Assessing the benefits of augmented reality in Army training

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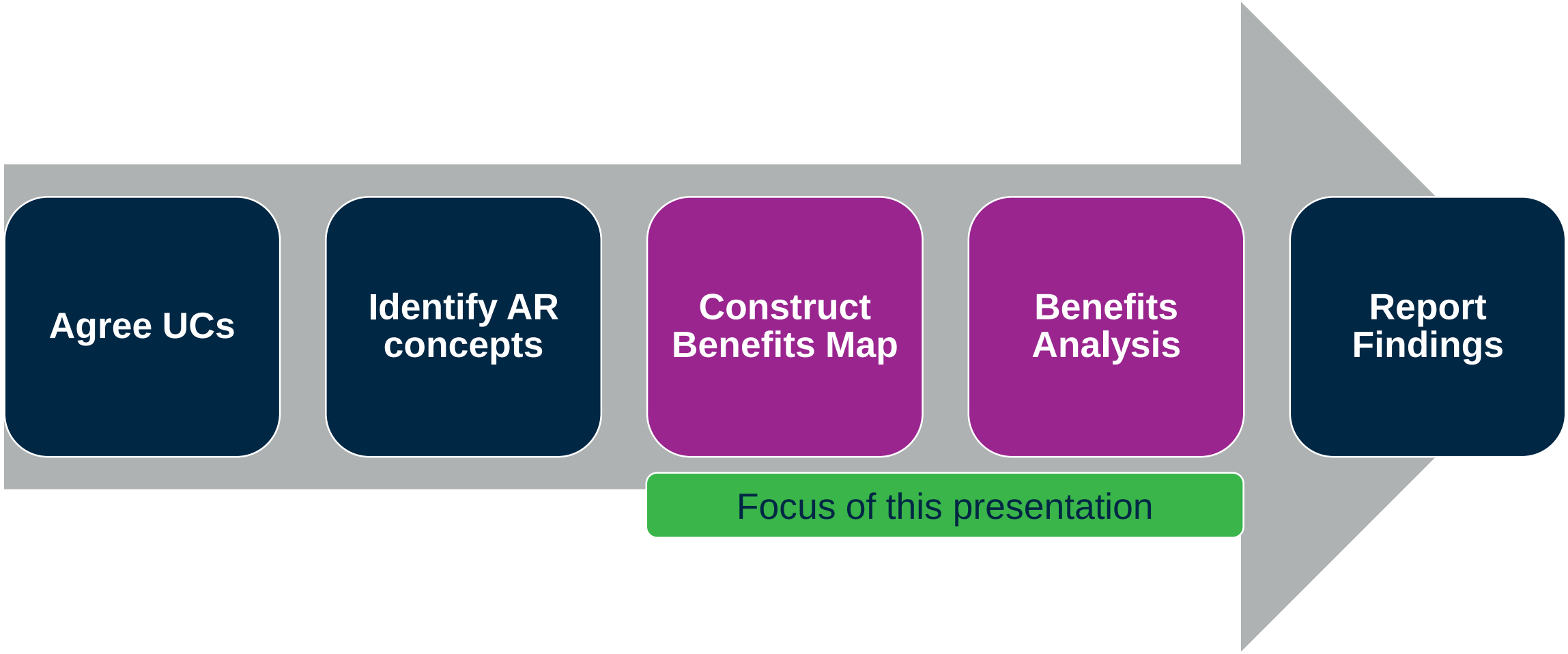
Study Overview

- Requirement
  - Provide recommendations on which Augmented Reality (AR) concepts should be invested in to support Army training.

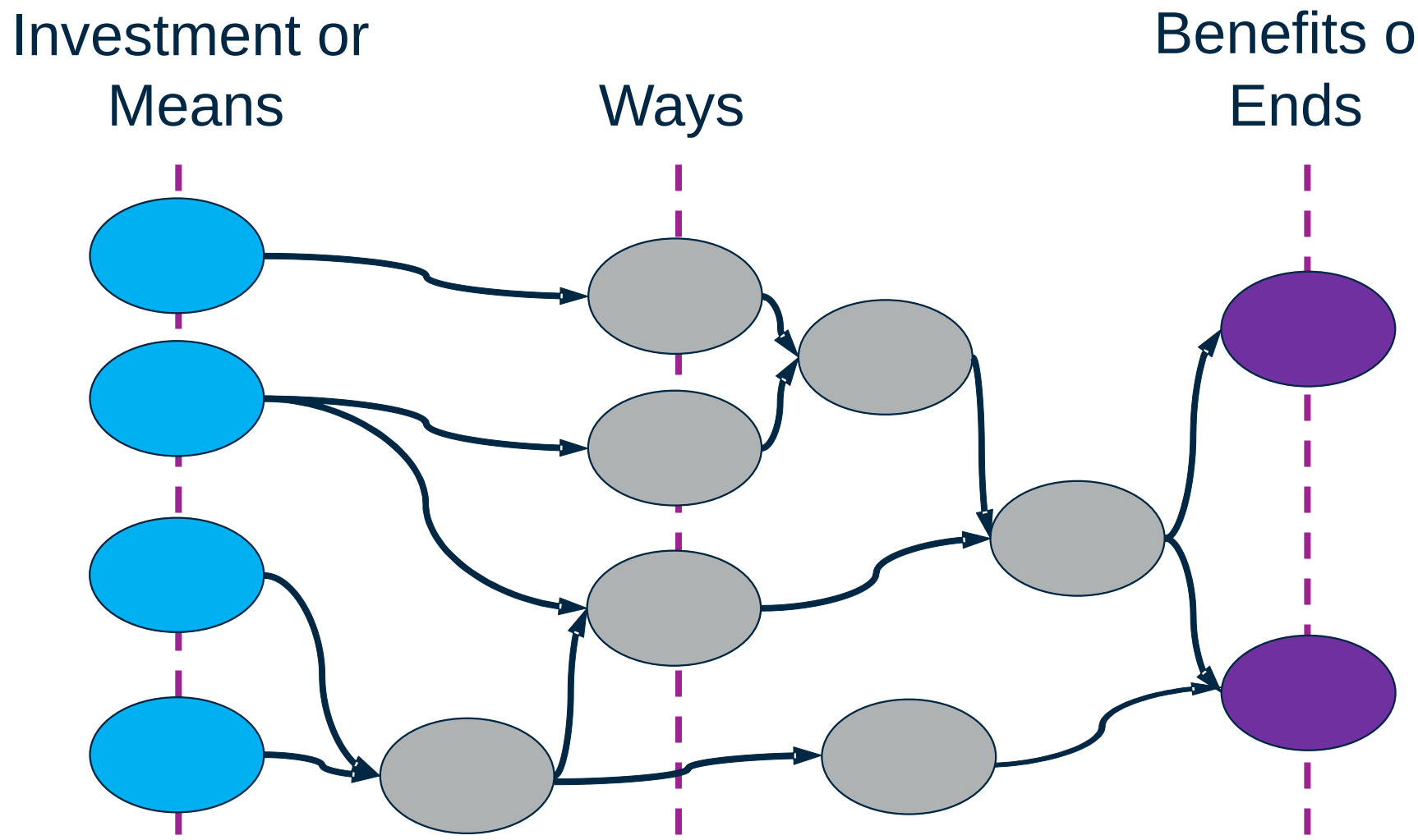
- Aim
  - To identify possible AR concepts for each of the Army training Use Cases (UC).
  - Demonstrate where the AR impacts positively/negatively on the training benefits.
  - Provide a Benefits Assessment Framework that enables a systematic evaluation of AR concepts against the UC.

- Augmented Reality
  - Involves the overlay of information onto a user's view of the real world, thus placing that information into the context of what the user is seeing.

Study Overview

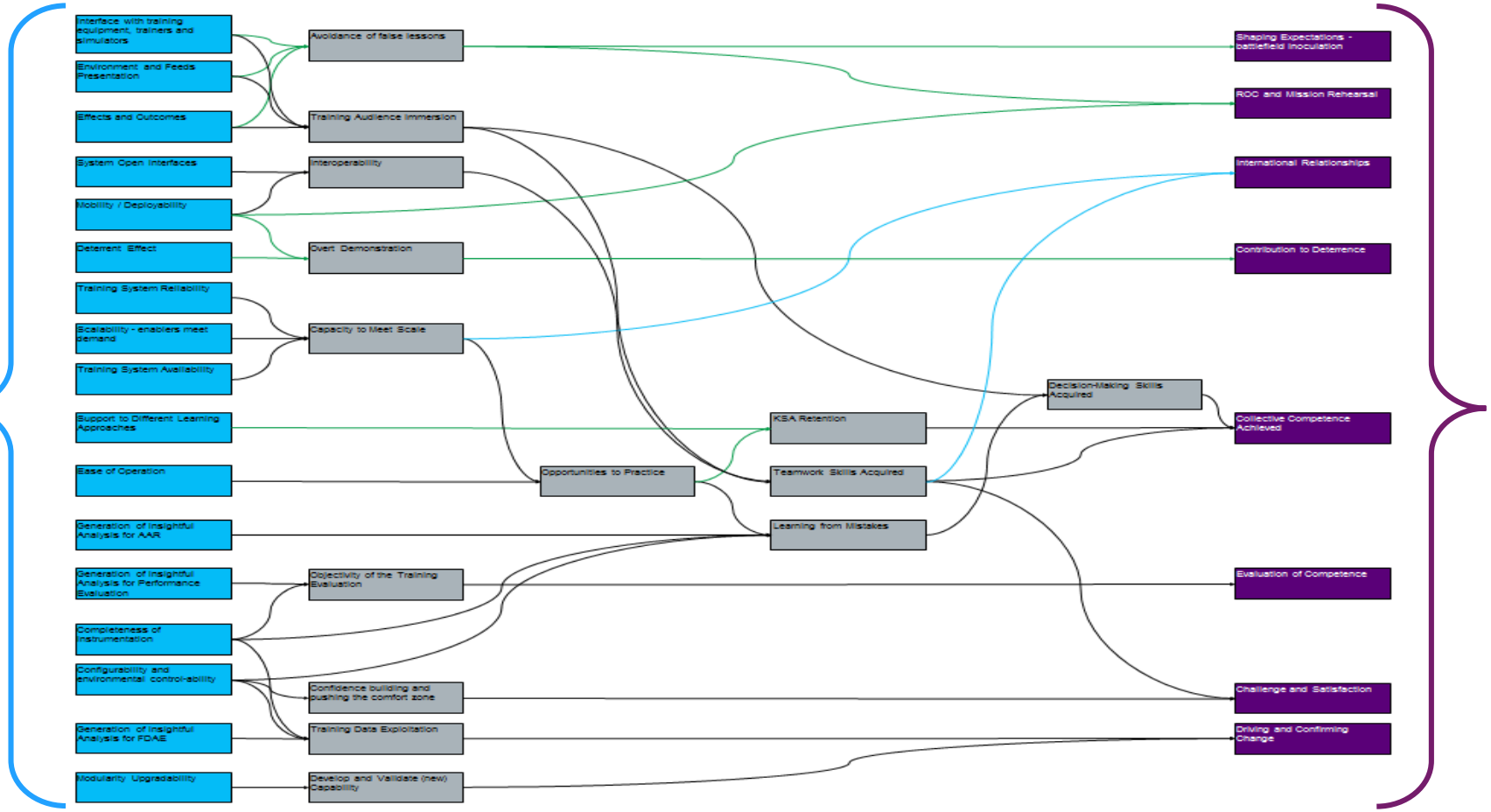


Benefits Map Overview



Benefits Map Structure

Investment nodes



Benefit nodes

Link compensation: Mitigating (100%) Contingent (50%) Compounding (0%)

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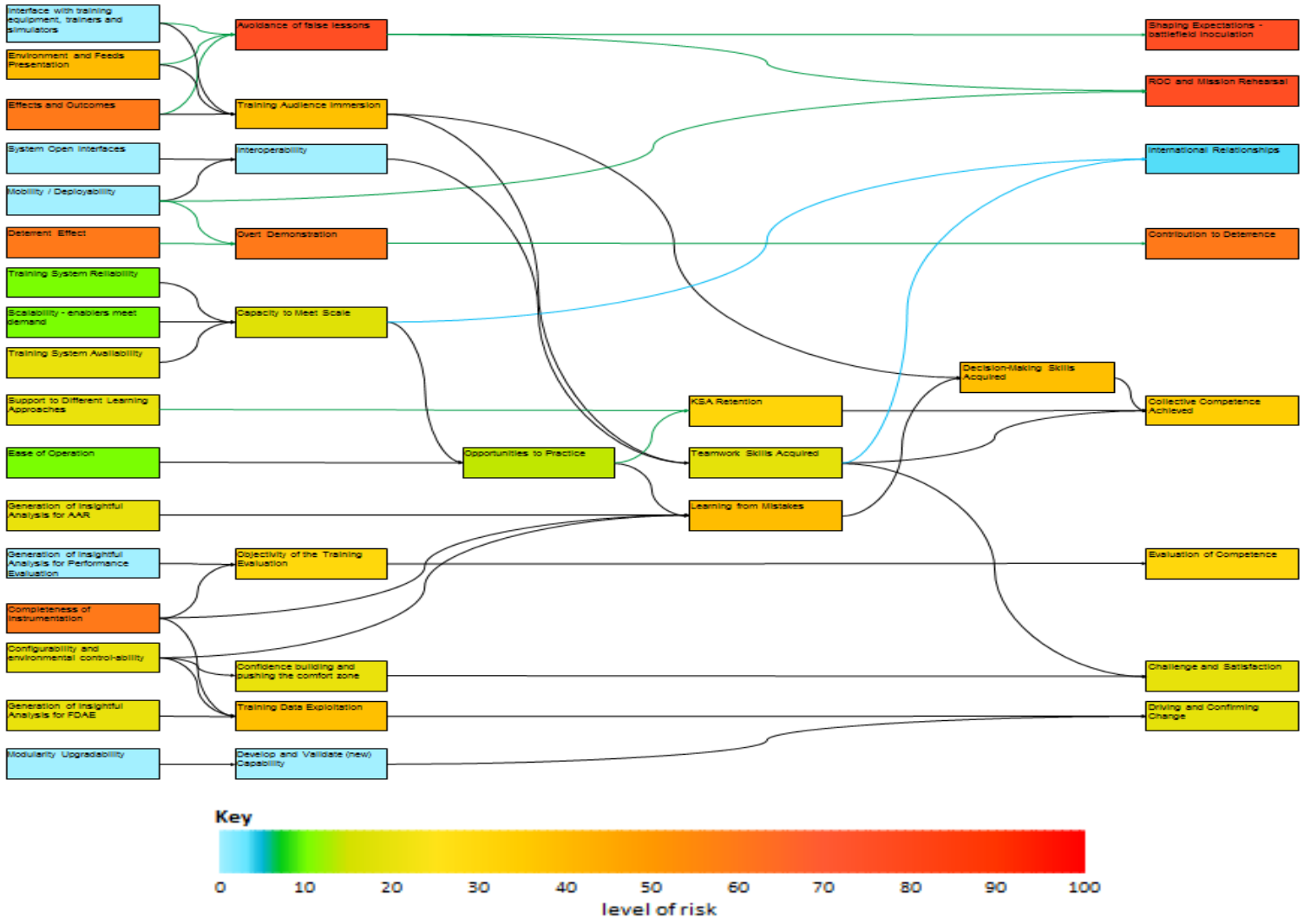
Risk Propagation

Investment nodes assessed for level of risk using PSG

Probability score	Severity score				
	Severe	Moderate	Nuisance	Negligible	Nil
High	0.85	0.60	0.40	0.20	0.00
Medium	0.60	0.40	0.20	0.10	0.00
Low	0.60	0.20	0.10	0.00	0.00
Very low	0.20	0.10	0.00	0.00	0.00
Nil	0.00	0.00	0.00	0.00	0.00



Shows level of risk to achieving the desired benefits

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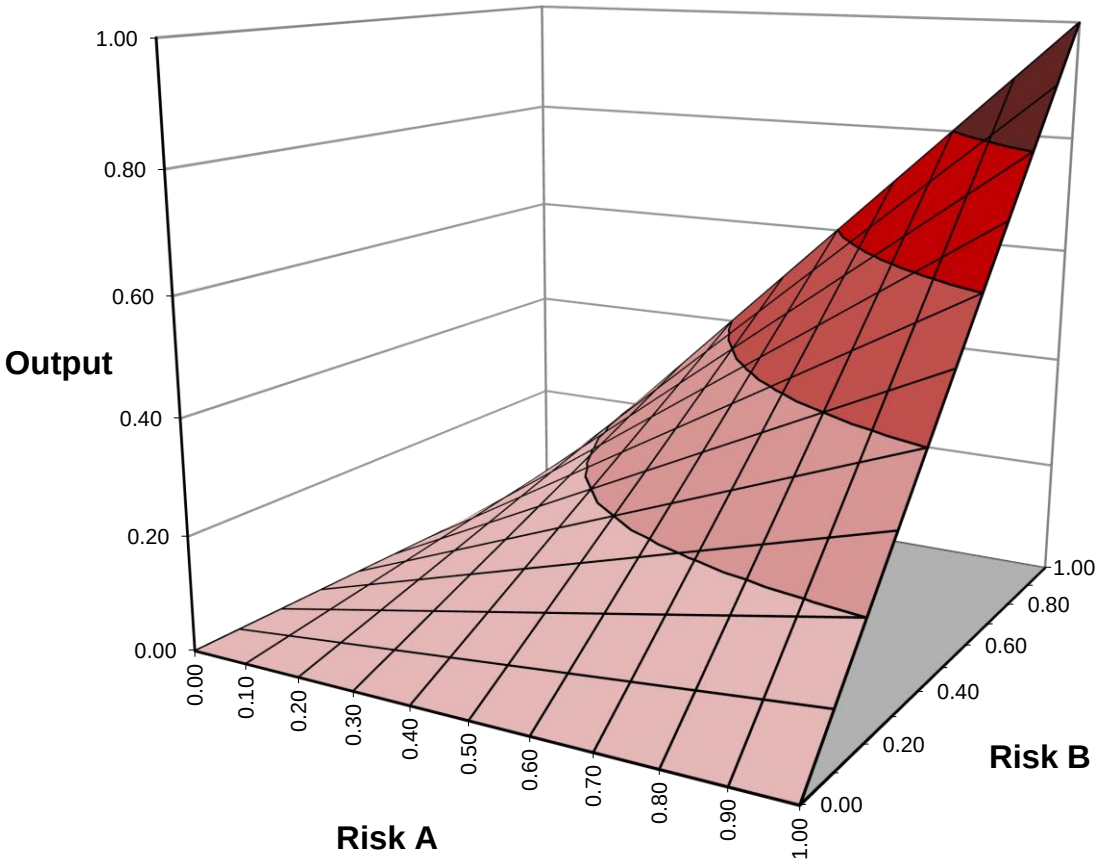
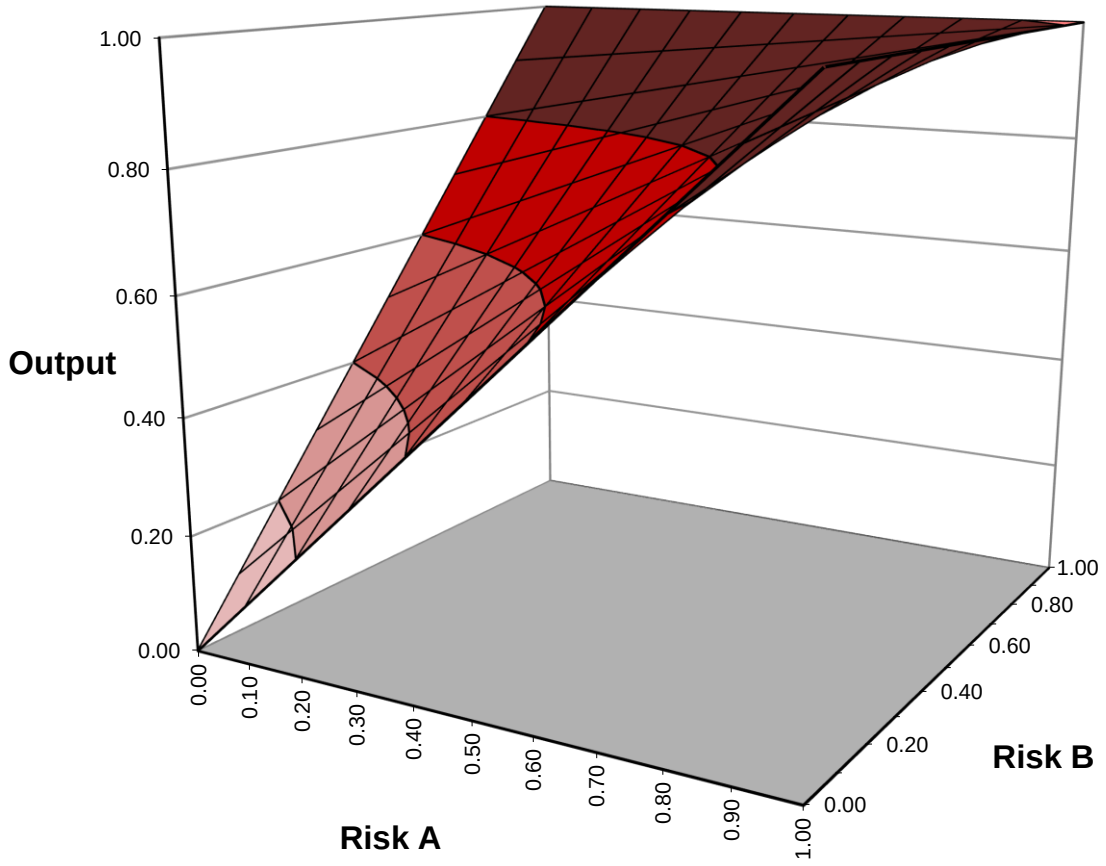
How is Risk Propagation calculated?

Pure Mitigating Risk



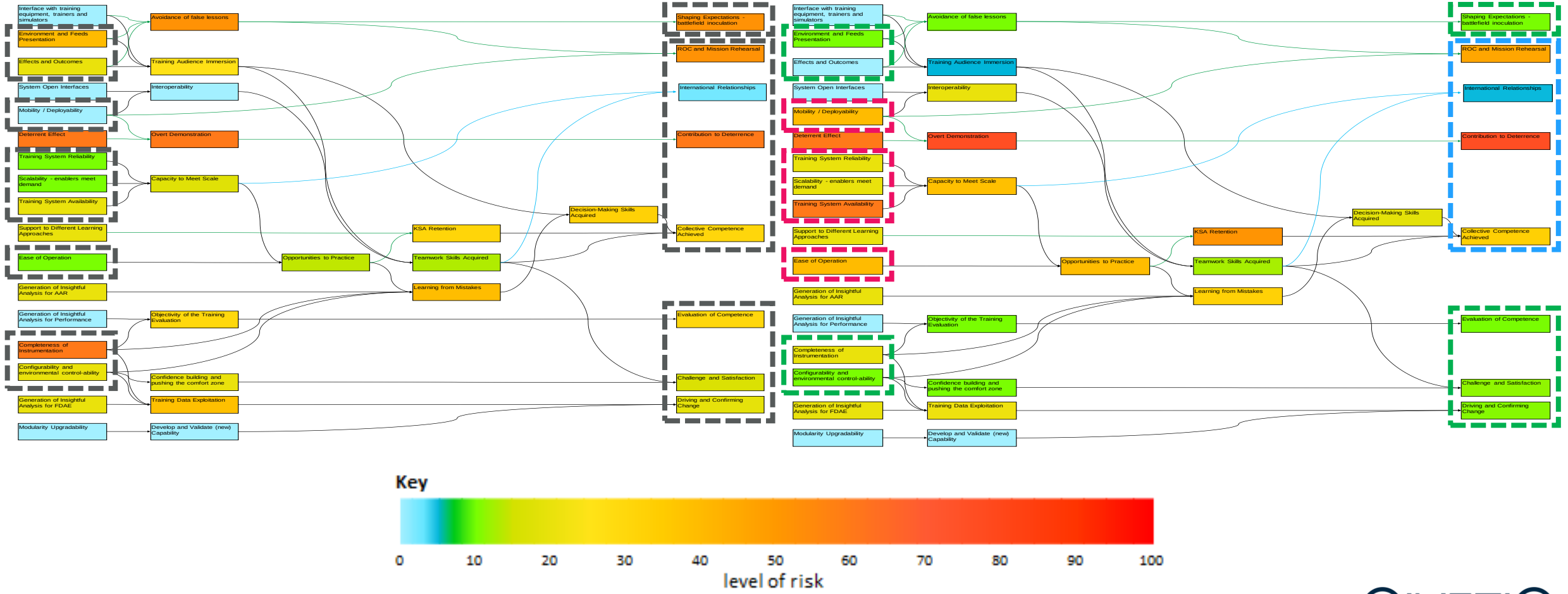
Pure Compounding Risk



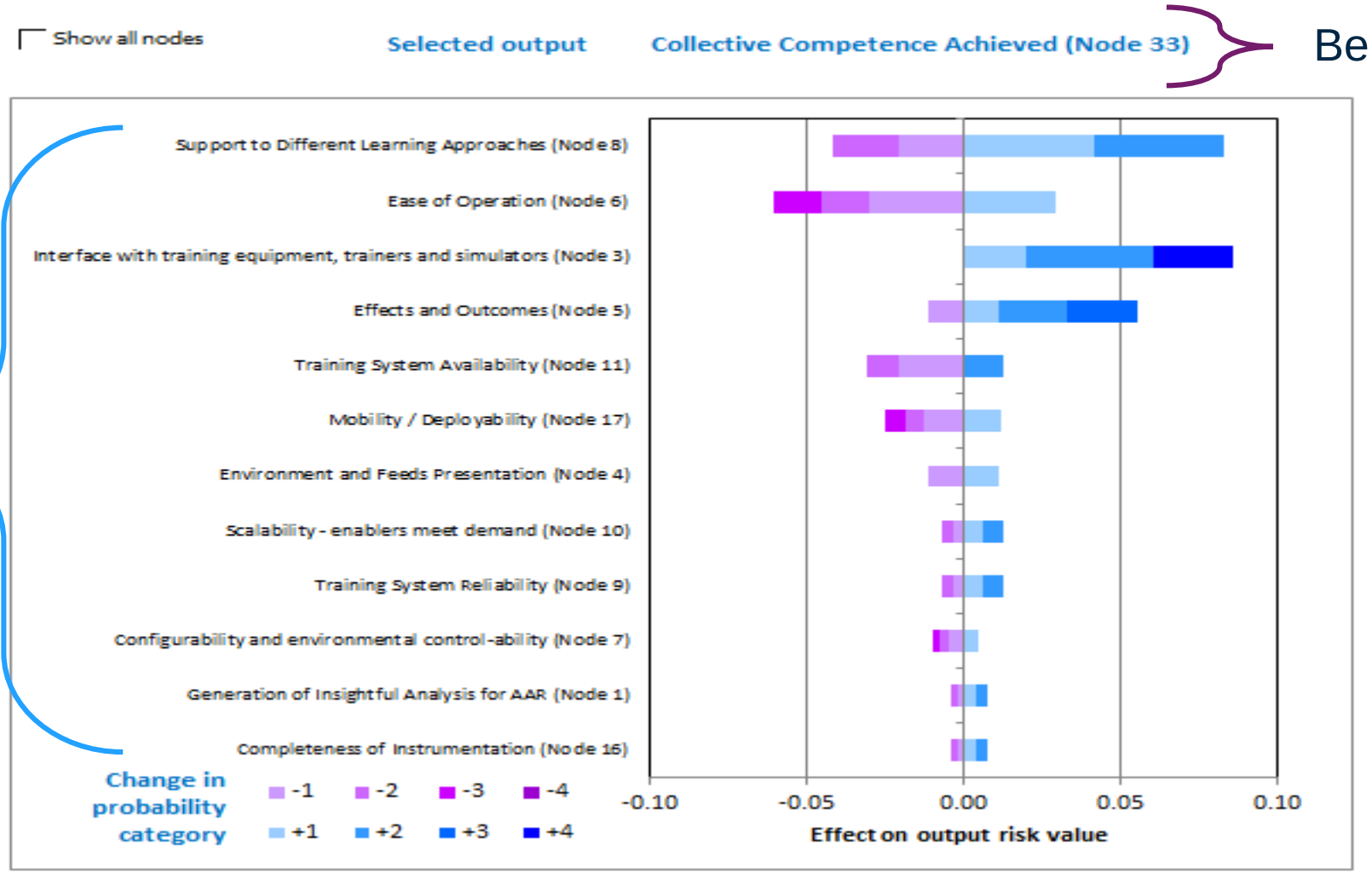
Example of Augmented Reality impact on benefits

Example Baseline

Example AR Applied



Sensitivity Analysis: Tornado Plot



Benefit node

Investment nodes

Most sensitive

Least sensitive

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The Benefits of Benefits Analysis

- Articulates problem space in diagrammatic form.
- Nature of benefit dependence recorded via the map providing an audit trail.
- Encourages less tangible and softer investment advantage to be considered.
- Provides an intuitive visual assessment of the level of risk to achieving the desired benefits.
- Allows easy comparison of different investment options.
- Provides an understanding of how sensitive each benefit is to changes in each of the investment risks allowing the key drivers to be identified.


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