



thinkingcars

AACHEN AUTOMOTIVE COLLOQUIUM 2026

Orchestrating Autonomy

Accelerating Open-Source Innovation
in Automated Driving

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WHY OPEN SOURCE

Automated driving is too big to build alone.

Electronics and software

Software: German Car Companies Join Forces Against Tech Giants

(dpa/clz) At the Automotive Electronics Congress 2025, major automobile manufacturers will sign a memorandum for the cooperative development of open-source software. This is intended to brace against initiatives by tech companies like Google that are pushing into the market.

Carmakers and suppliers commit to developing non-differentiating software together, in the open.

BUSINESS | GERMANY

German car industry sheds 51,500 jobs in a year

Mark Hallam
08/26/2025

Cost pressure: nobody can afford to build every layer alone.

DIFFERENTIATE

What makes your vehicle yours

Features, integration, user experience.



SHARE · AUTOMATED DRIVING

OpenADS

Open, modular or E2E driving stack.



SHARE · MIDDLEWARE

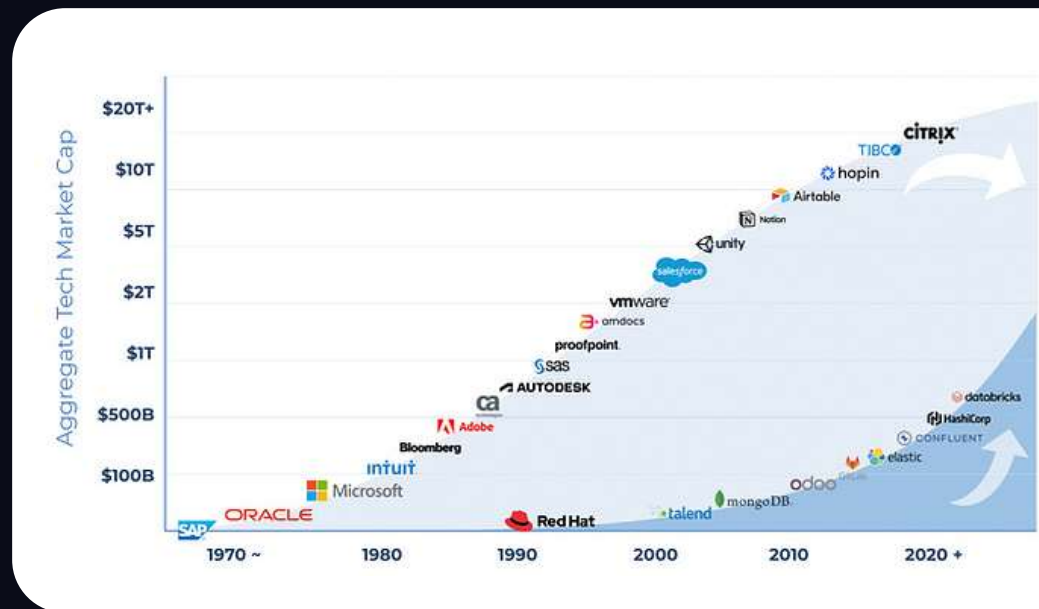
Eclipse S-CORE

Backed by carmakers and suppliers.

Sovereignty means control over your AD roadmap: feature priorities, release timing, supplier choice.

WHY OPEN SOURCE

Many companies understood the business case. Where is automotive?



All CNCF Companies statistics (Contributions, Range: Last decade), bots exclu... ▾		
Rank ^	Company	Number
	All	22078542
1	Red Hat Inc.	2940356
2	Google LLC	2407658
3	Microsoft Corporation	1177976
4	VMware Inc.	897786
5	Independent	625447
6	International Business Machines Corporation	550159
7	Isovalent	488439
8	SUSE LLC	345189
9	Splunk Inc.	306252
10	Amazon	278054

THE CATCH

A GitHub repository is **not a safety case.**

SUPPLIED SOFTWARE

Evidence comes with the contract.

The supplier runs the development process and delivers the work products that your safety case builds on.

OPEN-SOURCE SOFTWARE

The burden of proof moves to you.

The code comes, the evidence does not. Nobody signs for it: the adopter produces it per component, per version, per ODD.

AND THE BAR IS RISING



2024

ISO/PAS 8800 published: safety and AI in road vehicles.



JUN 2026

UN R185 & UN GTR No. 26 adopted: driverless systems must be at least as safe as a competent and careful human driver.



2027–28

EU AI Act high-risk obligations phase in.

THE NECESSITY

Qualification needs **benchmarks**, not reputation.

WHAT ADOPTION RESTS ON TODAY

GitHub stars and activity

Demo videos

Leaderboards on public datasets

Months of in-house evaluation per component

None of it goes into a safety case.



01 Reproducible

Every run containerized. Same input, same result, re-runnable on demand.

02 Representative

Scenario-based, on your data and your ODD. Not on a demo set that flatters the results.

03 Comparable

One published methodology for every candidate, whatever its origin.

04 Traceable

Every result linked to the exact deployment it ran in, and mapped to your requirements.

THE ECOSYSTEM

Benchmarks have to become shared infrastructure.



OUR CONTRIBUTION

A benchmark methodology validated in UNICARagil and autotech.agil. OpenADS, supported by Thinking Cars within Ecosystem Mobility 4.0.



THE MESSAGE

Share the code. Qualify it with benchmarks.



Our role: the independent evidence layer for open-source AD.

WHAT WE DO

Qualify components

Discover the right open-source components, benchmark them reproducibly on your data and ODD, and document the results aligned with ISO 26262 / ISO 21448.

HOW WE SUPPORT IT

Shared benchmarks

OpenADS, supported by Thinking Cars within Ecosystem Mobility 4.0. One published methodology for every component. Score Board for continuous evaluation, coming 2027.

YOUR NEXT STEP

Name one component

Tell us which open-source component you are weighing. Within 2–4 weeks, we map it and deliver a clear adopt/avoid recommendation. Pilot partnerships open in 2026.

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