END TO END RISK SCENARIO ANALYSIS AND MODELLING

STRUCTURED **SCENARIO ANALYSIS** FACT SHEET

ENABLING ECONOMIC DECISIONS FOR OPERATIONAL RISK MANAGEMENT

THE ANALYTICS BOUTIQUE
Analytics made friendly
A **True North Partners company**

STRUCTURED **SCENARIO ANALYSIS**

The Analytics Boutique solution helps you implement robust and efficient Operational Risk Scenario Analysis process to increase the quality of loss estimates, mitigating cognitive biases, linking risk measurement and mitigation and obtaining robust potential loss metrics and stable capital estimates

Structured Scenario Analysis pulls from engineering expert elicitation methods, ie **Performance Based Expert Judgment**. These methods permit to identify most qualified experts, providing these more weight in the aggregated answer and greatly enhancing the precision of loss estimates stemming from the expert analysis

BUILDING BLOCKS FOR A QUALITY SCENARIO ANALYSIS

OpCapital Analytics provides all the required building blocks for the modelling of operational risk:

- Answered individually or in workshop: a loss estimate per participating SME
- Phased Assessment: presentation workshop, individual analysis, mitigation answering, correlation…
- Multiple SME answers are aggregated into a scenario single loss estimate
- SME performance is evaluated through seed questions (with known answers)
- Linking risk measurement with the mitigation impact in risk profile and NPV of the mitigation plan implementation
- Risk scenario relevant data (ILD, ED and BEICFs) is made available to SME
- Scenario relevant data (ILD, ED and BEICFs)

TO LEARN MORE
Please contact your The Analytics Boutique representatives or visit our website, www.theanalyticsboutique.eu

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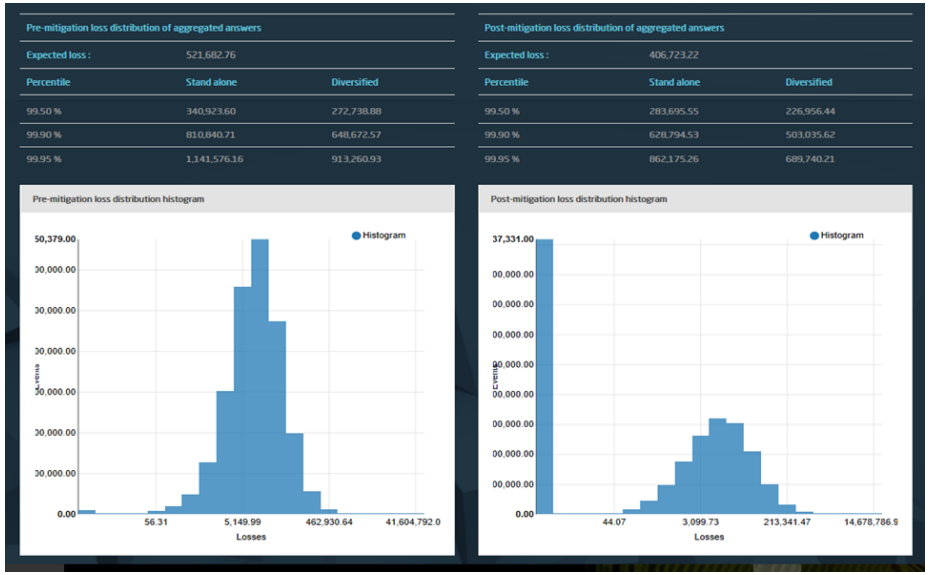

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SPECIFICALLY DESIGNED TO MITIGATE COGNITIVE BIASES AND OTHER INFLUENCIAL ISSUES IN SCENARIO ANALYSIS

Non exhaustive risk evaluation	▪ Structured Scenario Analysis contains a specific risk scenario identification module: an open question questionnaire to identify the list of largest risk concerns among selected experts and a close risk list questionnaire for voting and prioritizing risk scenarios
Herding or group thinking bias	▪ Structured Scenario Analysis permits answering scenario questionnaire in a workshop or each expert individually, to avoid group thinking ▪ Answering in various steps: risk description workshop, experts individual answers, risk mitigation
Anchoring bias	▪ Structured Scenario Analysis`s scenario analysis questionnaire contains a section to relevant internal and external losses and other risk management metrics to mitigate SME`s inadequate anchors and pre-existing references
Denial bias	▪ Structured Scenario Analysis links risk evaluation and risk mitigation permitting to justify the losses and errors by proposing remediation and calculating the NPV of action plans, to facilitate a risk exhaustive identification and proper evaluation
Confirmation bias	▪ In a first phase, before answering individually loss estimates, a workshop analysis of scenario causes and consequences is performed to eliminate pre-existing believes and establish a common understanding
Natural and/or formal leaders **Fear of looking unknowledgeable**	▪ Structured Scenario Analysis enables the individual answering of risk evaluation questionnaire (as an alternative to workshop) to avoid the influence of formal or natural leaders and mitigate the fear of looking unknowledgeable in front of peers and superiors
Lack of involvement **Dissimilar degree of skills among experts**	▪ Structured Scenario Analysis permits seed questions (a question whose answer is known) to examine the expert skills in evaluating uncertain risk scenarios permitting to identify those experts with better risk prediction skills. Experts are scored and their answers weighted based on their seed question performance ▪ Structured Scenario Analysis links risk evaluation and risk mitigation to motivate participating experts, and provides the NPV of the mitigation plans
Prevalence of intuition vs analysis	▪ Enforcing robust analysis: analysis of the causal pathway, risk drivers, dependency factors and more ▪ Creating the appropriate references by providing the internal and external losses and other OpRisk metrics
Lack of correlation approach	▪ Structured Scenario Analysis provides a factor model correlation approach driven by SME judgment elicitation provides a solid and transparent correlation matrix, for scenario analysis capital modelling

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CRITICAL RISKS PHASED ANALYSIS

Structured Scenario Analysis enables a workflow directed to maximise the quality of the loss estimates for critical risk scenarios and facilitate the determination of economic viable action plans.

- Scenario planning phase: permits the exhaustive identification of possible risk situations and their prioritization
- Scenario development phase: provides all the required information for the experts to properly evaluate critical risks; permits to identify those experts with best predictions skills; provides the NPV of the mitigation plans
- Scenario modelling phase: provides best practices and industry standards for modelling scenario results, creating hybrid models, solid correlations and perform Monte Carlo simulation to determine stable and robust capital requirements

Scenario planning

0. Scenario Planning

Survey among selected users to identify most relevant risk scenarios by business unit:

- Collection of the list of perceived most important risks and the team/resources available to assess them
- Voting process to determine final list of most relevant risk scenarios to be developed by SMEs
- RCSA are provided to SME as a source for risk scenario identification

RCSA
as scenario identification source

Scenario analysis development

1. Scenario documentation

Scenario description, includes, excludes, classification and more

Support data is selected for the scenario: internal loss data, etc.

Available internal & external loss data

KRIs, Internal Audit and other

2. Workshop for scenario presentation

Risk scenario presentation and initial discussion to insure a consistent understanding among SME

3. Individual estimation of losses

SMEs answer individually to both loss estimates (ie worst loss in 25 years…) and seed questions
Answers are aggregated and weighted based on SME performance on seed questions

4. Risk and reward analysis for mitigation

Evaluation of pre and post mitigation plan risk profile and capital & expected loss savings

Calculation of mitigation plans and insurance NPV based on expected loss and capital reductions

Scenario modelling and ICAAP

5. Cause driven correlations

Correlations determined based on risk drivers & causes

6. Modelling for stable capital estimates

Distribution tale modelling for stable capital estimates

Analysis of loss metrics and capital requirements

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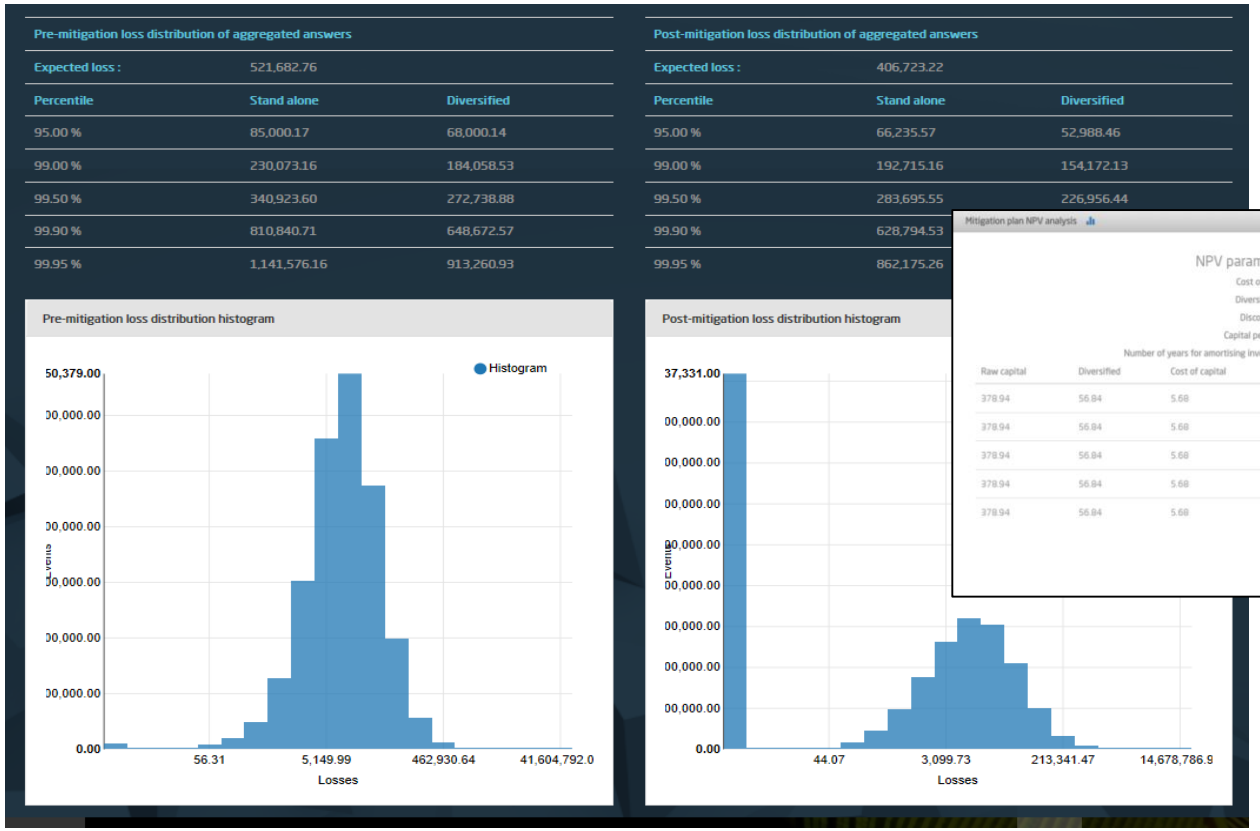
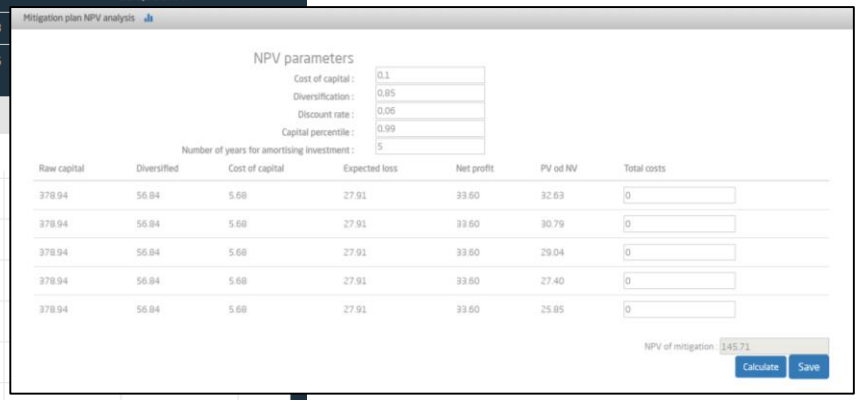
Optimal mitigation plan

Structured Scenario Analysis provides the tools to determine the NPV of risk mitigation plans and facilitating decision taking across the organization:

- Calculates the differences between the risk scenario pre mitigation plan and post mitigation plan
- Based on such differences and the cost of the mitigation plan implementation, the NPV of the mitigation plan is derived
- The impact of insurance programs can be also determined based on the very specific characteristics of the insurance program. The NPV of the mitigation plan (cost of risk transferred – policy cost) is also calculated

Functionality to evaluate mitigation plan impact into risk profile



NPV calculation of mitigation plan