

25 years of ASAM e.V.



Dr. Ralf Nörenberg

ASAM e.V. Board of Directors
HighQSoft GmbH

June 28th, 2023
Tokyo, Japan



Association for Standardization of
Automation and Measuring Systems

ASAM e.V.

The beginning 25 years ago

1998

Foundation of ASAM e.V.

The association ASAM e.V. is founded on Dec. 1, 1998 in Stuttgart, Germany, on an initiative of German car manufactures AUDI, BMW, Daimler, Porsche VW.

ASAM e.V. is the follow-up organization for all ASAM and STAUMECS activities. During the foundation meeting, 26 companies joined the new association.

The first ASAM Board of Directors consists of:

- Mr. Karl-Heinz Hönes (DaimlerChrysler AG; Chairman)
- Mr. Pölsler (Porsche AG)
- Dr. Langemack (Volkswagen AG)
- Mr. Jürgen Döring (rd electronic gmbh)
- Dr. Wilfried Melder (GfS)

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ASAM e.V. becomes an international organization including members from Japan and the US very quickly!

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1999

ASAM is taking up business

The office of ASAM e. V. (registered association) locates to the Munich area. Hans-Georg Swolana is appointed ASAM Business Manager. The new organization is fully operational as of early 1999.

2000

Membership

ASAM attracts its first international OEM members:

- DENSO Corporation (Japan)
- Renault SA (France)
- Ford Motor Company (USA)

Cooperation with ISO

First cooperation with ISO is initiated.

ASAM compliant products

First certified ASAM products are being launched.

ASAM e.V.

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Ralf uses the school vacations to work on ASAM ODS solutions for HighQSoft.

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ASAM e.V.

The beginning 25 years ago

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Ralf uses the school vacations to work on ASAM ODS solutions for HighQSoft.

>> ODS was one of the first standards developed by ASAM, reaching back as far as the early 1990s.

2000

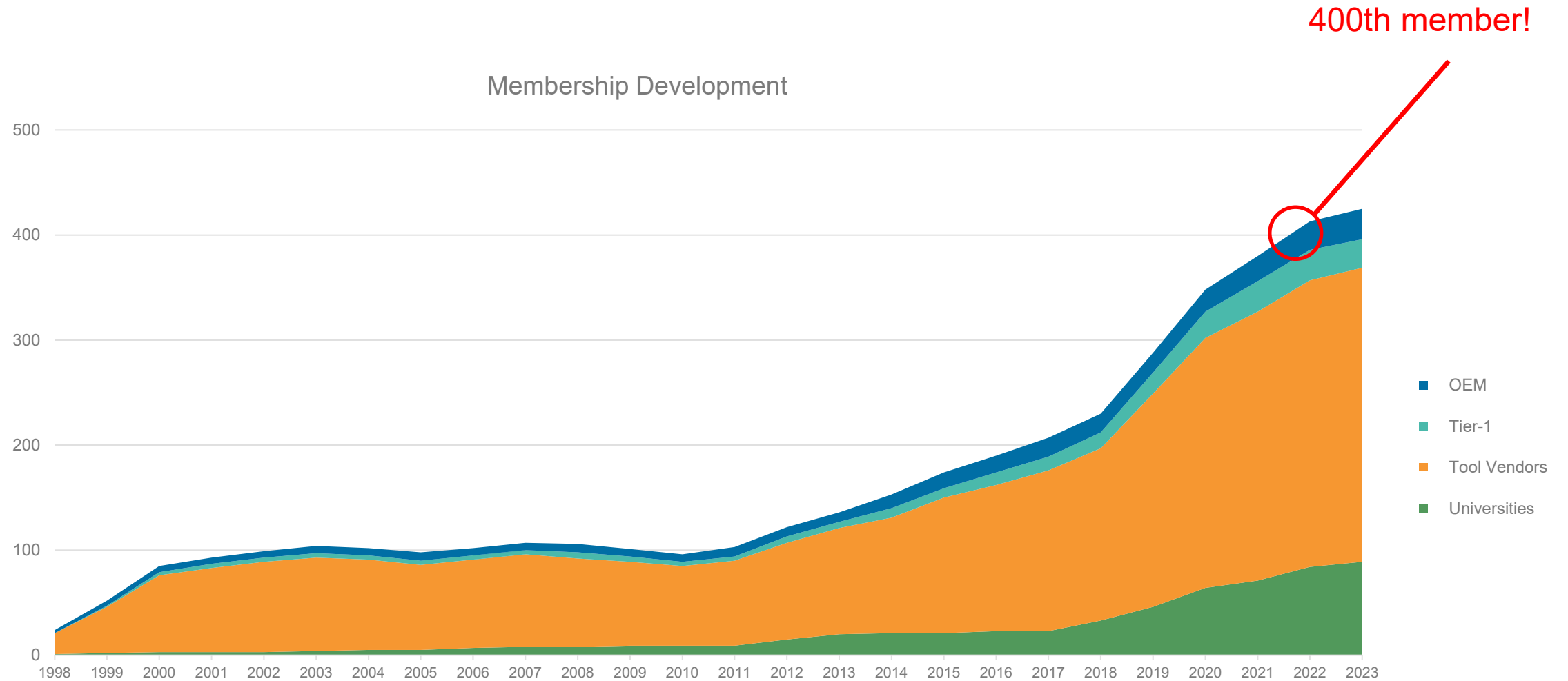
1995

First publication from an ASAM interest group!



ASAM membership development

Membership development over the past 25 years.



ASAM standards portfolio

ASAM is currently active in 7 domains

7

Domains

37

Released Standards

Simulation

OpenCRG

OpenDRIVE

OpenLABEL

OpenSCENARIO

OSI

Measurement & Calibration

ARTI

CDF

CMP

CPX

HMS

MCD-1 CCP / XCP

MCD-1 POD

MCD-2 MC

MCD-2 CERP

MDF

Data Management & Analysis

CEA

ODS

Diagnostics

MCD-2 D

MCD-3 D

SOVD

Test Automation

ACI

ASAP 3

ATX

GDI

iLinkRT

MCD-3 MC

OTX Extensions

XIL

ECU Networks

MCD-2 NET

Software Development

CC

FSX

ISSUE

LXF

MBFS

MDX

SCDL



ASAM e.V. standards are standards that shaped the industry

A selection of widely spread and internationally implemented standards

ASAM MCD-1 XCP

Standard that defines a bus-independent communication protocol to connect ECUs with calibration systems

ASAM MCD-2 MC

Description format of the internal ECU variables used in measurement and calibration

ASAM MDF

Standard for writing data from acquisition system

ASAM ODS

Standard for measured data storage

ASAM OTX

define a language and exchange format for the specification of executable test sequences.

ASAM XIL

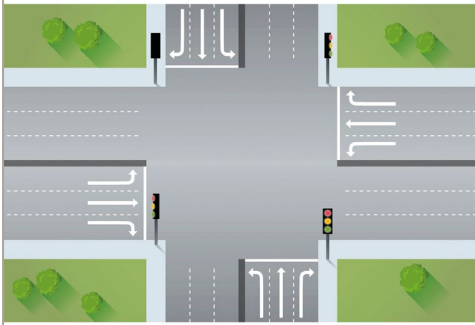
An API standard for the communication between test automation tools and test benches.



With openX standards a new era of ASAM e.V. standards is ahead

Standards are going road-side!

ASAM OpenDRIVE®



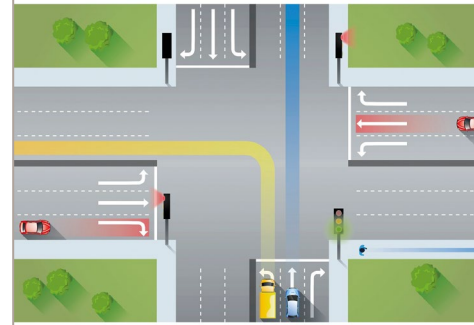
Static Road Network Description

ASAM OpenCRG®



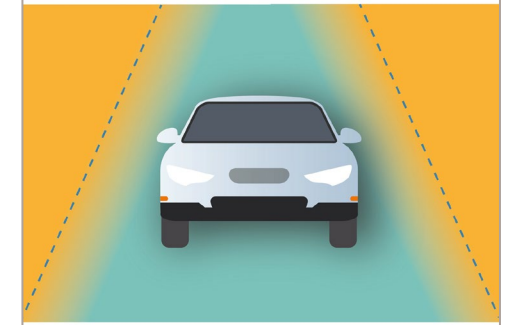
Static Road Surface Description

ASAM OpenSCENARIO®



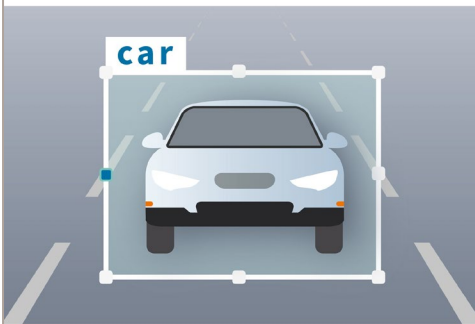
Dynamic Scenario Description

ASAM OpenODD®



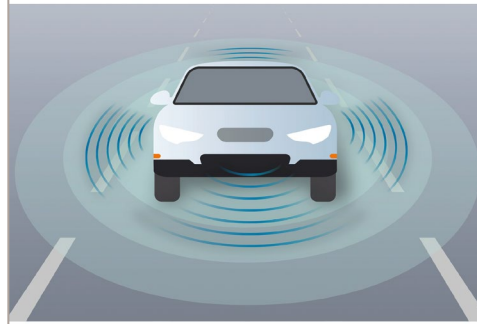
Defining the Operational Design Domain
for Automated Vehicles

ASAM OpenLABEL®



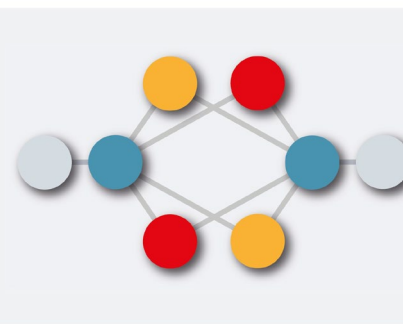
Standardized Labeling
for objects and Scenarios

ASAM OSI®



Interface for Simulation

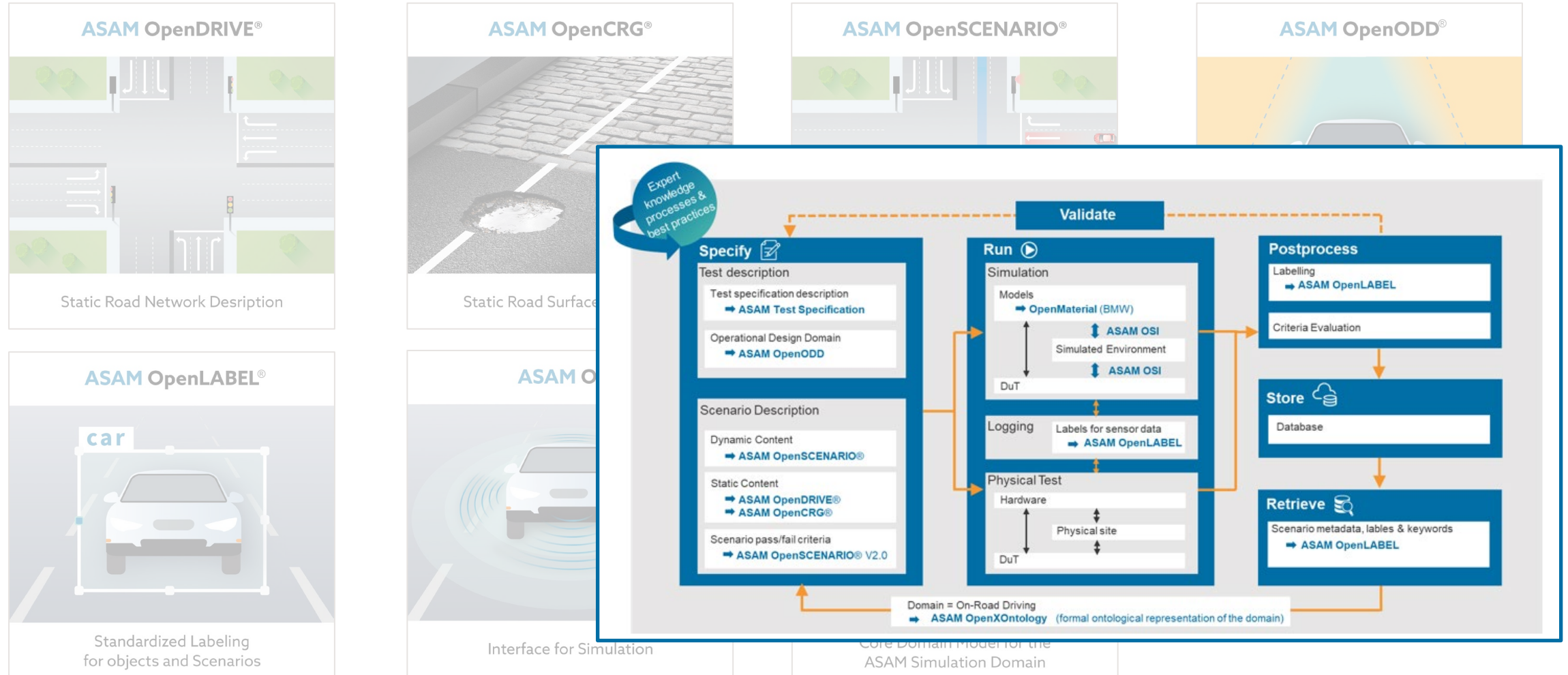
ASAM OpenXOntology®



Core Domain Model for the
ASAM Simulation Domain

With openX standards a new era of ASAM e.V. standards is ahead

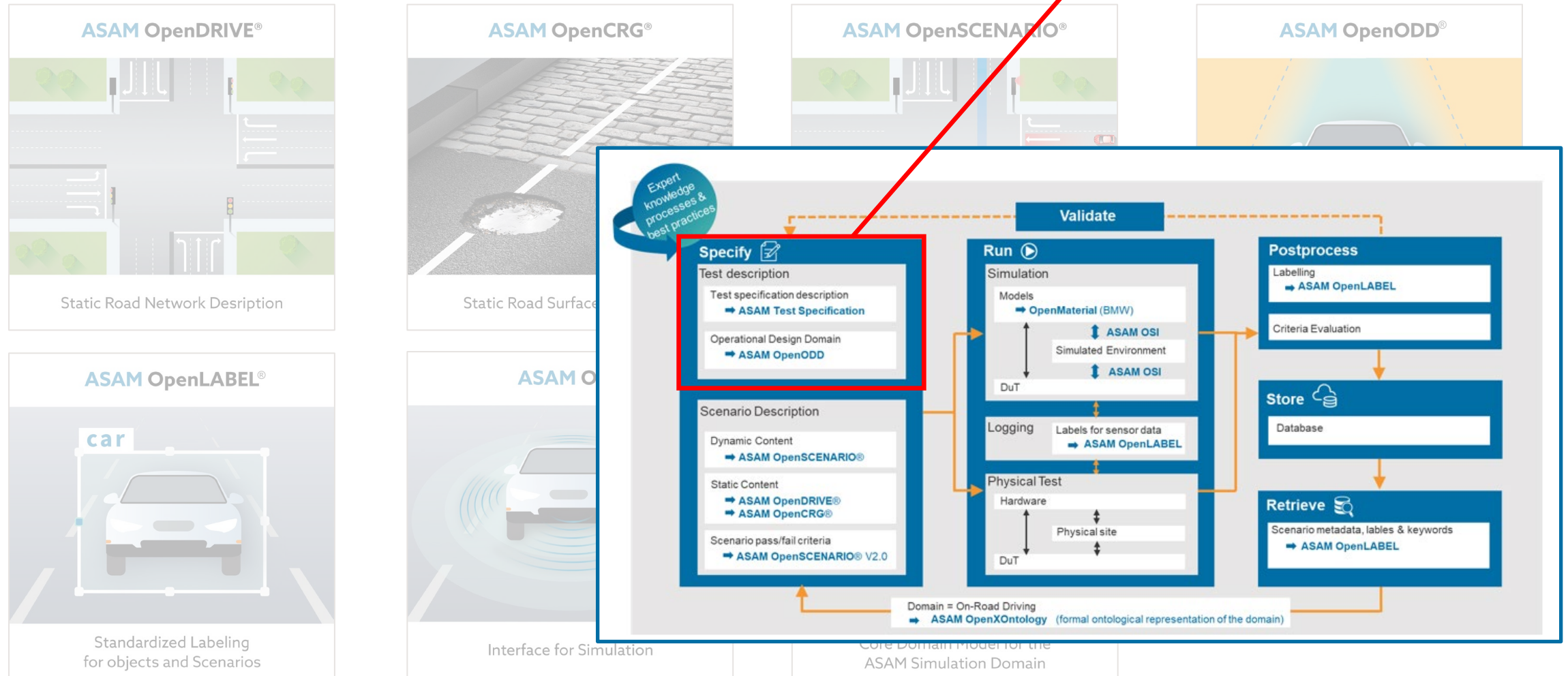
Virtual evaluation as the main goal



With openX standards a new era of ASAM e.V. standards is ahead

Virtual evaluation as the main goal

Consolidation is in progress!



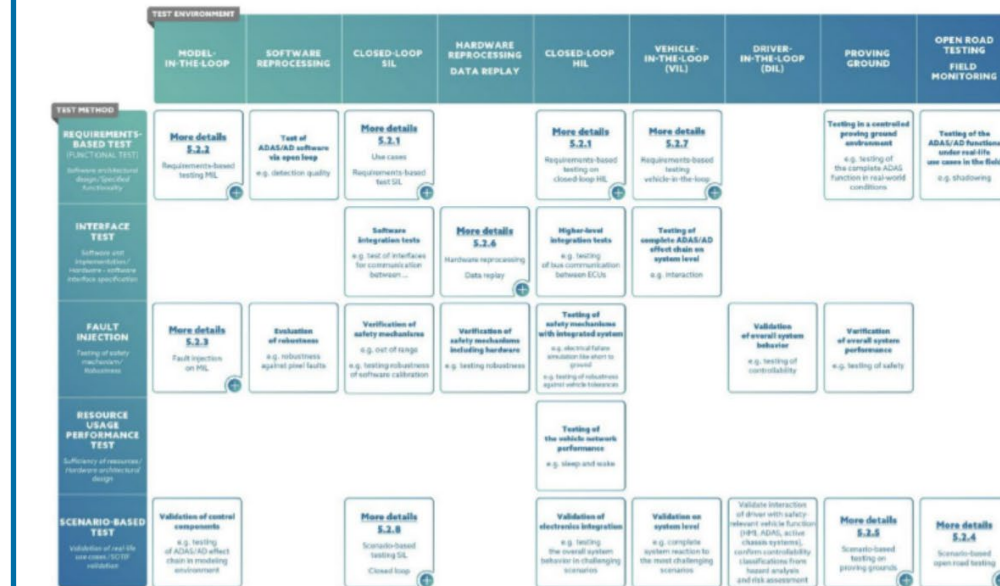
Strategic Position of the organization and the standards

Our way forward

- Working Group of **ASAM Test Specification** as a consolidation effort for user-cases and standards, for example
 - ASAM openLabel/openScenario, and ASAM ODS
 - ASAM MDF and ADAS raw data

Highlight: Testing ADAS/AD systems

Seeing the big picture



<https://www.asam.net/standards/asam-test-specification/>

Strategic Position of the organization and the standards

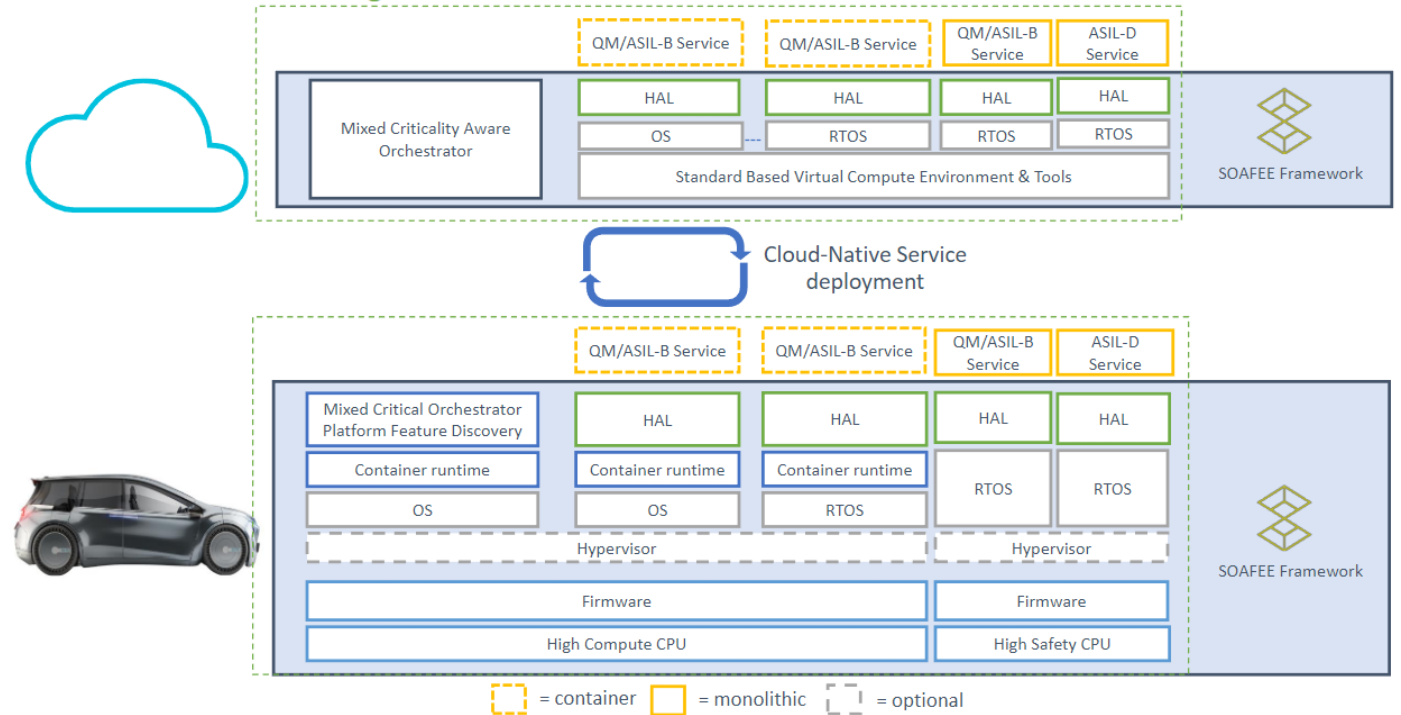
Our way forward

- “Multi-modal mobility with an emphasis on simulation” and
“Software Defined Vehicle (SVD) and its data pools”

- Environment models
- Data formats for sensors
- Domains outside automotive
 - Railroad
 - Motorbikes
 - Mobility networks and infrastructure

SOAFEE Cloud Native Architecture Vision

Framework for enabling mixed critical workload across cloud and vehicle



ASAM in Japan

A success story and blueprint for other activities

2012

In Japan forms the
Japanese ASAM Interest Group (JAIG)



2015

ASAM opens office in Japan

ASAM Japan G.K. officially opens its doors in November 2015 with Mr. Yoshiaki Shoi as the representative of ASAM in Japan. With this step, ASAM responds to the continuous growth in new members in Japan. The office in the Tokyo-area aims to promote collaboration among member companies and promote the concept of standardization in Japan.

2020 / 2021

The first standards purely developed in Japan are released within ASAM

ASAM MCD-2 MC

2020: Release of ASAM HMS (Hex File MGMT)

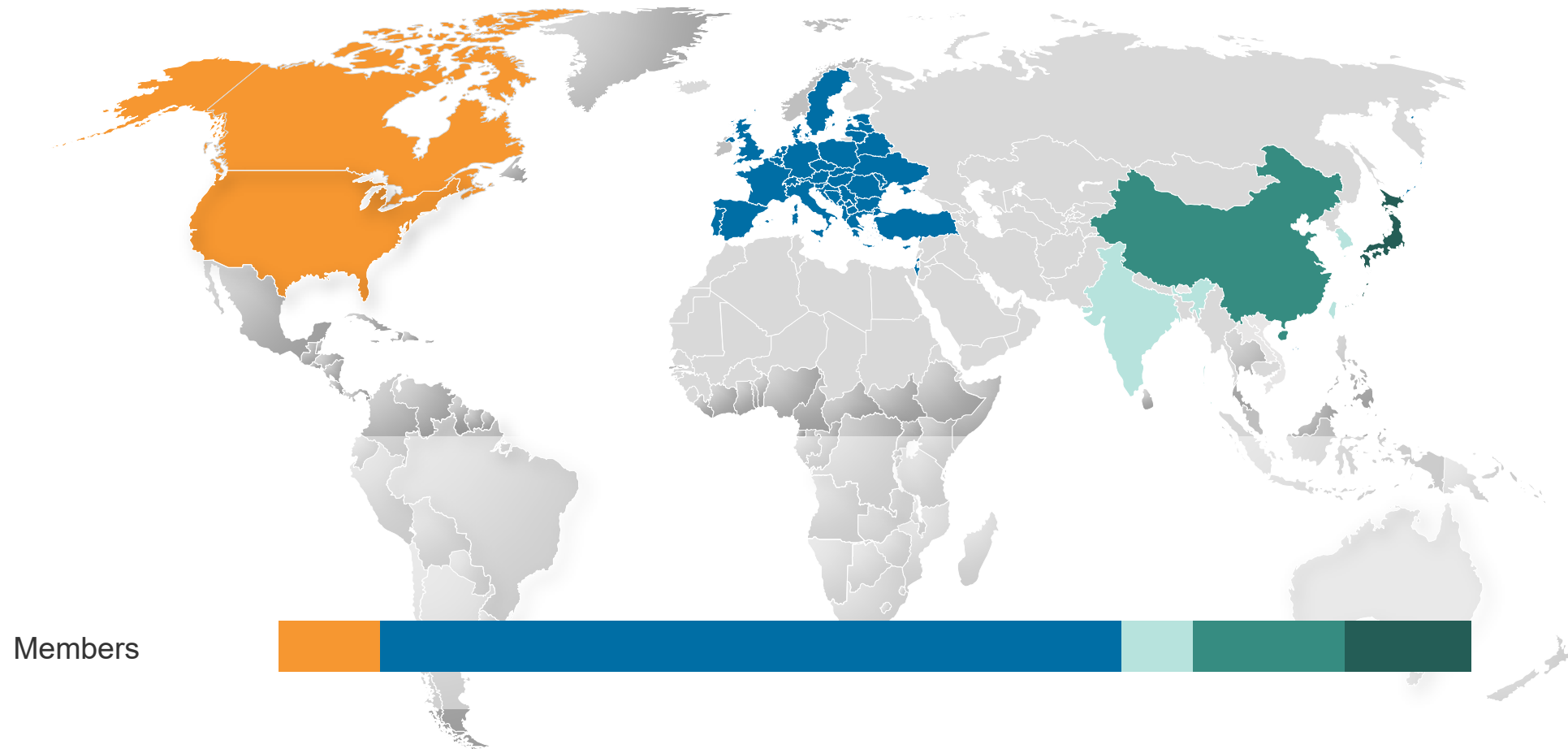
2021: Work package for ASAM OpenDRIVE purely developed in Japan

2021: Release of ASAM SCDL



ASAM – a truly international association

Global distribution of members, March 2023



Regional Meeting Japan 2023

Again, we're looking at an event with close to **150 participants** from Japan that are interested in getting updated, using, and/or contributing to **ASAM Standards**.

Let's start the second 25 years of ASAM with a successful regional meeting!



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