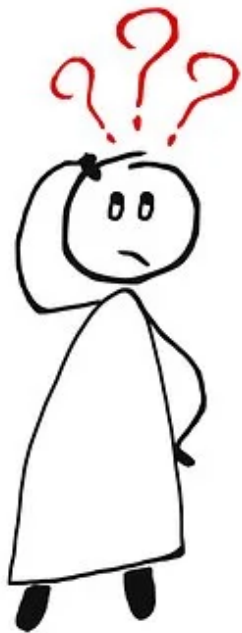


[nds.to/linkedin](https://nds.to/linkedin)



[nds.to/youtube](https://nds.to/youtube)

**Martin Schleicher**  
[martin.schleicher@nds-association.org](mailto:martin.schleicher@nds-association.org)  
NDS Association Chairman



## Questions?

→ Please use Q&A icon for raising questions!

- Indicate speaker/presentation you refer to
- Selected questions will be read after each presentation and answered live
- Speakers are asked to answer remaining questions in chat

# BACKUP