Evaluation and Validation of a New Risk Assessment Tool

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Making informed decisions about the future is something that all organizations find challenging. To aid with this, risk assessments are performed to ensure that potential risks are identified and mitigated. However, constructing a well-functioning and accurate risk assessment tool can be difficult. This article will explain how Sandvik SRP, a manufacturer of rock processing solutions, can verify that their recently developed risk assessment tool is effective and make improvements to it.

Sandvik SRP Stationary Crushing & Screening has recently developed a new risk assessment tool for conducting performance guarantees for sold crushing and screening plants. This development was driven by a desire to move from expert-based risk assessments to those based on quantitative inputs and to create a tool that provides consistent outputs regardless of who performs the risk assessment.

The new tool does not produce outputs similar to the expert-based risk assessment used as a benchmark for evaluating its performance. However, a subsequent analysis revealed several key insights regarding the tool's performance. Notably, screens were rated as risky, while certain models of crushers were deemed to carry a negligible amount of risk to a crushing and screening plant.

From a further investigation into what caused these issues several key areas where the tool could be improved was identified. These mainly consisted of the included scope of variables, the handling of underlying data, and the way that the final risk score is calculated. This culminated in a number of recommendations to ensure that the new tool is valid and effective in conducting risk assessments.

Firstly, adjusting the variable scope of the risk assessment tool to more accurately reflect the risks would provide a more comprehensive perspective.

Secondly, adjusting the marginal impact of certain variables used within the risk assessment tool would ensure that the assessment is truthful with respect to real-life scenarios.

Thirdly, adjusting risk outcomes based on test data. The idea behind using underlying data in a risk assessment tool is good, but it is important that it is performed in a correct manner. In the new tool, there are issues using underlying data in some instances. To validate the tool, it is important that these issues are fixed. Best practice would be to continuously update the underlying data based on real-life outcomes.

Lastly, including weights for the output calculation of the tool. Certain machines can be considered to carry more risk and should be attributed higher risk in the risk assessment tool. In conclusion, the risk assessment tool performs well. If these adjustments were implemented, the tool would provide a good overview of the risk.