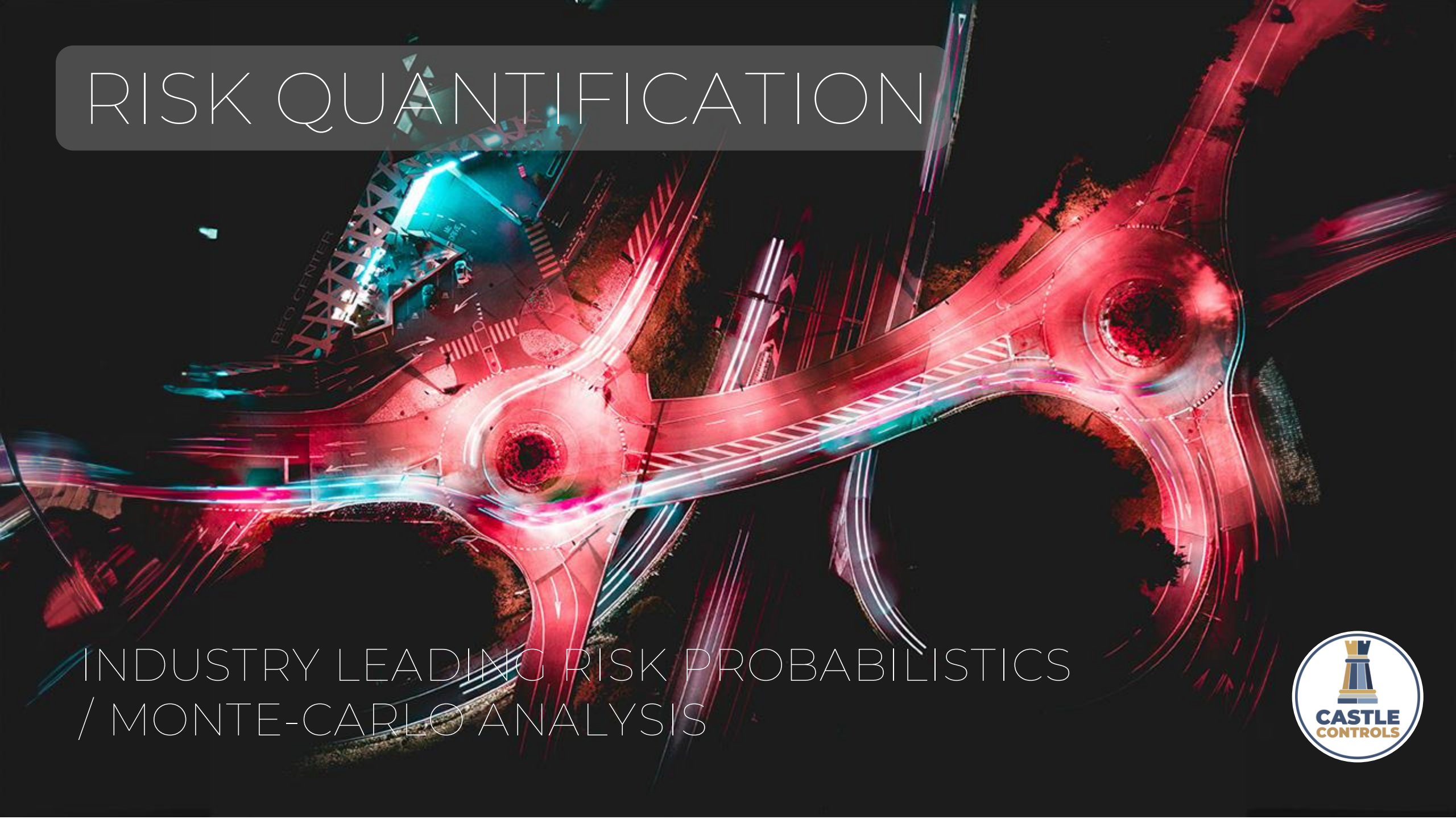
RISK QUANTIFICATION



INDUSTRY LEADING RISK PROBABILISTICS
/ MONTE-CARLO ANALYSIS

CASTLE CONTROLS

INTRODUCTION
RISK QUANTIFICATION

Industry leading Risk Probabilistics: Accurate, insightful, and accurate.

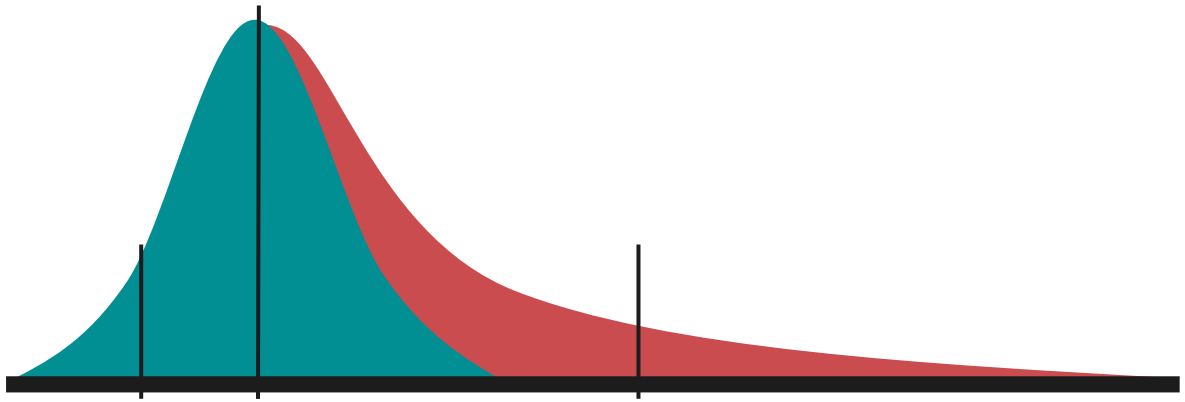
Quantifying project risks is a critical step in being able to effectively manage uncertainty and positively influence project outcomes.

Independently facilitated processes reduce bias and produce more insightful and accurate results. Castle Controls are experts in Risk Probabilistics and Monte-Carlo analysis with extensive hands-on experience running probabilistic exercises for major companies and projects of all types and sizes.

Castle goes beyond the hard numbers and mathematical models and will work with your business to understand the risk drivers and develop levers to improve outcomes.

Goals of Castle Probabilistics:

- Accurate Results: Quantify a project risk profile to create an accurate cost contingency and schedule float.
- New insights: Greater understanding of project drivers and risk impacts (across the P10-P90)
- Meaningful engagements: Process that has inherent value (as well as accurate results) through in depth review.
- Actionable outputs: Identify key levers/actions to improve project outcomes and drive success.



RISK QUANTIFICATION
OUR APPROACH

Standard process, tailored to meet your requirements:

Castle Controls have an established process for probabilisics that has been tested and proven over many years. Our method of gathering and modelling inputs will produce meaningful and accurate results.

However, as every project and goal is unique we have built flexibility and scalability into our approach so we can tailor solutions to your needs..

Process Characteristics:

- Structured & Repeatable: Our processes are well established, standardized, and industry proven.
- Low Admin: We utilize surveys and datasheets to reduce admin and maximise time available for meaningful discussions and analysis .
- Buy-in: We seek team and management buy-in throughout to ensure ownership of results.
- Scalable: We can scale our process and tailor approaches according to project type and phase.
- Actionable outputs: Identify key levers/actions to improve project outcomes and drive success.

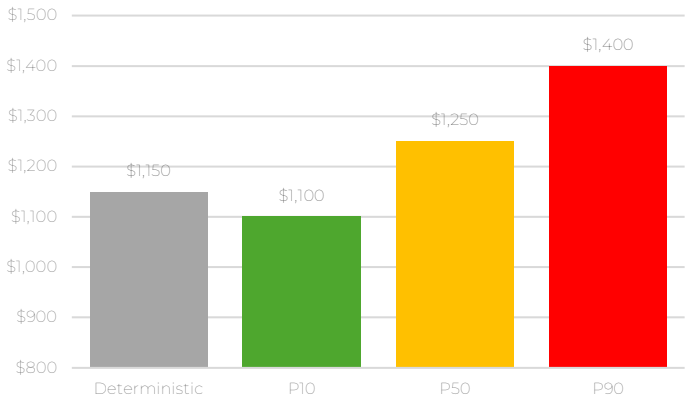
OUR PROCESS

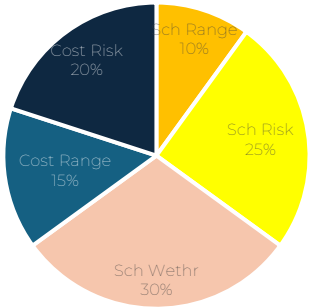
RISK QUANTIFICATION EXPECTED OUTPUTS

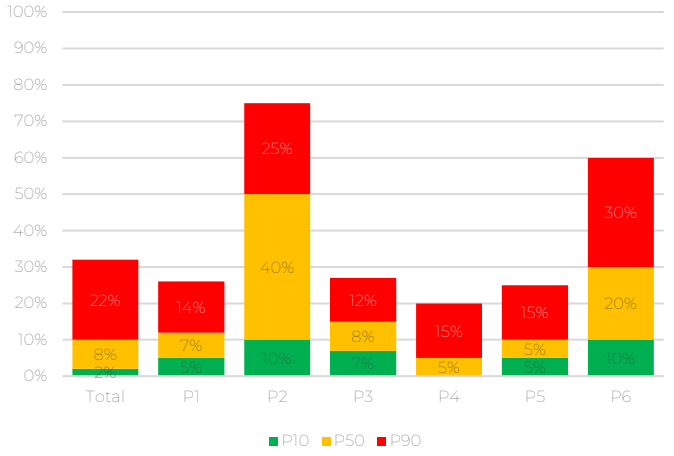
Every probabilistic exercise concludes with a detailed report that includes:

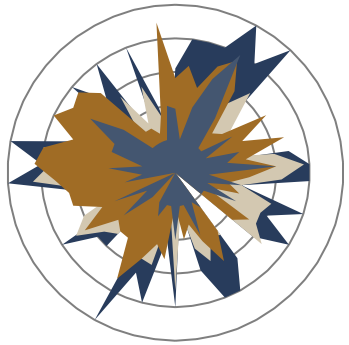
- Results: Quantified outcomes on cost and schedule.
- Critical Path(s) Analysis: Insight into the main critical paths and potential paths when risk impacts. This includes information on what is driving the schedule.
- Contingency Analysis: Insight into cost uncertainty/risk and cost drivers. Information on what elements of the estimate are most exposed to cost growth risk.
- Risk Profile Overview: Analysis on the unique risk profile of the project being modelled. Major risks at micro and macro-levels across the TECOP spectrum.
- Drivers: P10-P90 outputs and what drives each potential outcome.
- Levers / Mitigations: Recommended levers/actions to improve project outcomes and drive success.

We will also present the results to the business and facilitate an in-depth discussion about the results their implications.









RISK QUANTIFICATION LEVERS AND MITIGATIONS

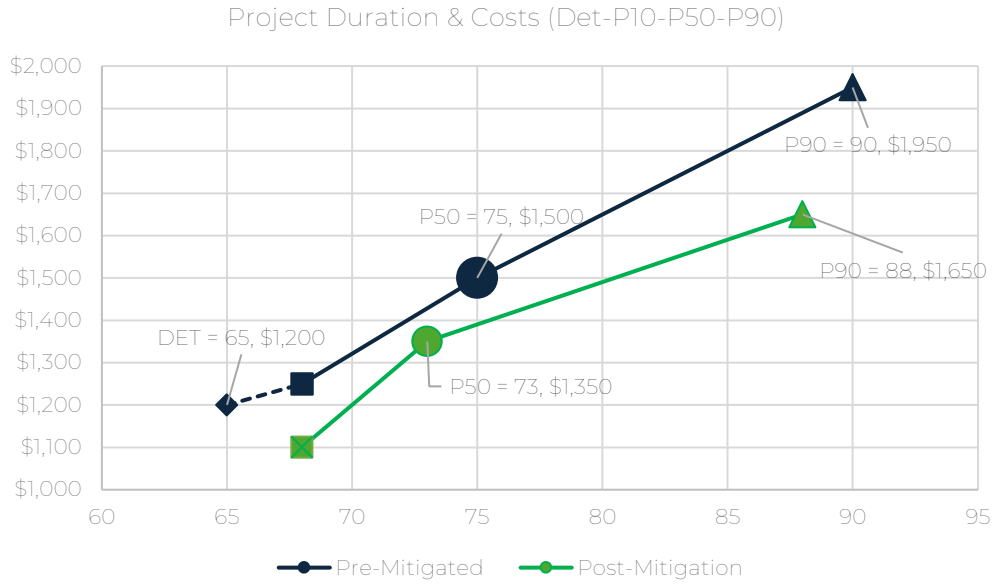
Levers that improve project outcomes:

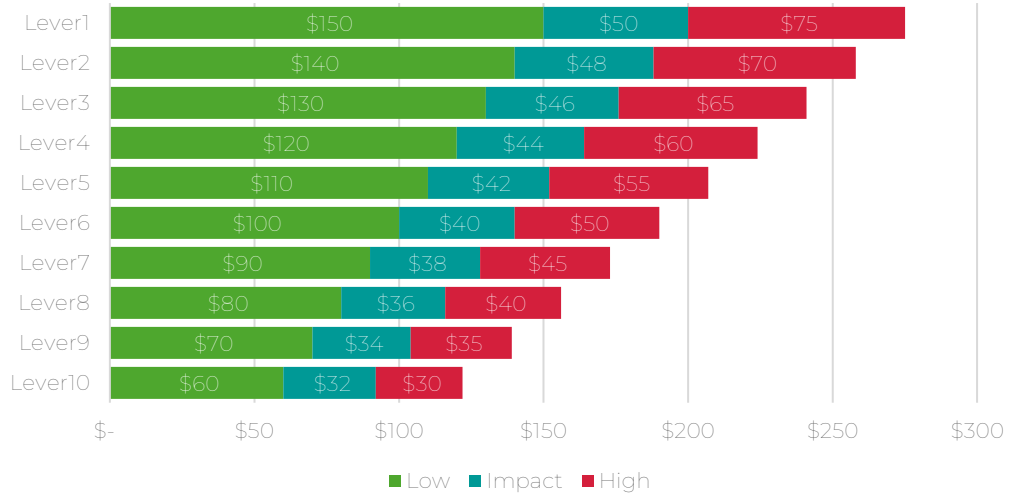
Mitigation actions (we call them “levers’) are an important element of the report-out from our probabilistic process. We want teams to have concrete actions they can take to improve outcomes and/or reduce risk.

When building the models and discussing inputs/outputs with the team we seek to identify sensitivities in the models and the main drivers that are causing extension and cost growth. These are then the focus of targeted levers which could improve outcomes. We can run models with and without levers to quantify their potential potency as mitigants.

Levers will be:

- Feasible: Actions which can be implemented.
- Effective: Expected to be effective and worthwhile.
- Quantified: Demonstrated to reduce the P50 (or P90) outcome.





RISK QUANTIFICATION
OUR SOLUTIONS

Different solutions for different projects:

We have three quantification solutions (Maxx, Lite, and Cost) which are designed to meet the needs of different project types and phases.

Each of these solutions utilize the same standardized approach and our philosophy towards probabilistics but are scaled and use different modelling toolkits.

We can meet with you to understand your project and then tailor a Probabilistic risk solution to meet your needs.

Quant Maxx is a full risk probabilistic solution which includes an independent Schedule analysis and integrated Cost Risk quantification. Suitable for projects with complex schedules and competing critical paths. Quant Maxx is our flagship offering.

Quant Lite is our simplified probabilistic solution suitable for smaller projects or projects with discrete Offshore campaigns. Quant lite still includes cost and schedule but one integrated model.

Quant Cost focuses exclusively on quantifying cost risk and the range of cost outcomes that can be expected. Ideal for quantifying contractual risks and potential claims.

RISK QUANTIFICATION TOOLKITS / SOFTWARE

Its not about the Software… .

We are firm believers that successful and valuable probabilistics exercises are not about the toolkit that is being used. The value is in the quality and depth of thought and discussion that occurs before data is loaded into the tools.

We have an established process for gathering and modelling inputs that will produce meaningful and accurate results. However, we are 'tool agnostics'. We have experience in a broad range of different modelling software packages for both schedule and cost risk analysis. We also have models ready in all the major software solutions (PRA/Pert, Acumen, @Risk, Crystal Ball, Safran).

We can meet with you to understand your needs before proposing the right solution for your project. We are also happy to use your licenses and hardware or to provide licenses and hardware ourselves as part of our quote.

ORACLE CRYSTAL BALL

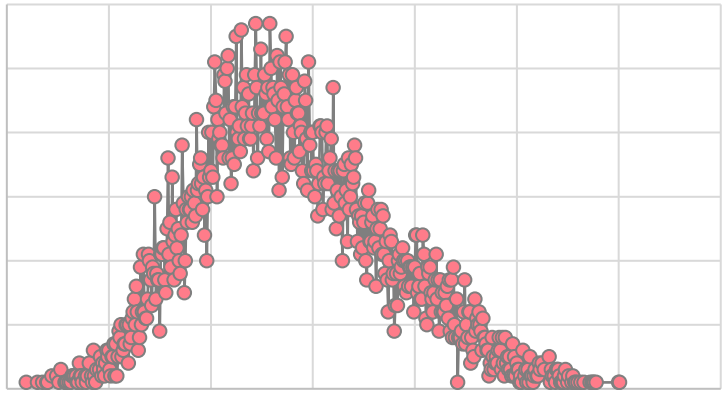
ORACLE PRIMAVERA RISK ANALYSIS

Deltek Acumen

Safran Risk

@RISK

PrecisionTree



We'd love to discuss with you how our Probabilistic offerings could help your organization define and quantify your risks. Please reach out for more information.

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