Do you need to reuse pre-existing open-source software in your safety-related projects?

Do you need to reuse Linux, Linux-based distributions, or AD/ML libraries?

Are you investigating if it is better to into the direction of proprietary certified microkernel-based OSes or go for open-source?

Are you working on qualification of open-source components like hypervisors, microkernels, kernels, user-space libraries, or middleware?

Do you need to reuse complex proprietary pre-existing software in safety-related projects?

DE0806 How to reuse of pre-existing open-source software - in accordance with ISO/PAS 8926 and ISO 26262

Currently, ISO 26262 does not provide requirements for reusing (qualifying) preexisting complex software elements. Even if there is a new standard, ISO PAS 8926, that builds on top of ISO 26262 and provides some regulatory guidance, this standard does not provide any clear solutions.

To close this gap, this training will provide you with clear guidance on how to qualify complex pre-existing software that was not developed in accordance with safety standards.

The training applies both to open-source and closed-source software.

It is based on several standards, in particular with the current ISO PAS 8926 and ISO 26262.

General approach:

The *exida* approach is to explain key issues and correspondingly propose a working solution both at the process level (e.g., how to structure the development, what work products are needed, how to achieve an assessment or certification) and at the technical level (e.g., how to perform a safety analysis, how to derive necessary safety mechanisms or safety measures, how to define KPIs or apply statistical methods).

The main focus of this training is on the safety reengineering of the software – so how to, at the technical level, correctly the software architecture/design/implementation by applying necessary changes like adding safety mechanisms based on safety analysis. But the training will cover all activities, from defining the overall qualification strategy to the safety case.

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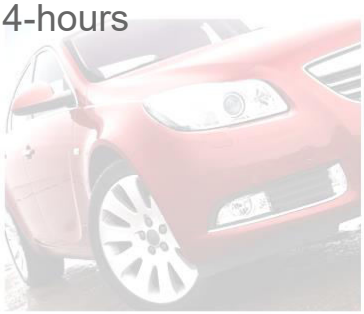
Who should attend?

- Functional Safety Engineers
- Software Safety Architects
- Product Owners
- Software Developers



Duration: 8 hours split as four 2-hours sessions or two 4-hours sessions

Language: English

Location: online

Certificate: Each participant gets a letter of attendance.

For more information, please contact:
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DE0806 How to reuse of pre-existing open-source software - in accordance with ISO/PAS 8926 and ISO 26262

Agenda and Content

- Overall qualification strategy (methods & measures)
  - Overview of the qualification approach, based on ISO 26262 and ISO PAS 8926
- Impact analysis
  - How to perform impact analysis and determine provenance class and complexity at component and function level
- Proven in use analysis
  - How to perform proven-in-use analysis, provide the necessary evidence, and provide extensions
  - What additional verification activities are needed
- Safety plan
  - How to create and maintain a safety plan for reuse projects
- **SW reengineering**
  - **The main part of this training, describing how to efficiently perform minimal SW architecture for the purpose of doing safety analysis and deriving new safety measures and safety mechanisms**

DE0806 How to reuse of pre-existing open-source software - in accordance with ISO/PAS 8926 and ISO 26262

- Testing
  - How to test SW, at each level, by the combination of different testing strategies, including statistical test methods
- Safety case
  - How to create a GSN-based safety case and maintain it continuously
- Assessment/certification strategy
  - How to prepare for and achieve assessment or certification