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Reducing Project Lifecycle Cost with an Integrated Safety Lifecycle Suite

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1 Abstract

The international functional safety standard IEC 61511 provides the safety lifecycle as a steadfast guideline to assess and mitigate risk for manufacturing processes including refineries, chemical, petrochemical, pulp and paper, and power plants. To achieve a functionally safe system, it is essential to follow each requirement in the standard. However, consistent execution is difficult to achieve and often depends on the tools used to perform analysis and specification of the safety instrumented system. The need for a consistent work process was fulfilled with a fully integrated safety lifecycle software suite. Lifecycle tools often include a module for each stage of the safety lifecycle. Use of the full suite ensures quality assessment and execution of a safety instrumented system, as well as compliance to the safety standard. An integrated tool would also streamline these tasks, easily transferring data from one module to another to save the user time and money.

In this paper, the benefit of using an integrated safety lifecycle tool versus use of excel spreadsheets or other in-house tools is quantified. The intent is to show how users of the software reduce the number of engineering hours, and therefore dollars spent, for each safety lifecycle task. It is assumed that all required information is available when needed. Through conservative estimates, this paper proves that it pays to use an integrated tool to support your safety lifecycle tasks and to make safety a priority.