SafetyBarrierManager, a software tool to perform risk analysis using ARAMIS’s principles -
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**SafetyBarrierManager, a software tool to perform risk analysis using ARAMIS’s principles**
The ARAMIS project resulted in a number of methodologies, dealing with among others: the development of standard fault
trees and “bowties”; the identification and classification of safety barriers; and including the quality of safety management
into the quantified risk assessment. After conclusion of the ARAMIS project, Risø National Laboratory started developing a
tool that could implement
these methodologies, leading to SafetyBarrierManager. The tool is based on the principles of “safety-barrier diagrams”,
which are very similar to “bowties”, with the possibility of performing quantitative analysis. The tool allows constructing
comprehensive fault trees, event trees and safety-barrier diagrams. The tool implements the ARAMIS idea of a set of
safety barrier types, to which a number of safety management issues can be linked. By rating the quality of these
management issues, the operational probability of failure on demand of the safety barriers can be calculated. The paper
will give a short description of the features of the tool, with emphasis on the methodologies that originate from the ARAMIS
project. The paper will also address developments and experiences over the last years, which have inspired additional
features. This includes a discussion of the use of generic management issues as opposed to concrete safety measures
targeted at specific safety barriers, which includes a discussion of the basic philosophy in the ARAMIS methodology of
dealing with safety management. The adjustments to the barrier typology is also discussed.

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