

Pipeline Risk Assessments

Risk Management

Integrity Management Programs are essential to guarantee safety and operational performance. It is an investment that uses the knowledge of key resources in the organization and is especially beneficial in the mid and long term.

The best way to optimize your Integrity Management Program is to focus on actual risks through a Risk Based Management methodology. To enable this capability, you need current, reliable, and suitable risk assessments.

Aellia provides Risk Assessment services that fully support your Risk Based Management Programs as part of your Integrity Management Program. Our pipeline engineers perform analyses and assessments in line with your company's integrity policies.

The in-house experts in your company can rely on our Pipeline Risk & Integrity Management Solution or PRIMS in short.

PRIMS is a highly flexible SaaS business application that provides you with the capabilities to execute Risk Assessments with internal resources. Multiple iterations through finetuning the applied model will lead to optimized results.

Our software tool PRIMS makes all forms of cooperation more efficient and reliable.

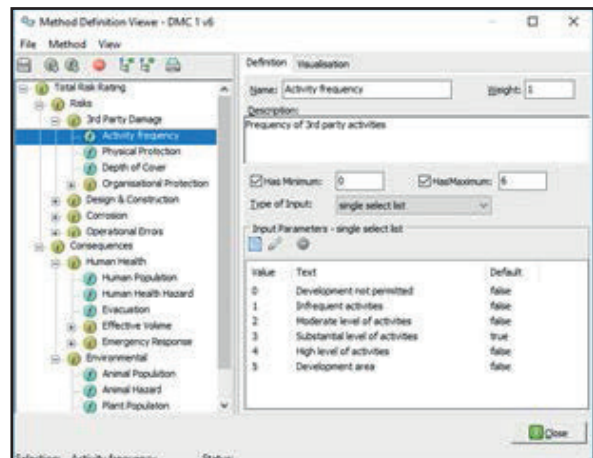
Risk Assessment types

Do you as pipeline owner or operator wonder why you seem to have endless requests to perform multiple risk assessments?

The simple answer is that different risk assessment approaches are required to give different stakeholders the information they need and that is relevant to them.

Planning authorities often require the results of Quantitative Risk Assessments (QRA) to support infrastructure planning decisions to ensure the public is not at risk. These are often mainly based on historical data and dispersion modelling, which means that they look at consequences in detail but take typical values for risk levels.

As pipeline operator, you will typically perform Relative Risk Assessments (RRA) and retrieve relevant information.

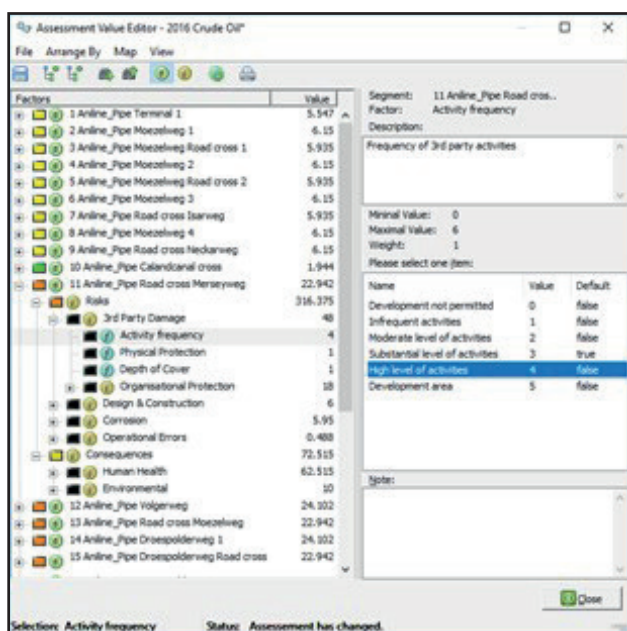


Risk Method definition capability in PRIMS

RRAs are designed to analyze the causes and potential mitigations for risks by using mechanisms that relate operational factors to risk levels. If carried out properly, this provides a complete basis for optimal use of resources across multiple pipelines, regions, and activities.

Our Risk Assessments

Our Risk Assessments provide risk scoring, which enables you to make comparisons across pipelines or pipeline segments and can be used immediately to start making risk-based decisions.



Risk Assessment values in PRIMS

The used models are based on the work of W. Kent Muhlbauer, which is the best known authority for methods of pipeline risk assessment.

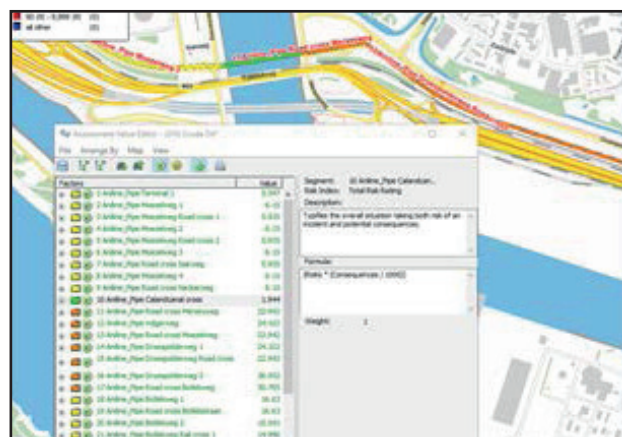
A first RA model, based on his earlier work, is suitable for pipeline operators with limited available data. The newer and more complex RA model can be calibrated to actual real world quantities such as cost/benefit in financial terms. This can provide more insight into the effects of risk management measures on the risk scoring.

Risk Assessment process

In the first stage of the risk assessment process, we assess your company's objectives and we check the availability of data.

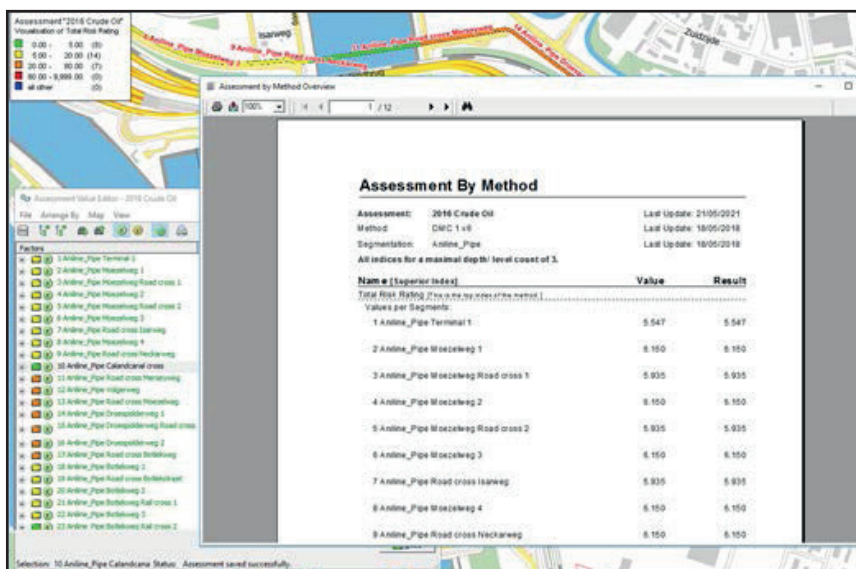
This analysis will determine whether a basic model or a more advanced risk assessment should be developed. The more advanced model requires more data but the results will allow you to have more control over resource use and expenditure.

The next phase refers to data collection and the integration into the Risk Assessment model. During this phase, the segmentation of the pipeline takes place to ensure that the impact of risk factors is limited to their real world effects.



Visualization of Total Risk Rating in PRIMS

The risk models are part of our Pipeline Information Management System PRIMS. All data is captured in the business application and the finetuning of the algorithm is realized through configuration in the software. No programming is required.



Example of a Risk Assessment report in PRIMS

Risk Assessment Report

The Risk Assessment Report contains all the data from the assessment and highlights the impact of various risk factors on the overall risk level. The report includes recommendations for suitable mitigation actions to reduce risks economically and efficiently.

We make all data available for easy import into your user systems or the underlying data can be used within PRIMS to directly support Integrity Management optimization through Risk Based Management.

PRIMS is our business application that supports all Integrity and Risk Management activities. It ensures smooth and reliable data exchange with other applications.

Moreover, it underpins our assessment work with the required tools to ensure an efficient and reliable project.

Benefits of our Risk Assessments

- Reduced operational and maintenance costs;
- Safe extension of pipeline life
- Planning for re-rating or operational changes;
- Optimizing inspection intervals
- Demonstrating safe operation for regulators
- Improved delivery of digital results
- Support (in PRIMS) for further analysis
- Support (in PRIMS) for repair and maintenance program