

# Quantifying non-financial risk: modeling complexity



## Standard approaches are lacking

The traditional method for quantifying non-financial risk (NFR) is based on calibrating historical data while assuming past events are indicative of future losses. Risk management approaches include: RCSA, LDA, scenario analysis or frequency-severity models. Modeling NFR must do more than analyze past events, rather it must model events and losses that have not yet occurred. The purpose is not to get to the “number.” Rather, effective NFR modeling is about management buy-in, helping decision makers implement effective strategies.

CRisALIS is a causal model that quantifies NFR and provides reporting designed to facilitate executive decision making by the board and senior management. The analytics platform identifies 2<sup>nd</sup> and 3<sup>rd</sup> order effects of risk manifestation and is the cornerstone for risk professionals to implement mitigation strategies.

## Complex Risk Analysis “CRisALIS”

CRisALIS provides a holistic forward-looking approach to modelling how non-financial risks may materialize. CRisALIS is based on complexity theory and incorporates data driven analysis, expert-derived causal modelling and artificial intelligence. It learns and evolves as your understanding of the threat evolves. It:



## Benefits

- Analyze either your enterprise risk or aggregation of risk across business units
- Identify the drivers of specific outcomes, which creates the ability to optimize a mitigation strategy
- Explain non-linear relationship between risk events, including causes, triggers and potential tipping points
- Provide executive information which allows for establishing and monitoring of non-financial risk tolerance(s) and other key metrics in real time
- Elucidate the root causes and cumulative impact of financial risks enabling better decision making (e.g., 2<sup>nd</sup> and 3<sup>rd</sup> order effects impacting processes, dependencies control decisions, etc.)

## Key Features

- 1.** NFR losses which can incorporate numerous scenarios
- 2.** Learns and adapts as new information becomes available
- 3.** “What if” and reverse stress investigations
- 4.** Aggregates or decomposes risk triggers; identifies tipping points
- 5.** Easy for non- modelers to engage and use