

## PORTFOLIO OPTIMIZATION AND UNCERTAINTY ANALYSIS.

Aucerna Portfolio is an analytic platform for evaluating decisions related to strategy development, portfolio management, capital allocation and M&A. Aucerna Portfolio can help companies optimize their portfolios and gain insights into their performance potential and their strategic alternatives at a corporate or business unit level. This is done in the context of their existing business goals, risks and uncertainties and company opportunities and objectives.

Aucerna Portfolio brings together data (financial and operational) and the business context (business goals, assumptions, constraints, etc.) to address decisions involving risk or uncertainty.



*“ We have access to two to five times more information now. We have fundamental insights into two critical areas: establishing an amount that should be paid for the merger or acquisition and an understanding of how the asset would blend with the company. ”*

HEAD OF STRATEGY  
( Large E&P Company )

# IMPROVE STRATEGIC DECISION MAKING.

## INTEGRATED, PRESCRIPTIVE BUSINESS MODELING

Apply powerful, constraint-based optimization algorithms to complex portfolios. Generate diverse strategic scenarios that explore the performance capabilities of your complete portfolio.

## MULTI-GOAL, MULTI-CONSTRAINT OPTIMIZATION

Optimize your portfolio considering multiple financial or operational goals, with consideration for timing, working interest, dependencies and project level constraints. Ensure your strategic scenarios are feasible, while balancing short, mid and long-term objectives.

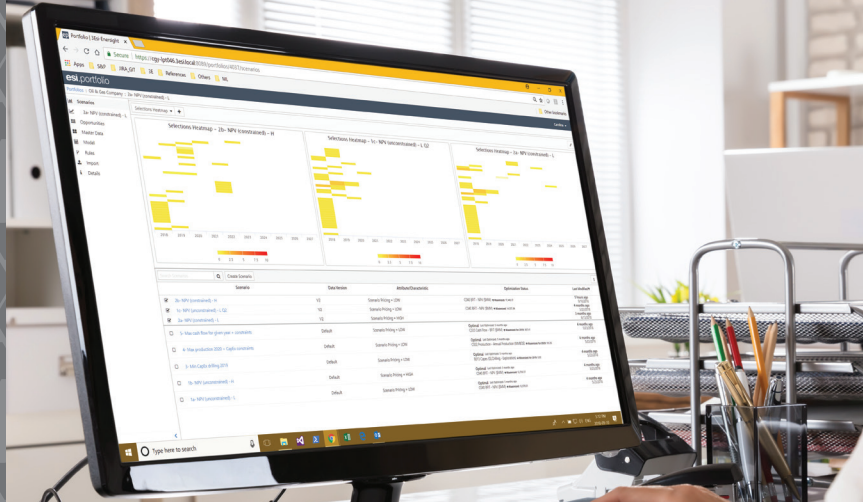
Optimize with custom operational and financial goals used as the optimization function or constraint. Use optimization to select assets, their optimal timing (shifting start dates within user specified parameters for each asset) and working interest based on the specified performance goals and constraints.

Utilize manual selection of assets and their timing for 'what-if' analysis.

## MANAGE RISK AND UNCERTAINTY

Apply uncertainty analysis to your portfolio and evaluate the cumulative impact of commercial and technical uncertainties on operational and financial performance. Improve your ability to succeed by understanding the probability of achieving goals over time and quantifying possible downside exposure.

Leverage deterministic and probabilistic description of assets within the same model. Compute the probability of meeting or exceeding goals and describe the range of outcomes for any and all portfolio results (operational and financial).



## RAPID SCENARIO ANALYSIS

Conduct rapid scenario analysis with powerful optimization algorithms that consider every goal and constraint. Perform analysis in days instead of weeks and eliminate excessive overtime while providing fast response to management requests.

## MERGERS AND ACQUISITIONS

See the complete picture for M&A decisions. Understand the optimal price you should pay and the ideal financing mix. Evaluate the benefits of opportunities versus alternative options and against important trade-offs you will need to make.

## MULTI-SOURCE DATA

Leverage data from any combination of economic software, spreadsheets or database and gather asset descriptions from multiple sources. Capture single economic descriptions for a project or probabilistic descriptions (multiple descriptions that can be used to reflect uncertain outcomes).

## CUSTOMIZABLE METRICS

Customize the metrics used to describe your projects, such as prod Mboe, opex, capex, reserve adds Mboe, DDA, Dry hole expense, etc.

Define computed metrics and tailor the underlying calculations to your company (e.g. aggregate production rate, reserves, net income, F&D, cash flow, different categorization of capital, earnings, ROCE).

Users have complete flexibility in deciding what is modeled, including PSA's, economic limits and decommissioning strategies.

## ATTRIBUTES

Create pro forma financial statements tailored to your company and use unlimited 'attributes' to categorize assets, such as geographic area, business unit, operated vs non-op, gas vs oil and more.

Break down the total portfolio results based on any attribute in order to examine it from different viewpoints and create generic projects that can be repeated over multiple years to represent opportunity type curves.



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