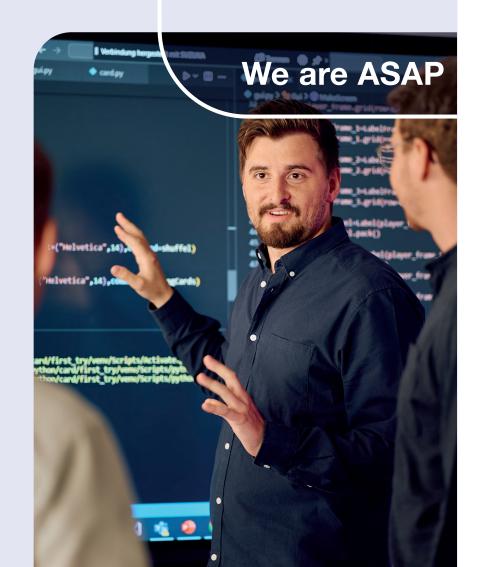
Our driving force is the automobile – our task is the development of future-oriented technologies. As a development partner to the automotive industry, the ASAP Group offers comprehensive services with a focus on the mobility of the future. As an independent subsidiary of the global player HCLTech, we combine stability with an innovative mindset. We are future-oriented and always have the latest technologies firmly in mind.

Benefit from our development expertise in the areas of electromobility, autonomous driving and connectivity. With our five service segments – Electrics/Electronics, Software, Consulting & Service, Test & Validation, Vehicle Engineering – our strategic development focus is on the future-oriented technologies of the automotive industry.



# get in touch

Any questions or projects that you would like to discuss? We'd love to share ideas and explore synergies with you.

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## Validation of exterior lighting



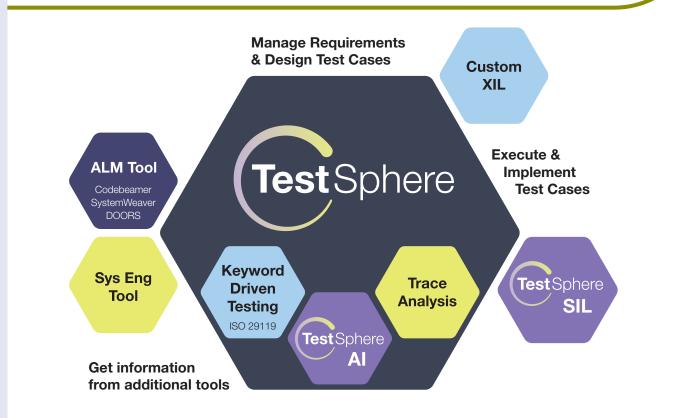
#### Challenges for hedging

The exterior light of a vehicle is central to safety, design and innovation. It must ensure both clear communication to the outside world and safety for the driver and other road users. However, new functions such as adaptive headlights and communication lights pose new challenges for safety. Safety-relevant functions for Level 2 and 3 autonomous driving require innovative test approaches, as conventional methods are not sufficient here. A virtual test environment that comprehensively covers all variables on the test bench is crucial for meeting high requirements.

### New methods for functional exterior lighting validation

TestSphere, the innovative end-to-end validation framework from ASAP, sets new standards in userfriendliness and traceability in the test process. Data and information are harmonized, visualized and managed centrally in the TestSphere Editor. This contains all essential information – from the requirement to the test report. TestSphere does not replace any of your existing tools – it aggregates the data using interfaces to tools and thus significantly simplifies the work of the testers and reduces costs in the test process.

# TestSphere: Al-powered end-to-end validation for automotive excellence



#### TestSphere in exterior lighting validation

- Automation: Execution of test cases on different test instances (SiL, HiL, ...)
- Harmonization: Aggregation of data from existing tools
- Keyword-Driven Testing: ISO-compliant test
  steps readable by humans and machines
- Comprehensive: One-off implementation of test cases, independent of the test system
- Efficiency: speed up test processes, simplify changes
- Consistent: Enables tracking of the test process –
  from requirement to test execution
- Al-powered: Suggestions and support for test
  and requirement design

### Scenario-based testing

- Application: Extended for exterior light functions, based on ADAS
- PEGASUS project: Integrated research for highly automated driving functions
- Test complexity: Reduced by specific scenarios
- Dynamic tests: For varying traffic and weather conditions
- Specification: Precise definition of scenarios
  and test cases
- Efficiency: time and cost savings, risk consideration