

# DEVELOPING ACCURATE RISK MODELS FOR CONTAMINATED LAND REMEDIATION

**A system that quantifies the risk and uncertainty associated with the remediation of contaminated land assets**



In strategic partnership with CARAS, EP Risk and the University of Newcastle (UON -Statistics).

Prioritise risk management efforts on items of greatest impact to achieve the best available financial outcome



Incorporates probabilistic modelling to quantify risk and uncertainty

Utilises the Palisade @Risk software platform to estimate the uncertainty associated with the predicted Total Out-Turn Costs (TOC)



Reduce your risk profile through a greater understanding of your contamination, construction and earthworks risks

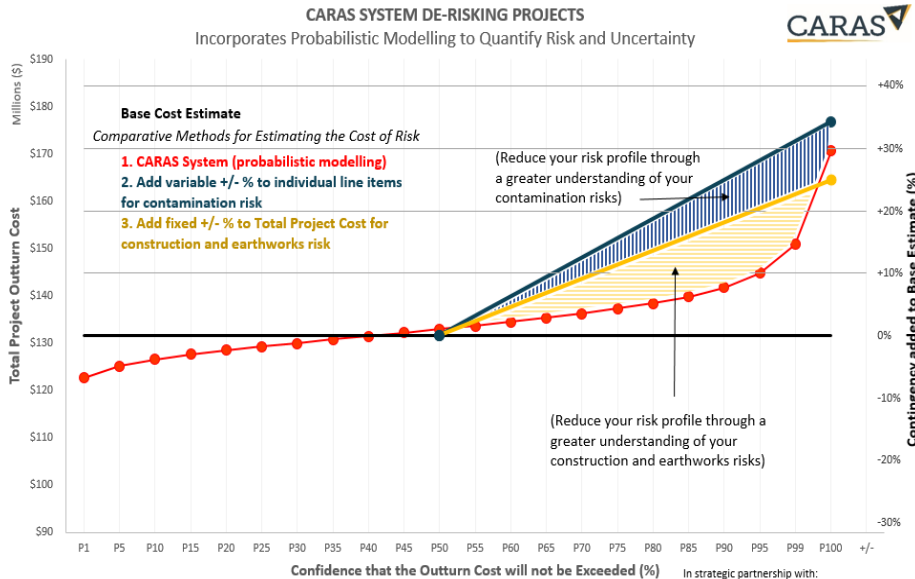
# CARAS System - Probability Model of the Total Out-Turn Cost

CARAS, in cooperation with the UON-Statistics, have applied probabilistic modelling techniques in the development of the cost estimation for the remediation of contaminated land.

CARAS replace fixed quantities and rates with risk distributions that are determined from the Project Risk Register and applied to the cost estimations in the Remediation Budget. This allows the predicted TOC to be expressed as a cost distribution with associated percentage confidence levels that the cost will not be exceeded.

The CARAS System will produce a statistical risk model for the project that incorporates:

- I. Identification of items whose uncertainty will have the greatest impact on cost overruns, thus providing direction for risk management efforts.
- II. Determination of a reasonable contingency allowance based on the level of confidence required.
- III. The capability for stakeholders to challenge the inputs that form the Remediation Budget cost estimate and Project Risk Register in a structured environment and understand the impacts on the TOC.
- IV. The results are presented as both data and graphic outputs that allow the client to visually identify the impact of risk and clearly communicate it to stakeholders.
- V. The CARAS Risk Model can be applied as a dynamic monitoring and predictive tool as the project proceeds.



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