

# Project and Portfolio Valuation in Force Design

A primary goal of portfolio decision-making is to ensure the selected portfolio delivers high value. However, the concept of “value” is multi-dimensional and can be difficult to assess. Force Design is a form of project portfolio management (PPM) used for defence investment planning. This research program, funded by the Defence Science and Technology Group, aimed to improve the quality of value assessment, which could ultimately increase the effectiveness of mathematical modelling and the broader Force Design process.

## Why the study was relevant:

- Value assessment is central to strategic PPM decision making processes. Valuation biases have the potential to skew value assessments and negatively affect portfolio decisions.
- Developing bias mitigation strategies requires comprehensive understanding of the valuation biases that affect the PPM process. This includes biases that are brought by the experts and senior decision-makers who participate in the process.

## What we did:

- A comprehensive literature review integrated insights from PPM, Defence, behavioural science, and organisational learning to explore how humans bring valuation biases to PPM processes and ways to mitigate them.
- Interviews reinforced the findings from the literature review and provided insights on the experiences and impressions of Force Design.

- Experimental research explored how different value representation formats affect PPM decisions.

## What we found:

- The literature suggests that developing awareness of potential bias is an important step toward bias reduction and that the influence of bias is embedded throughout the PPM processes.
- Improving the ways value is assessed can enhance portfolio decision processes, through increasing the level of trust in the process and increasing the SME satisfaction and engagement with the process.
- Statistical results indicate that the value representation format significantly influences the PPM processes and decisions, with qualitative findings offering further insights into the impact.

## What this means:

- Decision makers have different decision styles and are influenced by their experiences, preferences and biases. Awareness of these individual differences can enhance processes and outcomes.
- To mitigate bias, the value representation format needs to align with both the decision makers' experience and preferences and with the needs of the decision task at hand.

