

Ideas for AI, ML & RPA experiments in Operational Risk

Implementing AI, ML, and RPA in the area of Operational risk can significantly improve the efficiency and effectiveness of risk management processes, even in environments where data might be scarce or of variable quality.

Here are some common use cases and best practices for dealing with challenges related to data in operational risk:

Suggested use cases:

Process Automation:

RPA is particularly effective in automating routine and repetitive tasks within operational risk management processes. This includes compliance monitoring, audit trails, data entry and validation and report generation, which not only reduces human error but also frees up human resources for more complex risk analysis tasks.

Fraud Detection and Prevention:

Machine learning models can be trained to detect patterns indicating fraudulent activities. This includes internal fraud by employees and external fraud by vendors or contractors.

AI systems can monitor transactions, communications, and access logs to flag unusual activities.

Cybersecurity Threat Detection:

AI and ML are crucial in identifying potential cybersecurity threats, such as malware attacks or unusual access patterns, allowing for rapid response. These systems can process large amounts of data from network traffic and access logs to identify potential threats in real-time.

Predictive Maintenance:

Using machine learning to predict equipment failures before they occur



can significantly reduce downtime and maintenance costs. ML models can analyze data from equipment sensors (IoT devices) to forecast when maintenance should be performed, preventing operational disruptions.

Operational Risk Scenario Analysis:

Operational Risk Scenario Analysis: Use ML to simulate various operational risk scenarios, for instance Stress Testing to assess the impact of adverse events (e.g., economic downturns, system failures) on the bank's operations, or alternatively Loss Distribution Modeling: Estimate potential losses under different scenarios.

Finally, remember that **successful implementation** requires **collaboration** between business units, risk management teams, and IT departments. Doing it on your own within risk is much more challenging and more likely to fail.

Start with a pilot project, measure outcomes, and iterate based on results. Considering the data challenges that you most probably will encounter, transparency and communication are essential throughout the whole process including during the presentation of your results.

Therefore make sure to document assumptions, limitations, and any data-related challenges to ensure responsible use of AI, ML, and RPA.

Want to understand more or have a sparring session?

Contact us at info@redefi.cz.