COVESA All Member Meeting | April 22-23, 2026 | Porto, Portugal

Agenda

Wednesday, April 22

9:00 AM	Event Start
9:00 AM - 9:05 AM	Welcome Auditorio Steve Crumb
9:05 AM - 9:25 AM	COVESA Member's Keynote Auditorio COVESA is a member-driven organization, and during this session, the results of a member-wide survey will be presented. Attendees will also hear some important announcements about COVESA’s emerging activities in 2026. Kazuo Tsubouchi Steve Crumb

9:30 AM - 9:55 AM

AOSP App Framework Standardization Expert Group - Community Update

Expert Group Status Update

Agua

Expert Group Status Update

What has been done since last AMM

What is the focus/being done at this AMM

What is the focus until next AMM

Entertainment Working Stream update

Chris Goebel
Gabriel Gautron
Jose Freitas
Richard Fernandes
Sabine Hofschen

Community Update, Technical

API Standardization in JASPAR for SDV

Auditorio

JASPAR (Japan Automotive Software Platform and Architecture), a standardization organization in the Japanese automotive industry, has established a working group called the API WG to promote software development efficiency and revitalize the industry. The API WG is not only working on API specification development but is also challenging the code implementation. In this presentation, we will provide insight into the activities and discuss future perspectives.

Yasushi Ando

Business Session, Business Talk

Data Expert Group - Community Update

Data Expert Group Status Update

Ar I & II

Data Expert Group Status Update

What has been done since last AMM
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Adnan Bekan
Chaitanya Podalkuru
Daniel Alvarez-Coello
Erik Jägervall
Stephen Lawrence
Ulf Björkengren

Community Update, Technical

10:00 AM - 10:25 AM

Introduction to VSS: A Deeper Dive

Taking the next steps with your understanding of VSS. Learn from the pros as they walk through some how-tos. Get your questions answered and learn how to get involved.

Ar I & II

Taking the next steps with your understanding of VSS. Learn from the pros as they walk through some how-tos. Get your questions answered and learn how to get involved.

Erik Jägervall

Technical, Technical Presentation

Progress in SDV: A Global Comparison

Auditorio

The 2026 Omdia SDV survey, in collaboration with Sonatus, builds on the 2025
SDV survey presented at the COVESA All Member Meeting in Berlin, offering a deeper exploration of the evolving landscape of software-defined vehicles (SDVs).
This year's survey will highlight the growing importance of AI and software capabilities, the challenges of scaling SDVs, and the industry's progress in overcoming legacy systems and organizational barriers.
Aligned with the session theme European Initiatives for Software-Defined Vehicles, this presentation will focus on how Europe compares to other regions in terms of SDV adoption, challenges, and opportunities. By analyzing survey data from
automakers, Tier 1 and Tier 2 suppliers, and consultants across North America, Europe, and Asia-Pacific, we will explore Europe's position in areas such as software complexity, data management, and regulatory compliance.

John Heinlein PhD
Maite Bezerra

Business Session, Presentation

10:00 AM - 11:00 AM

AOSP App Framework Standardization Expert Group - Working Session OEM VHAL

Agua

As vehicles become software□defined, OEMs might want to expose while at the the same time fully control reliable, consistent vehicle data to insurance partners, fleet operators, mobility services, ADAS analytics, anfd in□car digital applications. Today, an OEM can offer either all vehicle data via OEM signature or close none at all. Today, every OEM solves this differently — resulting in fragmentation, high integration costs, and slow time□to□market.

An OEM AOSP□based VHAL offers a harmonized and scalable way to publish core vehicle data across models and regions using Android’s native Vehicle HAL framework.
For OEMs, this creates tangible benefits:

Lower engineering and integration cost through a unified data interface

New revenue opportunities (insurance, UBI products, ADAS insights, fleet services)

More competitive vehicles via lower TCO and better connected□service offerings

Faster ecosystem integration with insurers, fleets, mobility partners, and service providers

Built□in regulatory alignment through Android’s permission & transparency mechanisms

In this workshop, we will walk through a hands□on AOSP VHAL showcase using an emulator, demonstrate how standardized data flow and websockets enable partner integration, and collaboratively identify high□value use cases.
OEMs will shape which VHAL values should be prioritized to support real commercial opportunities and operational efficiencies.

10:30 AM - 10:55 AM

Morning Break □ □□ - Sponsored by MOTER Technologies Inc

Grab a cup of coffee and a snack while you mingle and network between sessions. It's the perfect blend of productivity and indulgence!

Auditorio Foyer

11:00 AM - 11:25 AM

Data Expert Group - VSS Next and VDM Next

What is next for the Data Expert Group: VSS and VDM

Ar I & II

Adnan Bekan
Chaitanya Podalkuru
Daniel Alvarez-Coello
Erik Jägervall

Technical, Technical Presentation

Navigating the Future: Omdia's SDV Forecast and Regional Comparisons

Auditorio

This session explores the expectations for how Software-Defined Vehicles (SDVs) will evolve in the coming years through a blend of forecasts, data-driven insights, and thought-provoking industry expertise. It begins with an overview of how SDVs are advancing across Europe and other global regions, based on an emerging SDV framework. The session then transitions into a fireside chat that interprets the findings, delves into their real-world implications, and examines how they align—or diverge—from industry trends.

Key topics include:

SDV Framework Overview: A concise explanation of SDV levels, highlighting technological and functional milestones.
Forecast Highlights: Key insights into SDV adoption rates, market growth, and regional comparisons.
Industry Perspective: A discussion on the practical implications of the findings and alignment with industry trends.

Santhosh Jogi
Maite Bezerra

Business Session, Presentation

11:00 AM - 11:45 AM

AOSP App Framework Standardization Expert Group - Working Session - Entertainment

Entertainment Ecosystem - Why isn’t it taking off and what we can do about it.

Agua

Chris Goebel

Technical, Working Session

11:30 AM - 11:55 AM

Reimagining Customer Connection in the Era of Connected Vehicles

Auditorio

Automotive manufacturers have long prioritized the psychological and emotional connection between drivers and their vehicles. From the beginning, capturing the Voice of the Customer (VoC) has been essential to understanding needs, preferences, pain points, and expectations. This process has never been quick, significant design or functional changes required a high degree of confidence and were often years in the making. Today, the rise of connected vehicles and the rapidly evolving in-vehicle digital experience are reshaping the innovation model. These advancements challenge us to rethink how we experiment, iterate, and gather customer insights, enabling a deeper, more dynamic emotional connection with the vehicles of the future. In this session, we will explore how innovation and customer experience intersect in the evolving landscape of connected vehicles:

- Creating a Catalyst for Innovation through VSS
- Prioritizing the Customer Experience Amidst Connectivity
- Shaping and Incentivizing Early Adopter Programs
- Enabling Deeper Insights into the Customer Journey
- Recognizing When You’ve Made the Connection

Cathi Chinn

Business Session, Presentation

VDM in Practice: End-to-End Workflow from Conceptual to Physical Data Models

Ar I & II

This presentation explores the implications of using the Vehicle Data Model (VDM) as a conceptual and governance layer and how it can influence application and database design in practice. Using a simple EV charging station domain as a proof of concept, it demonstrates an end-to-end workflow from conceptual modeling and
versioning to the generation and application of artifacts in the physical layer. The example shows how logical models can be mapped to application structures and a document-oriented database schema, highlighting the transition from shared concepts to concrete implementations.

The work illustrates how a unified conceptual model can act as a single source of truth across teams and technologies, enabling a common vocabulary while allowing
multiple physical representations such as APIs, schemas, or data formats. It provides a baseline for further experimentation on interoperability, the impact of logical model evolution on applications and data stores, and the use of logical models for reasoning tasks. Attendees will gain a clearer understanding of how VDM can be applied to their own domains and extended collaboratively to study.

Daniel Alvarez-Coello
Rami Pinto

Technical, Technical Presentation

11:50 AM - 12:30 PM

AOSP App Framework Standardization Expert Group - Working Session - Future Model For AOSP group and future topics

Agua

Future Topics, like e.g. Geocoding, iMAP updates, App Host, in-app updates

Group Charta Next

Who would actively participate and contribute in the future?

Chris Goebel
Gabriel Gautron
Jan Kubovy
Jose Freitas
Richard Fernandes
Sabine Hofschen

Technical, Working Session

12:00 PM - 12:25 PM

Building Knowledge Graphs to Harmonize Data Models and Standards for Connected Vehicles

Ar I & II

Connected-vehicle ecosystems increasingly span multiple data models and standards ,e.g. vehicle signals and services, fleet/telematics schemas, simulation and validation formats, and emerging regulatory interfaces. Each layer often introduces its own “local” vocabulary (optimized for a product, UI, or pipeline), and the translation cost between these vocabularies compounds over time. This session presents knowledge graphs as a pragmatic harmonization mechanism: a semantic spine that preserves local flexibility while enabling shared discovery, reuse, and cross-domain analytics.

Starting from COVESA artifacts (e.g., VSS/VISS and CDSP data pipelines), we describe a pattern language for building an automotive knowledge graph that connects to complementary standards such as ASAM OpenX (OpenDRIVE/OpenSCENARIO/OpenLABEL/OpenODD ISO/ITS concepts, and generic vocabularies (SSN/SOSA for sensing, QUDT for quantities/units, and SAREF extensions). The focus is incremental adoption: lightweight mappings, versioning and governance to prevent drift, and “just enough” semantics to enable validation and reusable queries across vehicles and environments. Attendees will leave with an actional playbook for reducing integration friction without forcing a one-size-fits-all ontology.

Danh Le-Phuoc

Technical, Technical Presentation

Turning AI Potential into Engineering Productivity in the Software-Defined Vehicle Era

Auditorio

As the automotive industry moves toward software-defined vehicles, companies are exploring how generative AI can deliver practical business value across the engineering lifecycle. Beyond customer-facing applications, AI has growing potential to improve development productivity, manage system complexity, and strengthen collaboration across the mobility ecosystem.

This session will bring perspectives from a global powertrain leader and an engineering technology startup on practical approaches to integrating AI into development workflows—from systems and requirements to safety and validation. Drawing on insights from the COVESA Generative AI Working Group and early industry initiatives, the discussion will highlight pragmatic steps companies can take to build capability while maintaining rigor in standards such as ASPICE and functional safety.

Dr. Yansong Chen
Maurice Dantzler

Business Session, Presentation

12:30 PM - 2:00 PM

Networking Lunch □□ □□□

Composto Restaurant - Ground Floor

2:05 PM - 2:25 PM

Commercial and Fleet Vehicle Expert Group - Community Update

Commercial and Fleet Vehicle Expert Group - Community Update

Ar I & II

Group Status Update

What has been done since last AMM

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Entertainment Working Stream update

Mouham Tanimou
Ted Guild

Community Update, Technical

2:05 PM - 2:30 PM

Accelerate software-defined vehicle (SDV) workflows

Cloud-native tools auto-generate VHAL, enable virtual cockpit development, synthetic testing, and reusable Android apps—accelerating prototyping, collaboration, and integration using open, standardized data interfaces.

Agua

COVESA’s Vehicle Signal Specification (VSS) becomes standard for SDV platforms and app development for OEMs and 3rd app companies in Automotive industry. Cloud-native browser based solutions can help OEMs by leveraging automated VHAL generation and signal mapping. By transforming VSS-compliant vehicle signal models into a standardized Vehicle Hardware Abstraction Layer (VHAL). Applying this clear approach enables early, consistent, and URI-flattened access to vehicle signals—effectively enhancing how industry standards can be applied in real development workflows. This approach allows developers to use standardized vehicle signals as a foundation for building reusable, standards-based Android Automotive applications, entirely within virtual cockpit environments, long before physical vehicle hardware is available.

By combining VSS-driven signal standardization with virtualization, new SDV toolchains accelerate prototyping, enable test automation through synthetic and SOME/IP signal feeds, and creates consistent integration points across SDV toolchains.

The session will also highlight how cloud-based browser based virtual development environments leads some added values and benefits—such as:

• cloud-based workbenches—help scale collaboration and validation,
• on-demand virtual cockpit instances,
• UI abstraction tooling from vehicle data layer,
• ensuring applications are built on open, standardized vehicle data interfaces rather than proprietary implementations.

2:05 PM - 2:40 PM

Automotive AI – Unleashing New Possibilities

Auditorio

Creating opportunities for collaboration within the Automotive AI community can be challenging but generative AI potentially can help the mobility and connected vehicle achieve a safer and more intuitive experience for both driver and passengers.

Dr. Yansong Chen
Georg Doll
Harry Powell
Ian Etheredge
Mihai Potoceanu

Business Session, Panel Session

2:25 PM - 3:05 PM

Extending VSS to commercial vehicles - Panel-Discussion with ACEA's truck & bus-OEMs and COVESA

Ar I & II

Up-coming in-vehicle API will offer FMSv5 migrated to VSS organized in the Commercial and Fleet Vehicle Expert Group-Community.

The cooperation with MAN, VOLVO, FORD, IVECO, DAIMLERTRUCK, DAF, SCANIA in the ACEA taskforces is An overview and panel discussion of COVESA / TF HDEI FMS collaboration to date.
• Why it matters? What has been done? What is next?

Get an overview from the truck-OEMs and bus OEMs to hot topics like:
1) What is the need for interoperability for truck &busses?
2) What is the reason for the cooperation with COVESA?
3) Why the market profits from standardized interfaces (e.g. SAE J1939)?

4) How this ACEA cooperation extends the scope of the today’s VSS?
5) Is this new truck and bus in-vehicle API an OEM-internal API or open to public?

Abdelkader Sellami
Achim Henkel
Armin Keller
Philippe Grand
Steve Crumb
Ted Guild

Business Session, Community Update, Panel Session, Technical

2:35 PM - 3:00 PM

Multi-Domain E/E Testing: AOSP, Open AD Kit and Open/Closed-Loop Simulation

Agua

A demonstration of how virtual E/E architecture simulation - combining open-loop (drive recording playback) and closed-loop (synthetic scenario) approaches - can accelerate and standardize multi-domain vehicle software development and testing.

We show how an Android Automotive OS emulator and an Autoware OpenADKit AD/ADAS stack can run within a single virtual E/E architecture definition, with vehicle signals mapped toward a common signal abstraction layer. Participants will see a live demo transitioning from open-loop signal replay - feeding recorded drive data into both IVI and AD stacks - to closed-loop simulation where the AD stack perceives and actuates against a synthetic scenario while the IVI reacts to the resulting vehicle state in real time.

Key takeaways include a practical framework for multi-domain virtual testing, signal abstraction as an enabler for cross-domain interoperability, and how a virtual-first approach can accelerate vehicle software development across domains.

Per Sigurdson

Technical, Technical Presentation

2:45 PM - 3:20 PM

Operationalizing Vehicle Data in Insurance, Tires and Other Sectors

Auditorio

The automotive industry has long promised that vehicle data would unlock new value in adjacent sectors, from insurance and logistics to smart infrastructure. Yet, scaling from pilot projects to reliable revenue has proven difficult. Many programs stall because data arrives in different formats, is collected in static, proprietary ways, or requires costly processing before it can be used across diverse fleets. As demand grows for data-driven services, the question is shifting from what data to sell to how to build the flexible data foundations needed to deliver it reliably and at scale.

Leading this discussion, Sonatus CMO John Heinlein will join leaders from usage-based insurance (MOTER COO and CTO Michael O’Shea), tire intelligence (Michelin CTO - Tire Digital Twin Program Jeremy Vayssettes) and [Sector, Participant TBD] to examine the practical steps required to turn raw signals into trusted commercial metrics.

John Heinlein PhD
Michael O'Shea
Nicola Concer

Business Session, Panel Session

3:05 PM - 3:30 PM

Joint Vehicle Signal Specification/Commercial and Fleet Vehicle Expert Group Working Session

Topics:

VSS Issues introduced or relevant to Commercial and Fleet Vehicles

Ar I & II

Adnan Bekan
Erik Jägervall
Mouham Tanimou
Ted Guild

Technical, Working Session

VSS and AI: Challenges for Data Collection

The talk highlights selective, purpose-driven data collection as essential for scalable AI lifecycle management and software-defined vehicles.

Agua

Artificial Intelligence (AI) changes the way data can be produced, processed, and collected. Not only does AI change the way data is processed in a vehicle: AI does not only consume data, it also continuously generates new, derived or synthetic data whose availability and semantics depend on the resultant model itself. Dynamic data preprocessing already challenges the notion of a static data catalogue for an automotive telematics system. AI further challenges this notion: changing an AI model can directly influence which data exists and can be collected.

While the Vehicle Signal Specification (VSS) has a notion of derived data, its ability to describe how data is derived is limited. Due to their opaque and non-deterministic nature, AI models make the task of describing how derivation takes place nearly impossible. Add in the need for more complex data such as pictures, video, and lidar data, and it becomes clear that not all data can be transmitted all the time.

This talk will discuss these challenges and present use cases that motivate them. Using concrete use cases, it demonstrates why VSS only scratches the surface of the problem and why selective, purpose-driven data collection is essential. Building and maintaining AI models require vast amount of data, both for accomplishing its tasks, as well as for retraining. However, training, inference, validation, and retraining have fundamentally different data requirements. Determining what data is needed where and how often is key to success. It is also key to a real Software Defined Vehicle.

Takeaways:

Data collection use cases with AI.

3:25 PM - 3:50 PM

BMW Neue Klasse

BMW Keynote

Auditorio

Graham Smethurst

Business Session, Keynote, Presentation

3:35 PM - 3:55 PM

COVESA Central Data Service Playground (CDSP) Introduction and Status Update

Ar I & II

The COVESA Central Data Service Playground (CDSP) is intended to support collaborative investigation of data centric architectures and for that work to be publishable in the open.

After a short project introduction for newcomers, we will cover some of the major newer features and the future roadmap

Christian Mühlbauer
Haonan Qiu
Stephen Lawrence

Community Update, Technical Presentation

VSS Beyond V2X: Standardizing Research Datasets Across Simulation and Real Vehicles

Researchers struggle with heterogeneous vehicle and simulation data. VSS-compliant exporters for BeamNG and SimHub standardize telemetry, reducing preprocessing and enabling seamless integration of simulated and real datasets.

Agua

VSS is known for vehicle-to-cloud and inter-ECU communication, but automotive researchers face a different standardization problem: data heterogeneity across platforms. A colleague's ML project analyzing autonomous driving algorithms required aligning 200+ features from multiple vehicles in different formats—manual feature mapping became a major bottleneck. When combining simulation data (BeamNG, CARLA) with real vehicle telemetry, researchers waste time on format conversion instead of analysis. VSS could solve this, but it hasn't been available in simulation tools.

We've developed VSS-compliant telemetry exporters for BeamNG and SimHub (tested across multiple sim racing games). These tools demonstrate a new VSS application: dataset standardization for research workflows. By generating simulation data in VSS format, we eliminate preprocessing overhead when integrating with real vehicle datasets. This isn't just simulation-to-vehicle integration—it's showing VSS as a practical solution for the data wrangling problems researchers actually face.

We will be extending this to CARLA and exploring other widely-used simulation platforms. The goal: establish VSS as the common data schema for automotive research, enabling seamless dataset portability between virtual and real testing environments. We welcome collaboration with COVESA members to identify priority platforms and develop guidelines for VSS in research contexts.

Bhargab Acharya

3:50 PM - 4:10 PM

Flexible Break □□□□□- Sponsored by MOTER Technologies Inc

It's been quite a day, but don't let that slow your momentum! Take a quick break with us, grab a snack and a coffee, and recharge your energy. You've got this!

Auditorio Foyer

4:10 PM - 4:35 PM

Generative AI Group - Working Session - Generative AI for Automotive Engineering: From Concept to Code

Generative AI Group - Working Session

Agua

The COVESA Generative AI Group is building practical AI tooling for automotive digital engineering. We present our first concrete output — the vss-translator MCP server enabling AI assistants to author, validate, and convert VSS signal specs — and dive into the DBC/CAN-to-VSS translation use case. The second half covers our ASPICE MAN.3 agent framework and opens the floor: bring your use cases and help shape the group's roadmap.

4:10–4:15 - Welcome + Who are we? - Yansong / Georg
4:15–4:40 - Community Update: From Vibe Coding to Spec-Driven Development - Georg
4:40–5:00 - Use Case Deep Dive: DBC → VSS Translation - Bogdan Racotea
5:00–5:20 - ASPICE Role Agents: MAN.3 Framework progress - Ragip Selcuk / Susan Butler
5:20–5:25 - Open Discussion: Bring your use cases - Yansong (moderation)
5:25–5:30 - Wrap-up + Action items - Yansong / Georg

Dr. Yansong Chen
Georg Doll

Technical, Working Session

Integrating Open-source Semantic Reasoners to CDSP: Call to Action

CDSP adds semantic reasoning but relies on a single proprietary engine. This work proposes a multi-reasoner, open-source approach with adapters, benchmarks, and governance to enable transparent, reproducible decision logic for SDV innovation.

Ar I & II

COVESA have established the Central Data Service Playground (CDSP) as a neutral, open environment for experimenting with data-centric architectures across VSS/VISS, cloud backends, and adjacent-industry use cases. With the addition of rule-based semantic reasoning in the Knowledge Layer, CDSP is starting to support deterministic, explainable decision logic that moves beyond scattered IF-ELSE code. However, the current Knowledge Layer Server depends on a single non-open source reasoner, which creates practical barriers for open adoption, long-term evaluation, and reproducible benchmarking across the community. This presentation is a call to action to make CDSP “multi-reasoner ready” by integrating permissively licensed open-source semantic reasoners alongside existing implementations. We will report our initiative (BMW and TU Berlin) in implementing and benchmarking open source semantic reasoners. This initiative aims to provide a minimal Reasoner Adapter interface (rules/ontology loading, incremental updates, query/inference API, and explanation hooks), a shared benchmark harness built around representative VSS/VDM scenarios, and a contribution workflow that lets members plug in new engines and compare them fairly. Attendees will leave with three concrete outcomes: (1) an agreed integration blueprint and backlog for an OSS reasoner option in CDSP, (2) a candidate short-list and evaluation criteria (performance, determinism, deployability, licensing), and (3) a roadmap to turn these contributions into a community-maintained capability that accelerates SDV and fleet-data innovation.

4:10 PM - 4:50 PM

Deriving Actionable Insights from Vehicle Data to Advance Business, Safety, and Operations

Auditorio

Modern road administrations, fleet operators, insurance companies, and a host of other organizations are increasingly leveraging vehicle data generated by connected car platforms to improve how they operate, maintain, and manage their roads, fleets, and products. This panel explores how actionable insights can be derived to:

- Enable faster, evidence-based decision making for road safety
- Determine vehicle utilization and uptime, as well as active residual value across the vehicle lifecycle
- Facilitate proactive risk mitigation, operational optimization, and loss reduction
- Leverage vehicle data to manage personal and commercial fleets

The panel will discuss the foundations required to support insights that span OEMs, fleet operators, leasing and finance providers, insurers, and road safety stakeholders.

Harry Powell
Jose Carlos
Michael O'Shea
Roger C. Lanctot
Ted Guild

Business Session, Panel Session

4:40 PM - 5:30 PM

Generative AI Group - Working Session

Generative AI Group - Working Session

Agua

Generative AI Group - Working Session

Using AI for Signal Translation/Mapping

Bogdan Racotea
Dr. Yansong Chen
Georg Doll
Josef Mleziva

Technical, Working Session

Ready to Go Together: Unveiling JASPAR's New OSS Project

Ar I & II

JASPAR, after two years of activities in its API Working Group, is now ready to release the results as open source. These outcomes extend and further reinforce the long-standing efforts of COVESA. In this session, we will provide the world's first in-depth overview of what will be released as OSS and share the direction for accelerating future collaboration with COVESA.

Shinichi Suzuki
Takafumi Yoshida

Technical, Technical Presentation

5:30 PM - 8:00 PM

COVESA Member Showcase & Reception

Ballroom

The COVESA Demo Showcase is an event where you'll get the chance to witness demonstrations of vehicles and products. It's an exciting opportunity to see firsthand what members and partners have been working on.

Additionally, while you explore the show floor and engage in networking, you'll have the chance to enjoy local cuisine and cocktails. It's a great way to experience cutting-edge innovations while also indulging in delicious food and drinks.

Special Events

Thursday, April 23

9:00 AM - 9:25 AM

Agentic AI in the Smart Cockpit: Emerging Security Gaps at the Edge

Traditional cybersecurity falls short against prompt injection, tool misuse, and cross-domain actions, requiring a risk-based edge AI security architecture that preserves performance and trust.

Agua

As in-vehicle AI systems evolve from passive voice interfaces to multimodal, agentic applications, the security model of the smart cockpit must be re-evaluated. Unlike earlier infotainment systems, these AI architectures reason, plan, invoke tools, and increasingly operate across vehicle domains. This expanded capability fundamentally changes the system's risk profile, introducing threats that traditional automotive cybersecurity approaches were not designed to address. Prompt injection and jailbreak techniques can manipulate model tool-using decisions rather than exploit code, enabling the hijacking of AI models and agents. Meanwhile, the erosion of domain isolation assumptions increases the potential impact of compromised AI behavior across vehicle services and user data.

This presentation will explore emerging attack paths, including tool misuse, agent context manipulation, and unintended cross-domain actions, and understand why model-level safeguards alone are inadequate. It will examine why cloud-centric AI guardrail models are insufficient for in-vehicle deployments, where security cannot come at the cost of real-time performance or interaction quality. Finally, it will outline a forward-looking, risk-based security architecture for edge AI systems — an approach that preserves performance while enforcing trust boundaries, validating tool outputs, protecting memory integrity, and inspecting AI inputs and outputs where decisions are made.

Gregor Knappick

Technical, Technical Presentation

Vehicle Information Service Specification - Community Update

Project Status Update

Ar I & II

Project Status Update

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What is the focus/being done at this AMM

What is the focus until next AMM

Ulf Björkengren

Community Update, Technical

9:00 AM - 9:50 AM

Software Defined Vehicles (SDV) – From Vision to Reality

Auditorio

The Software Defined Vehicle (SDV) has rapidly progressed beyond a theoretical concept. Original Equipment Manufacturers (OEMs), Tier 1 suppliers, software developers, and engineering service providers are engaging in collaborative efforts to develop next-generation software-centric architectures. These architectures aim to enable a new range of hyper-personalized consumer experiences. To successfully navigate this transition, it is essential to focus on software commercialization, which involves establishing new partnerships, refining product development processes, standardizing common data models, creating scalable software solutions, and generating new revenue streams. This panel will discuss the challenges and collaborative opportunities within the supply chain to address these issues collectively, moving away from the traditional commodity-based approach of the past.

Santhosh Jogi
Brian Carlson
John Heinlein PhD
Tim Yerdon

Business Session, Panel Session

9:30 AM - 9:55 AM

Extending VISS-Based Vehicle Data Synchronization Toward a Scalable Cloud Reference Architecture

An updated VISS-based experiment syncing vehicle data to the cloud. By simulating larger fleets, it explores mapping, transformation, scaling, and trade-offs, proposing a reference architecture for designing connected vehicle data backends.

Ar I & II

Description:

This session presents an evolution of an ongoing experiment of synchronizing vehicle data to cloud backends using VISS. The integration is updated to the latest VISS release and expanded to explore additional feeder capabilities that better reflect how vehicle data can be mapped, transformed, and scaled in backend systems.

The scope is extended by simulating a larger vehicle fleet to provide a more realistic view of data volume, structure, and access patterns. The talk focuses on practical observations and trade-offs, and proposes a reference architecture that can be used both for hands-on experimentation and for guiding early design decisions on how to model and manage connected vehicle data in the cloud.

Rami Pinto
Ulf Björkengren

Technical, Technical Presentation

Operationalizing a CSMS for SDVs: Architecture - Centric Cybersecurity Management

Architecture-centric CSMS uses AI to unify cybersecurity across the vehicle lifecycle—linking modeling, risk, testing, compliance, supply chain, and operations—enabling traceability, continuous monitoring, and evidence-driven governance for SDVs.

Agua

Description:

Operationalizing an Architecture-Centric Cybersecurity Management approach that is supported with AI-Assistance.
Why architecture-centric matters: Context + Traceability. Unifying security activities across the vehicle lifecycle from system/threat modeling and risk assessment/treatment to validation/test, continuously managed compliance reporting, supply chain security and vulnerability mapping & incident management to operationalize controls into monitoring. This presentation will also be linked with and reference a technical whitepaper that will be provided.

Overview:

SDV Challenge & Regulatory Context

Architecture-Centric CSMS Concepts

Core Workflows (TARA, SBOM, Testing)

Operationalization (Controls -> SEvs -> VSOC)

Governance + Evidence (Catalog, Policy, Compliance, AI-Assistance)

Moustafa Elkoumy

Technical, Technical Presentation

10:00 AM - 10:25 AM

Leveraging VSS to Build Enhanced AI Models for Collision Detection and Real-Time Analytics

AI collision detection needs large, reliable vehicle data. Third-party sensors create inconsistency, limiting model quality. Standardized data via VSS and VISS enables accurate real-time analytics, better driver coaching, and safer roads.

Ar I & II

Accurate prediction, detection, and reconstruction of vehicle collisions are essential for improving road safety and reducing fatalities. AI models enable real-time collision detection, severity assessment, driver coaching, and risk forecasting, but they require large, high-quality datasets for training.

Today, such data is often obtained through third-party hardware like AI dashcams or OBDII dongles. These approaches introduce uncertainty due to installation errors, device damage, proprietary preprocessing, and limited data coverage. As a result, models built on these sources may not generalize well and can perform poorly in real-world deployment.

Using standardized vehicle data models such as VSS (Vehicle Signal Specification) and interfaces like VISS (Vehicle Information Service Specification) provides consistent, richer, and more reliable access to vehicle data. This enables the development of more advanced collision detection and real-time analytics, supporting driver coaching, risk mitigation, and ultimately safer driving experiences.

Ian Chaffey

Technical, Technical Presentation

Navigating the Road Ahead: Agentic AI — Promise, Pitfalls, and the Path to Adoption

Auditorio

AI is evolving at an unprecedented pace. In just the past twelve months, the landscape has shifted from early experiments with reasoning models and tool use to a full-blown ecosystem of agentic frameworks — Cursor, Claude Code, Codex, OpenClaw, and many more — that are reshaping how teams write code, manage documentation, triage communication, and coordinate complex work.

These aren't theoretical capabilities. Engineering teams are already using coding agents to debug production issues in minutes instead of hours, reverse-engineer legacy systems with minimal documentation, and maintain knowledge bases that stay accurate over time. Beyond the codebase, agentic AI is stepping into meeting facilitation, email triage, and cross-team coordination — tasks that have traditionally consumed disproportionate amounts of human attention.

But the promise comes with real traps. The familiar challenges of hallucination, limited context windows, and verbose outputs remain. More critically, as organizations move from pilots to production, new pain points are emerging: service reliability when teams depend on agentic infrastructure, token costs that scale faster than expected, and governance gaps around supervision, accountability, and auditability of AI-driven decisions.

This talk takes a candid look at both sides. Drawing on practical experience, it explores what agentic AI can realistically deliver today, where the hidden costs lie, and why the organizations that succeed won't be the ones that bolt AI onto existing processes — but the ones that blend it into every level of their operations, from individual workflows to corporate governance, and allow their processes to evolve alongside the technology.

The road ahead is fast, complex, and full of potholes — but it's the most exciting road our industry has seen in decades.

Open Source Threat Intelligence

Agua

This presentation shares a first-hand, practitioner’s journey into open source threat intelligence at ASRG, approached from a true beginner’s perspective. Without a background in software development or formal intelligence analysis, the challenge was to build publicly available intelligence feeds that increase transparency and help the automotive industry better understand product-relevant threats. The talk covers early tooling decisions, lessons learned from using both commercial and open source platforms, and the limitations encountered when applying IT-centric intelligence models to product and vehicle security use cases.

The session then focuses on ASRG’s migration to OpenCTI and the evolution of enrichment pipelines built using no-code and low-code solutions. Attendees will learn how automation platforms, public dashboards, and relationship-driven data enabled scalable enrichment aligned with SAE/ISO-21434 needs, while also hearing candid lessons from

John Heldreth

Technical, Technical Presentation

10:30 AM - 10:55 AM

Morning Break □ □□- Sponsored by MOTER Technologies Inc

Grab a cup of coffee and a snack while you mingle and network between sessions. It's the perfect blend of productivity and indulgence!

Auditorio Foyer

11:00 AM - 11:15 AM

In-Vehicle Payment

Group Status

Auditorio

Jens Kohnen
John Moon
Mark Gerban

Business Session, Presentation

11:00 AM - 11:25 AM

EU Data Act Project Status Update

Project Status Update

Ar I & II

Project Status Update

What has been done since last AMM

What is the focus/being done at this AMM

What is the focus until next AMM

Christina Rux

Community Update, Technical

From Signal to Service: Adaptive AI in SoftwareDefined Vehicles Enabled by AAOS and COVESA Standards

Agua

This session presents a software-defined vehicle architecture that demonstrates how vehicle data can be transformed into actionable intelligence using AI, with relevance for connected commercial and fleet vehicles as well as adjacent industries. We present a fully vertically integrated in-vehicle AI demonstrator, spanning from hardware signals to the infotainment layer, shown from both an OEM and an aftermarket perspective.

Based on AOSP Android Automotive, the architecture uses the Vehicle HAL (VHAL) as a standardized interface for in-vehicle signal access and control. Vehicle signals are transported via CAN-over-Ethernet using an Open1722 proxy, enabling scalable and vehicle data access.

The system integrates live camera streams from both an OEM perspective and an aftermarket perspective, illustrating how AI-enabled vehicle data can be exposed beyond OEM boundaries. Video data is processed by AI models for object detection, face recognition, and gaze estimation, turning raw sensor data into meaningful semantic information.

A newly introduced AI HAL enables structured configuration and orchestration of AI workloads and supports adaptive AI behavior by combining vehicle context (e.g., vehicle start, door events) with AI model execution. This highlights the importance of vehicle data as a core asset for adaptive AI.

Michael Spitzer

Technical, Technical Presentation

11:15 AM - 11:55 AM

In-Vehicle Payment & EV-Charging: State of the Industry

Auditorio

As EV adoption scales, the charging experience remains bottlenecked by fragmented payment systems, requiring drivers to juggle multiple RFID cards and CPO apps. Today, the software-defined vehicle is poised to solve this through native, in-vehicle payments but the industry is currently navigating two distinct approaches to achieving a seamless checkout.
This panel brings together mobility and fintech leaders to dissect the technical and commercial realities of the EV-charging payment landscape. We will explore the dual tracks driving the industry forward: the push for EMVCo Open-Loop standards, versus the Car-Wallet / Plug & Charge approach, where the vehicle itself acts as the secure, tokenized payment credential.

Key Takeaways:
- The Two Paths to Payment: A comparative look at EMVCo open-loop infrastructure versus vehicle-bound, closed-loop/wallet architectures.
- Open-Loop Standardization: How the newly released EMVCo final papers will impact charging hardware, interoperability, and the roaming ecosystem.
- The Car-Wallet in Action: A practical breakdown of the live BMW, Hubject, hellgate.io, and MER deployment—how the vehicle securely authenticates and pays.
- Architecting the Future: How OEMs, CPOs, and fintechs can reduce backend fragmentation and deliver a truly seamless "charge and go" experience.

Cezary Faszczewski
Jens Kohnen
John Moon
Steffen Rhinow
Will Judge

Business Session, Panel Session

11:30 AM - 11:55 AM

AdVantage Auto: Unlocking the Cabin Economy

Ar I & II

This proposal outlines a strategic partnership between automotive manufacturers (OEMs) and Out-of-Home (OOH) advertising firms to revolutionize billboard targeting through real-time passenger analytics. By leveraging anonymized, aggregated data from connected vehicle sensors— such as passenger count, demographic profiles derived from infotainment logins, and route intent—we can transform static roadside displays into dynamic, high-conversion assets. This ecosystem allows automotive companies to monetize their vast data streams while providing advertisers with unprecedented "eyes-on-glass" accuracy, moving the OOH industry from broad geographic estimates to precise, audience-based programmatic buying.

The technical implementation focuses on a privacy-first data exchange that synchronizes vehicle location with billboard proximity. When a connected Copyright Please note that the slides and possibly a recording of the final presentation will be made available for download on the COVESA website after the event for unrestricted distribution. The final presentation shall only contain material that can be distributed in this manner. By submitting your abstract or presentation, you attest that you are the copyright owner of the material contained in your presentation or received prior written consent of the respective copyright owner and therefore are authorized to grant COVESA permission to post your submission on our website for unrestricted distribution. (Note: speakers/entities will retain the copyright of the material in their presentation.) COVESA All Member Meeting, Porto, Portugal Proposal and abstracts for a presentation on 22 or 23 April 2026 Abstract (1-2 paragraphs) vehicle approaches a digital billboard, the OEM’s onboard system transmits a high-level audience snapshot to the advertising server, triggering a creative asset tailored to the specific interests or demographics

Shift Education and Research to SDV: VSS implementation in Experimental and Virtual SDV platform (Demonstrator)

Agua

The transition to software-defined vehicles (SDVs) is fundamentally changing the automotive industry and creating a growing demand for engineers who understand software-oriented vehicle architecture and standardized vehicle interfaces such as VSS. Technical universities and research centres need to adapt to SDV methodology when designing study programs, research infrastructure, and concepts developing. This session will examine the importance of integrating SDV and VSS principles into technical education and demonstrate an approach to presenting modern vehicle software systems.

The presentation introduces an experimental SDV platform built on a standard production vehicle that has been extended to support SDV-oriented applications and data abstraction. In addition, a simulation-based virtual SDV laboratory enabling students to experiment with vehicle services and software functions in a safe and scalable environment. Both platforms demonstrate the implementation of selected use cases based on the Vehicle Signal Specification (VSS), providing practical examples of standardized vehicle data access. Together, these platforms create an educational ecosystem that bridges theoretical knowledge with hands-on SDV development and experimentation.

Tomáš Mrověc

Technical, Technical Presentation

12:00 PM - 12:25 PM

Finding the right balance between open source, commercial and inhouse developed software

SDV shifts require balancing in-house, open-source, and commercial software. Open source lowers cost but adds long-term maintenance risk; commercial solutions provide SLAs and expertise. A strategic mix is essential.

Agua

The transition towards Software-Defined Vehicles (SDV) forces the industry to rethink the right balance between in-house development, open-source software, and commercial solutions. Initiatives such as COVESA and the Eclipse SDV working groups are creating valuable open-source foundations for non-differentiating software. Yet, open source is not “free” in the automotive context. Vehicles remain in the field for 15–20 years, and long-term maintenance, security updates, and compliance cannot be left solely to the community.

Relying entirely on open source means either dedicating scarce in-house resources to maintain large code bases or paying third parties for support— often at a significant cost, with the added risk of depending on niche expertise and facing a new form of vendor lock-in. Commercial software, in contrast, typically comes with service-level agreements (SLAs), guaranteed support, and subject-matter expertise, especially in critical areas like cybersecurity. This reduces risk for OEMs, who remain ultimately responsible for fixing vulnerabilities regardless of code origin.

Cybersecurity adds another layer of complexity: beyond the direct cost of patches or recalls, reputational damage and regulatory penalties—such as those under GDPR—can be substantial. Thus, there is no one-size-fits-all solution. A thoughtful mix of in-house, open-source, and commercial software—applied where each makes the most sense—will be key to building sustainable and secure SDV architectures.

Bernd Niedermeier

Introducing the Connectivity-Defined Vehicle

Auditorio

Description:

There’s a lot of talk about software-defined vehicles, but the reality is that connectivity will define the vehicle of the future as it already defines many vehicles today. Connectivity is now implicated in safety, infotainment, contextual marketing, data sharing, vehicle-based commerce, and monetization. Market leaders like Tesla and General Motors are turning to subscription-based models which are clearly connectivity dependent and generating billions of dollars in revenue.

The reason connectivity is such a defining value proposition is because of its inherent complexity. Antennas must be refined and tested, semiconductors and modules must be crafted to support multiple modes of connectivity. And software must be written to manage connectivity processes which will increasingly allow for switching between connectivity providers and connectivity types.

As the automotive industry electrifies, car companies will be more dependent than ever on wireless connections to evolve and manage customer relationships and replace lost aftermarket revenue from waning sales of internal combustion vehicles. Connectivity will ultimately enable advanced orchestration of vehicles that ought to reduce highway fatalities while increasing vehicle throughput on already crowded roadways. Cellular, satellite, V2X, Wi-Fi, private 5G are all implicated and will all play a role in this evolution. At the same time, each connectivity branch will continue to undergo its own unique evolution and standards-setting activities – posing the ultimate challenge for car makers seeking to keep pace and differentiate their offerings.

Roger C. Lanctot

Business Session, Presentation

Scalable function development for SDV

Software-defined vehicles are shifting E/E architectures from domain ECUs to zonal and centralized compute. Standardized interfaces and reusable function patterns enable deployment across architectures and support migration.

Ar I & II

The introduction of Software concepts into the vehicle and its' surrounding ecosystem lead to the (R)evolution of E/E Architectures at the car manufacturers. The journey begins for most OEMs at a decentralized or Domain centric architectures where functions realized on single special purpose ECUs are connected together, over a Server Zone architecture where a less strict allocation of functions and the introduction of Zones and HPCs (High Performance Computers) is done, to a Central Compute or Zero Edge architecture in which most of the functionality is centralized in a kind of board computer and Sensors and Actuators are hosting no Software or a very small, more "firmware" like, software. While the journey is ongoing in most OEMs E/E architecture evolutions the destination of the journey and the speed of travel is different. This leads to the challenge that the Functions developed in the industry based on decades of Domain Know-How have to be deployed to different vehicle architectures. Therefore, the approach of developing functions must be changed: Following a pattern that allows the re-use of the functions in the three beforementioned architectures and hybrids of them, that allow an easier migration of the OEMs to new architectures and aims to increase the re-use through different vehicle lines and generatons.

The pattern consists of 3 levels of standardized interfaces and is realized over 4 levels of Software and is based on existing and proposed standards. This can lead to innovative products and solutions that allow for virtual development and end to end testing. With COVESA VSS can be used for semantic API and the COVESA Community can look into standardizing other interfaces and shaping existing and

12:30 PM - 2:00 PM

Networking Lunch □□ □□□

Composto Restaurant - Ground Floor

2:05 PM - 2:20 PM

Cybersecurity Group Status

Group Status

Auditorio

Chuck Brokish
Rex Struble

Business Session, Presentation

2:05 PM - 3:00 PM

In-Vehicle Payments: COVESA Workshop & White Paper Discussion

Agua

This interactive workshop will focus on the recently developed COVESA In-Vehicle Payments (IVP) white paper, which highlights key opportunities, technical challenges, and industry needs related to payment enablement in the automotive industry. Participants will actively discuss the findings and recommendations in the paper, with an emphasis on identifying shared priorities and possible paths toward a common framework. The session will also consider the proposal to strengthen the dedicated COVESA work group, which aims to develop a formal industry standard for in-vehicle payments by uniting OEMs, payment networks, mobility providers, and technology partners to shape the future of automotive commerce through open collaboration.

Jens Kohnen
John Moon
Steffen Rhinow
Will Judge

Technical, Working Session

2:20 PM - 3:00 PM

Automotive Cybersecurity – The Road Ahead

Auditorio

Automotive cybersecurity and privacy is crucial because it protects vehicle occupants, their data, and the vehicle itself from malicious cyberattacks. As vehicles become more connected and reliant on software, the potential attack surface expands, making robust cybersecurity measures and the use of AI essential. AI plays a crucial role in automotive cybersecurity by enabling faster, more accurate, and proactive threat detection and mitigation.

Andrew Kolisnyk
Chris Moyer
Giuseppe Serio
John Heldreth
Moustafa Elkoumy
Tim Yerdon

Business Session, Panel Session

3:35 PM - 4:00 PM

Flexible Break □□□□□- Sponsored by MOTER Technologies Inc

It's been quite a day, but don't let that slow your momentum! Take a quick break with us, grab a snack and a coffee, and recharge your energy. You've got this!

Auditorio Foyer

5:00 PM

Event End