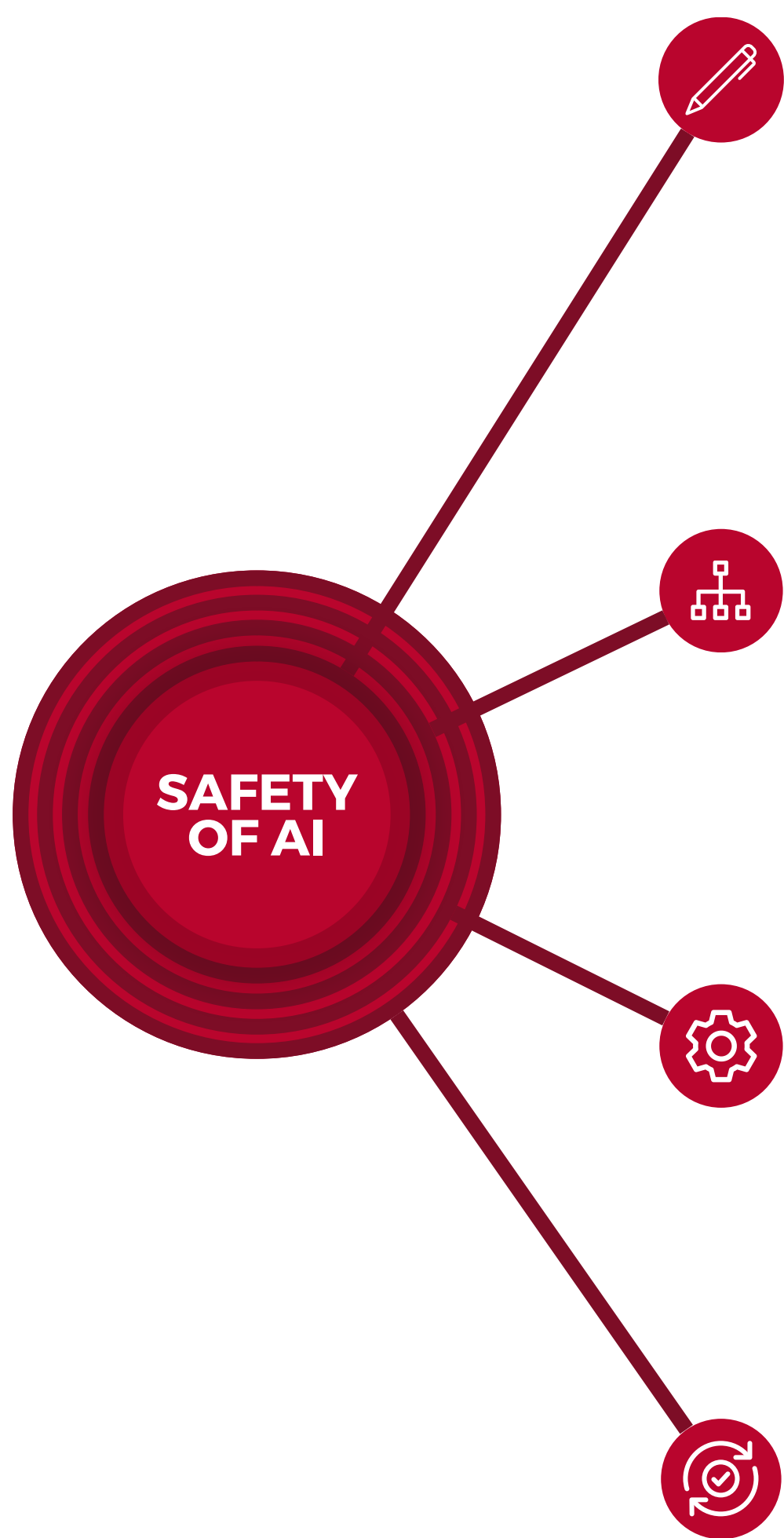


Guideline for AI in safety-critical applications

This guideline contains a list of principles to enable the development and deployment of Artificial Intelligence in safety-critical applications. The principles address AI specific challenges and insufficiencies and provide recommendations to ensure the safety of a system.



Functional specification

1. Specify intended component and system behaviour
2. Define the Operational Design Domain
3. Perform domain specific risk analysis

Architectural design

4. Use AI only where necessary
5. Implement AI only at component level
6. Prevent too complex AI sub tasks
7. Make use of redundancy strategies
8. Employ an independent Safety Monitor

Implementation methods

9. Ensure decisions are exclusively rule-based
10. Select suitable AI approach for each specific task
11. Base implementation on established coding guidelines

Training, testing and validation

12. Define quality gates for training, validation and test data
13. Define task specific validation metrics
14. Apply independent safety assessment
15. Develop a maintenance strategy

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We strive for a world in which safe and sustainable mobility systems improve people's lives. To achieve this, we support our visionary customers and partners worldwide. Together, we help connect and mobilize all people

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