

# Engaging Engineers to AI.... The Role of a Risk Manager as Translator

**Better outcomes  
through innovation  
and excellence.**

**Engineering.  
Management.  
Development.**



# Collaboration and innovation, centred on you





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17 Years in Project, Programme, Portfolio and Strategic Risk

- BA (Hons) Risk Management
- IRM Diploma
- Risk Mgt Guest Lecturer

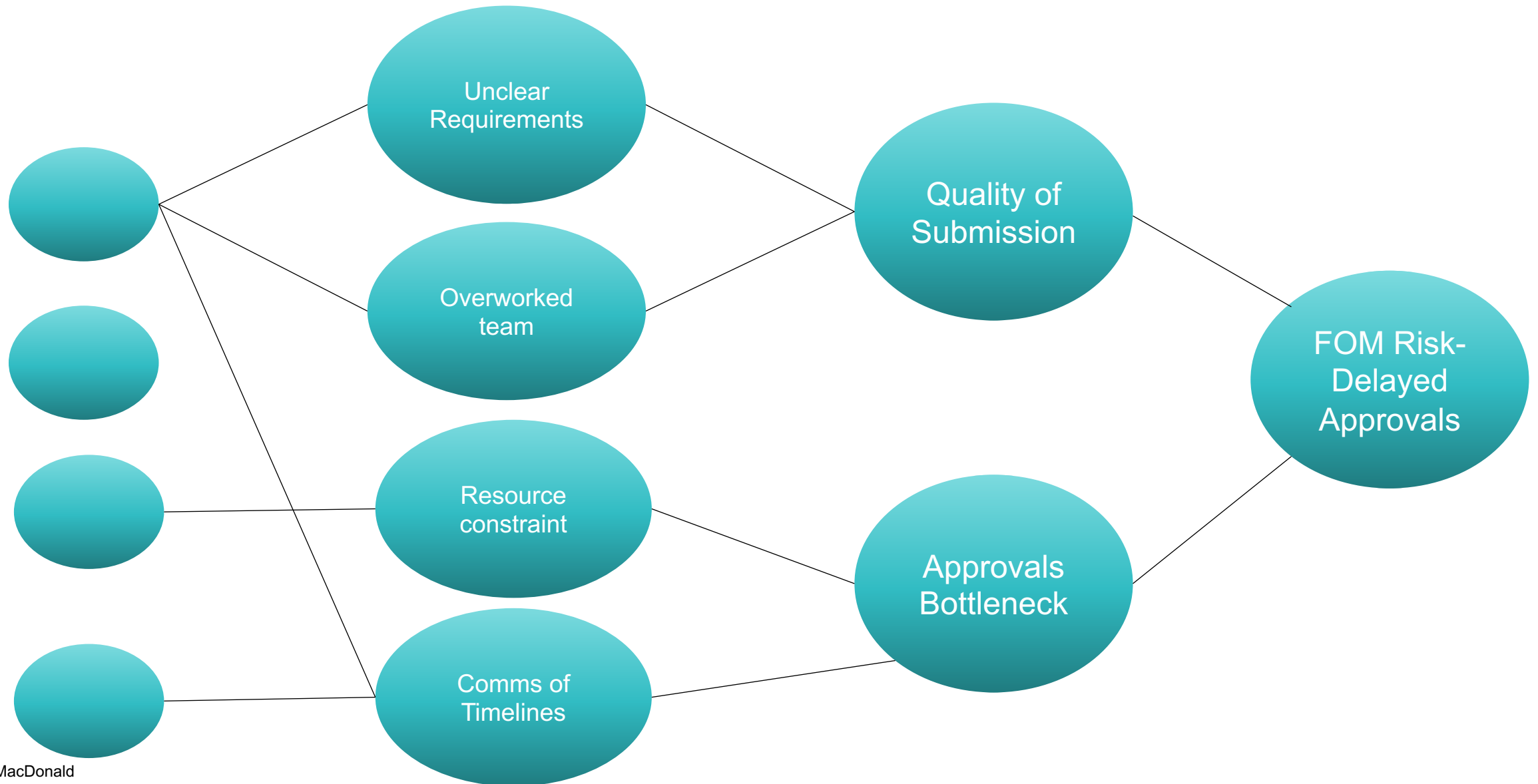
Client highlights

- £1.6bn Clyde Infra Programme
- £67BN NATO AFSC Concept Alpha Feasibility

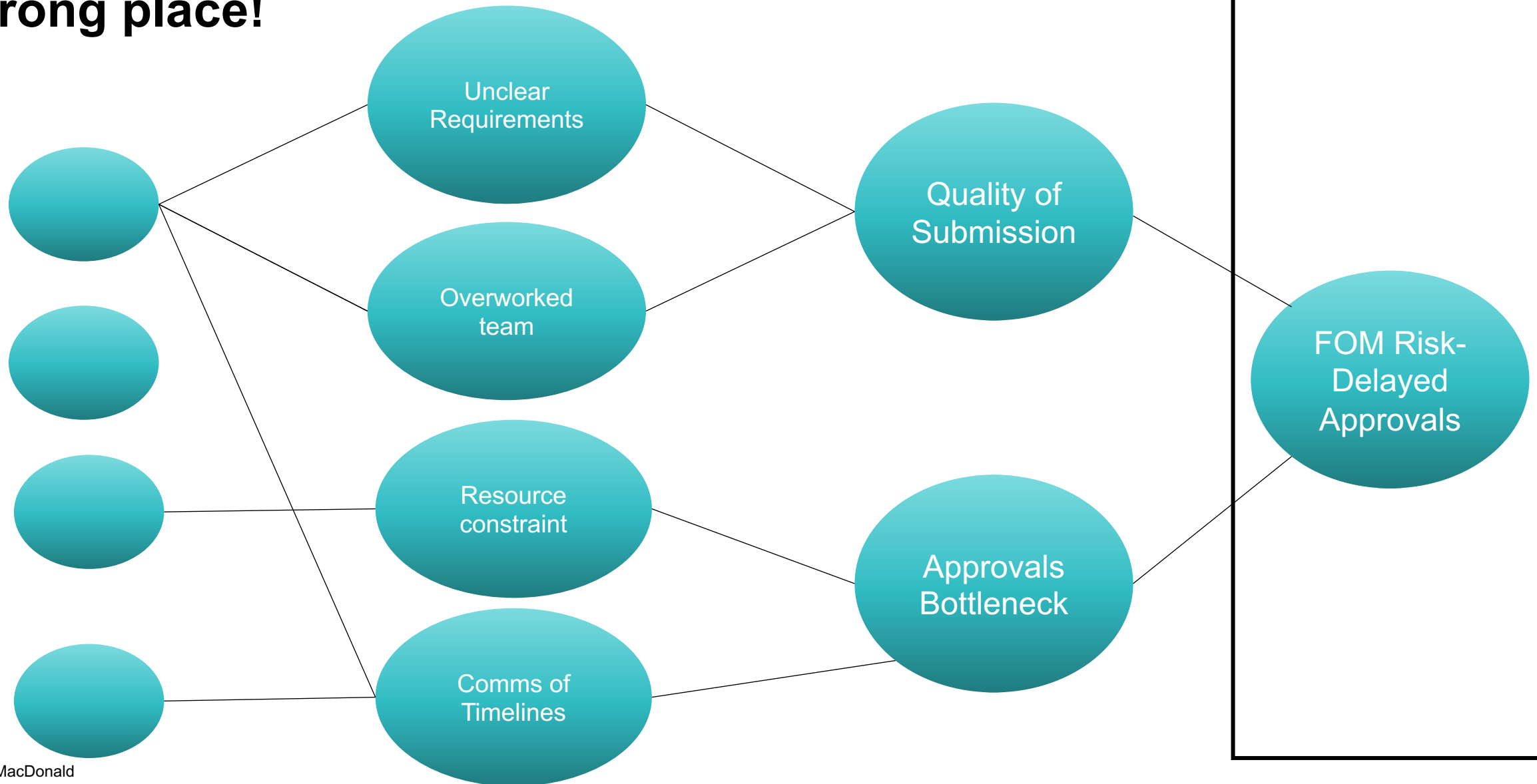
Most Commonly Asked Question ....

What does a Risk Manager actually do?!

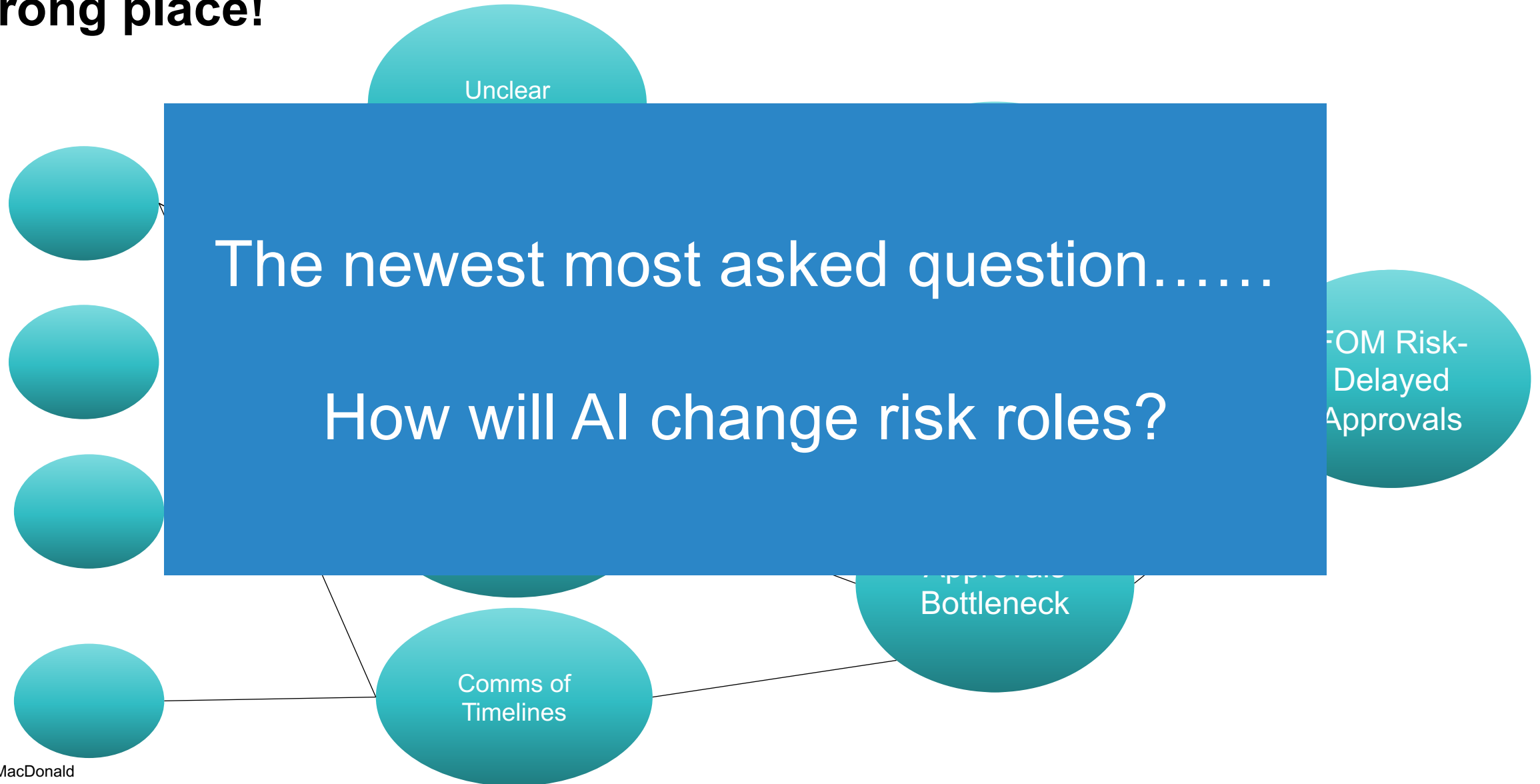
# When a risk is not the risk.....



# When a risk is not the risk.....When you're looking in the wrong place!



**When a risk is not the risk.....When you're looking in the wrong place!**



# ARTIFICIAL INTELLIGENCE

Techniques allowing computers to copy a human behavior



## MACHINE LEARNING

AI techniques allowing computers to learn to solve a specific task



## DEEP LEARNING

A subset of Machine Learning based on the use of neural networks





# How can (CoPilot/ChatGPT/BingChat) improve work

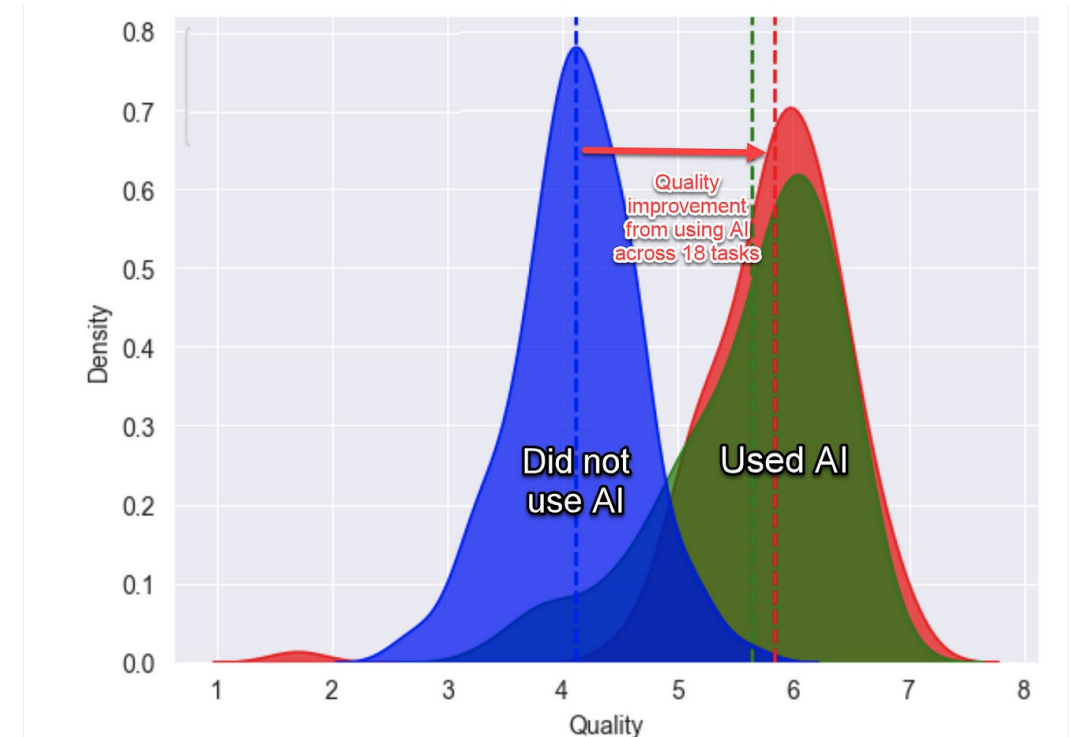
Peer reviewed paper by BCG, MIT and Harvard University Lab for Innovation Sciences

## Background:

- Collaboration between Boston Consulting Group and a team of social scientists.
- Largest pre-registered experiment on the future of professional work in the AI era – published 18/09/2023.

## Key Findings:

- BCG consultants using ChatGPT-4 outperformed those who did not in 18 different tasks.
- Performance metrics:
  - Completed **12.2% more tasks** on average.
  - Completed **tasks 25.1% more quickly**.
  - Produced **40% higher quality results**.

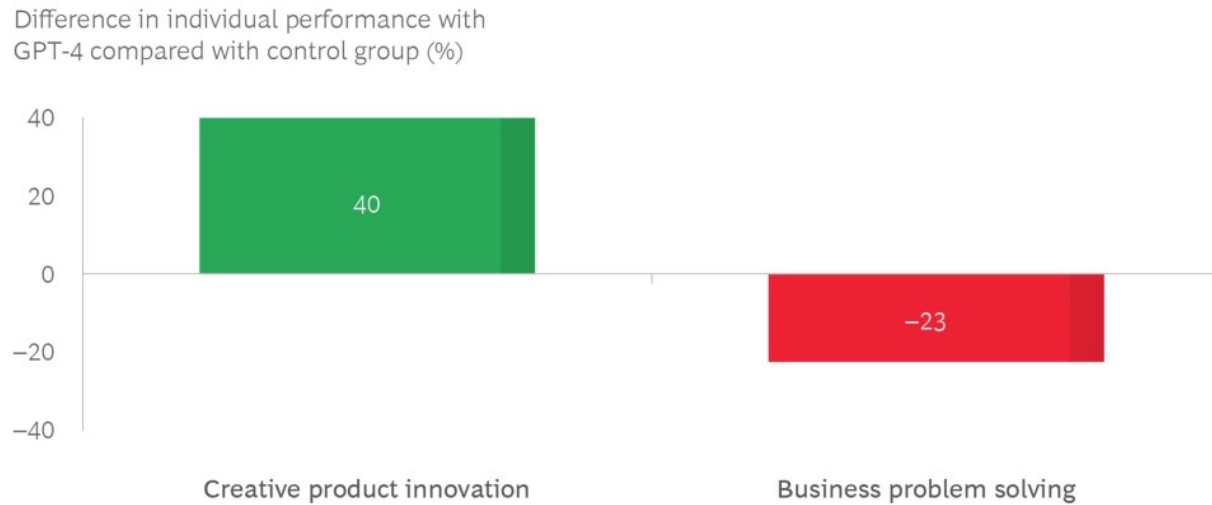


Distribution of output quality across all the tasks. The blue group did not use AI, the green and red groups used AI, the red group got some additional training on how to use AI.

Source: [“Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality”](#) – study by the BCG, MIT and Harvard University Lab for Innovation Sciences;

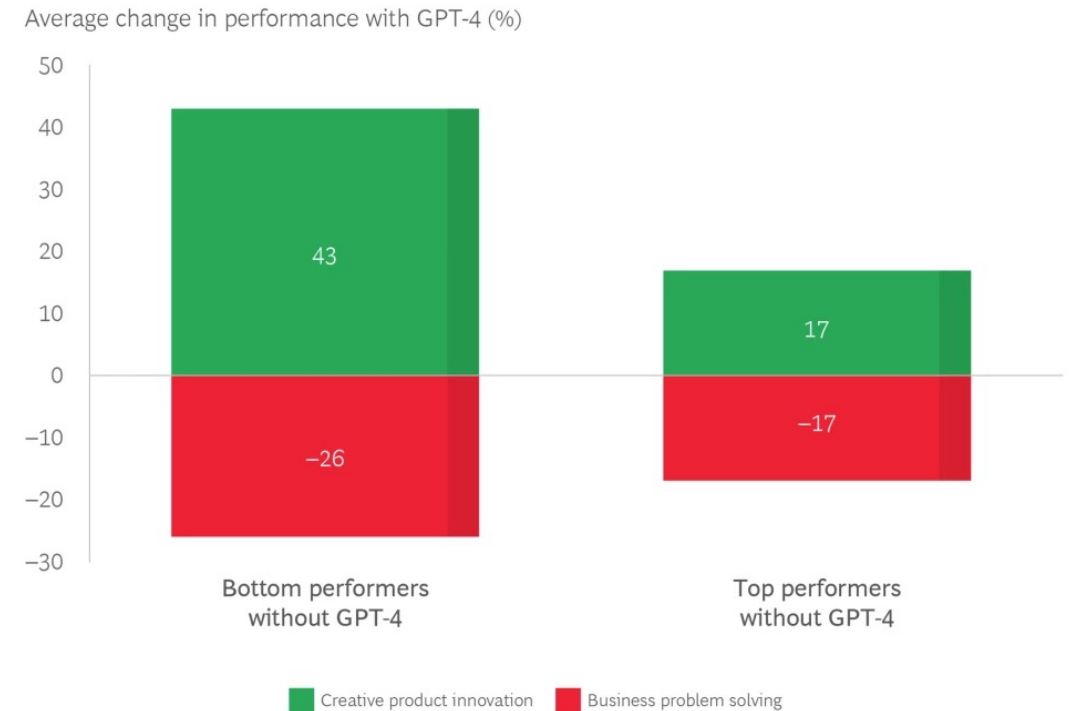
# So, should we be doing it?

Exhibit 1 - Generative AI Significantly Boosts or Hurts Performance, Depending on the Type of Task



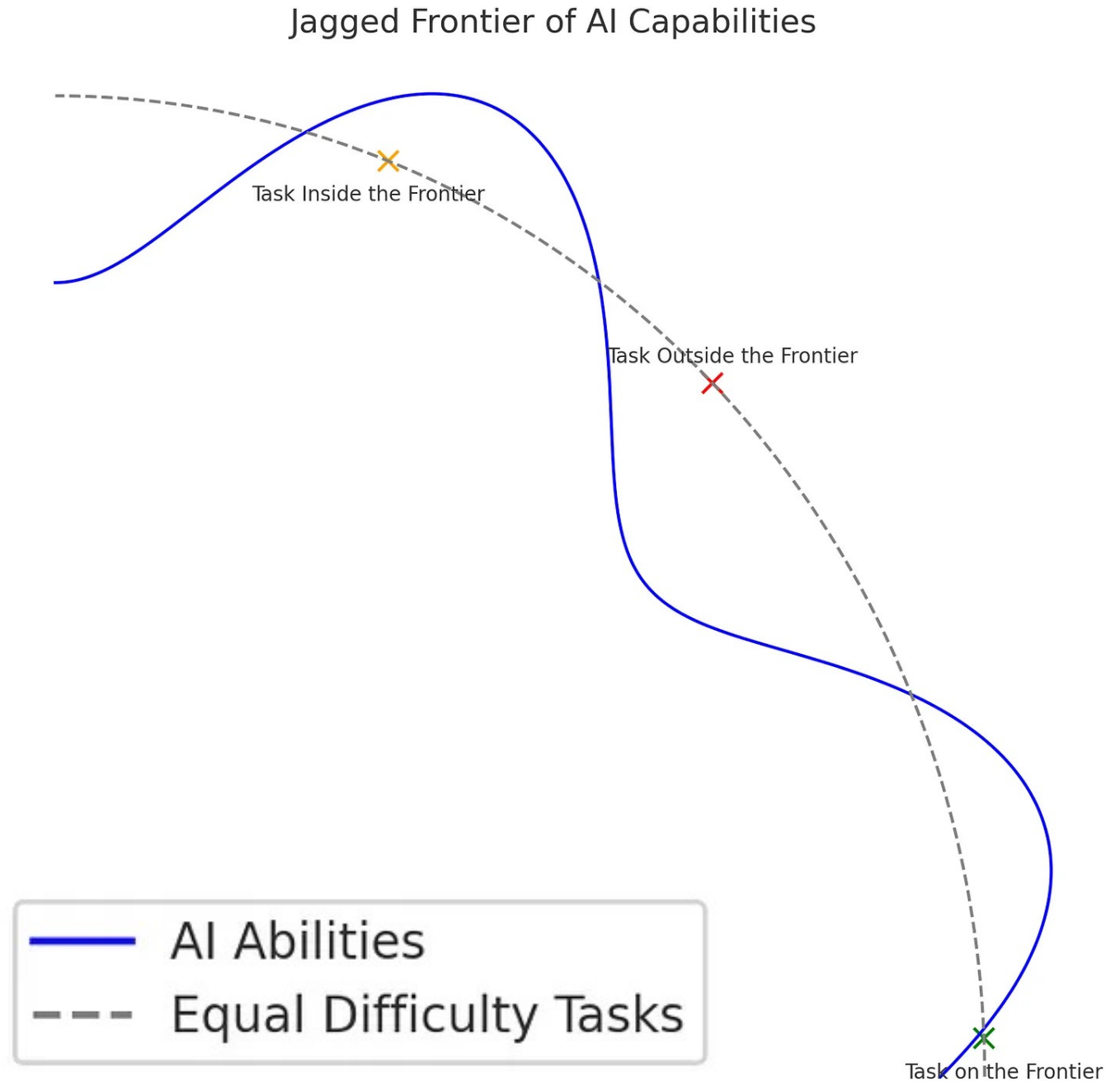
Sources: Human-Generative AI Collaboration Experiment (May-June 2023); BCG analysis.

Exhibit 2 - Generative AI's Performance Effect Is Strongest When Baseline Proficiency Is Lowest

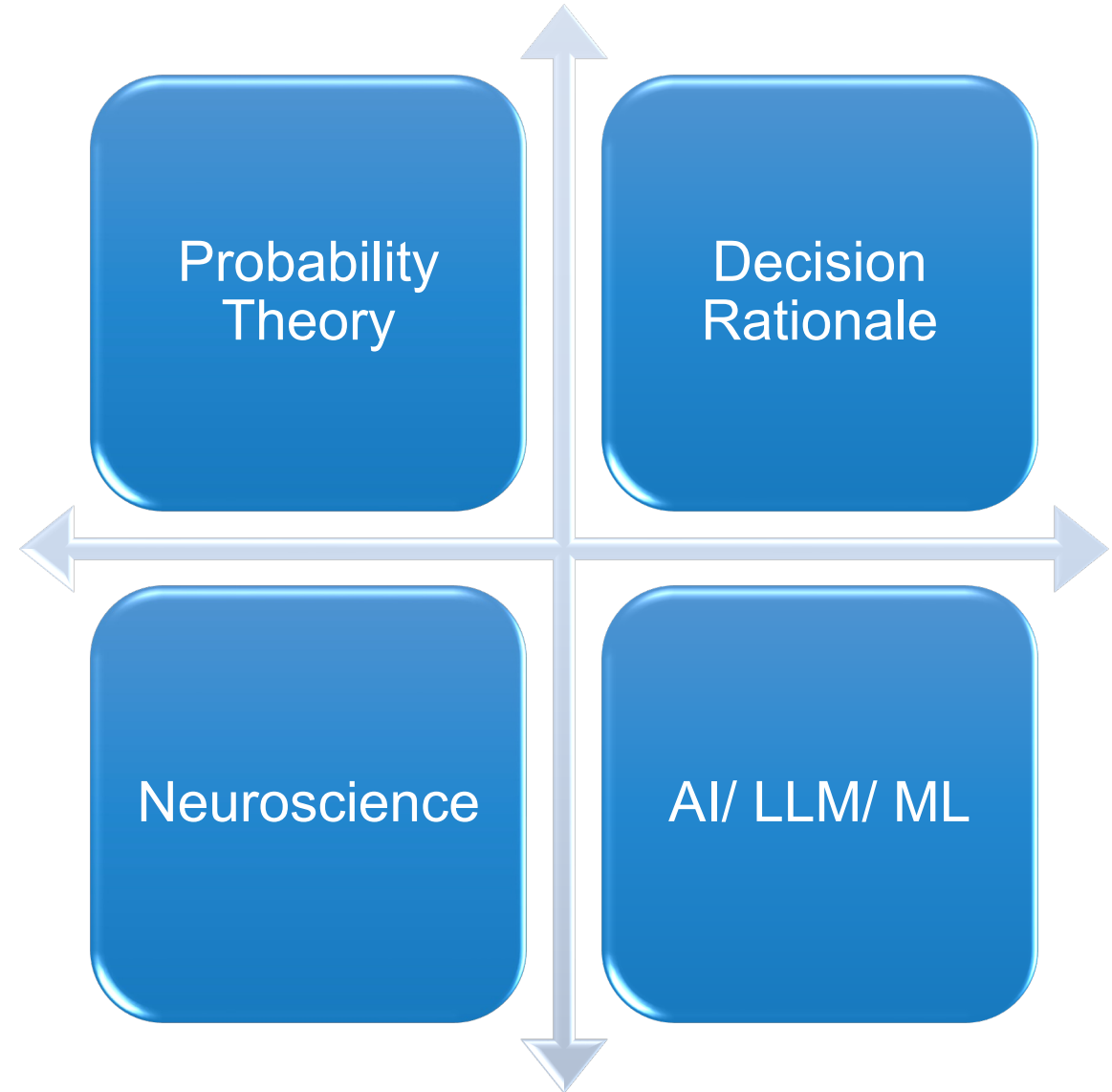
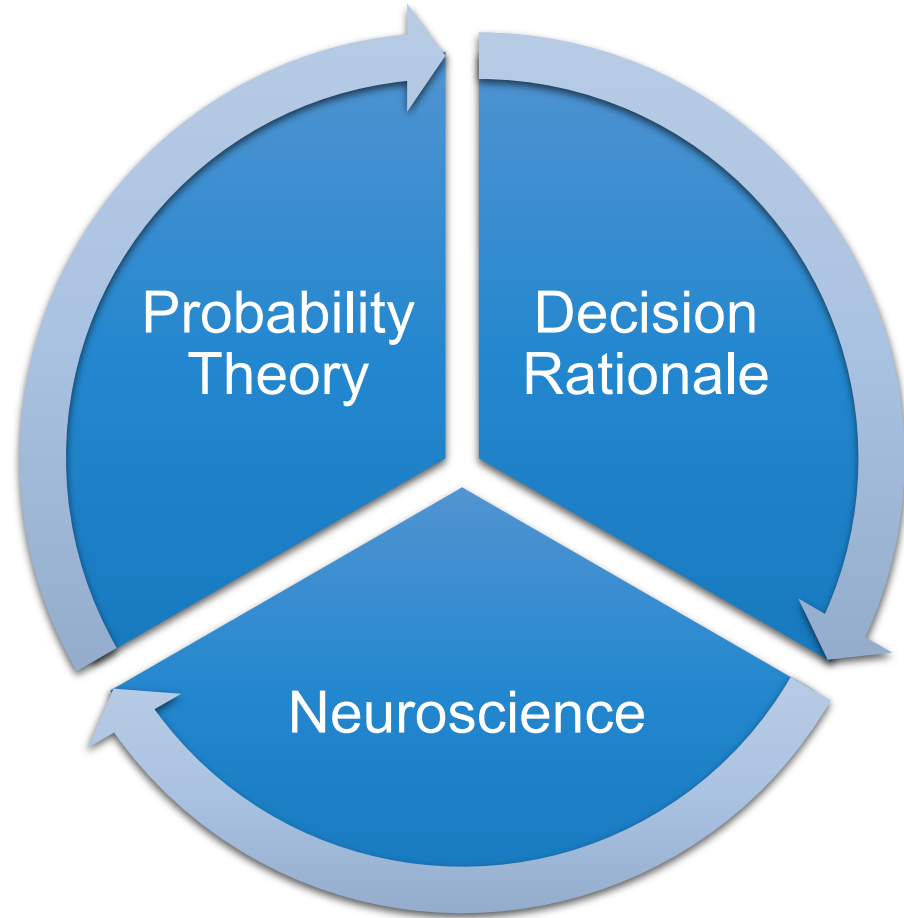


# The Jagged Frontier

AI has a "Jagged Frontier" representing its capabilities and limitations. The frontier is invisible, making it challenging to discern tasks AI can handle effectively.

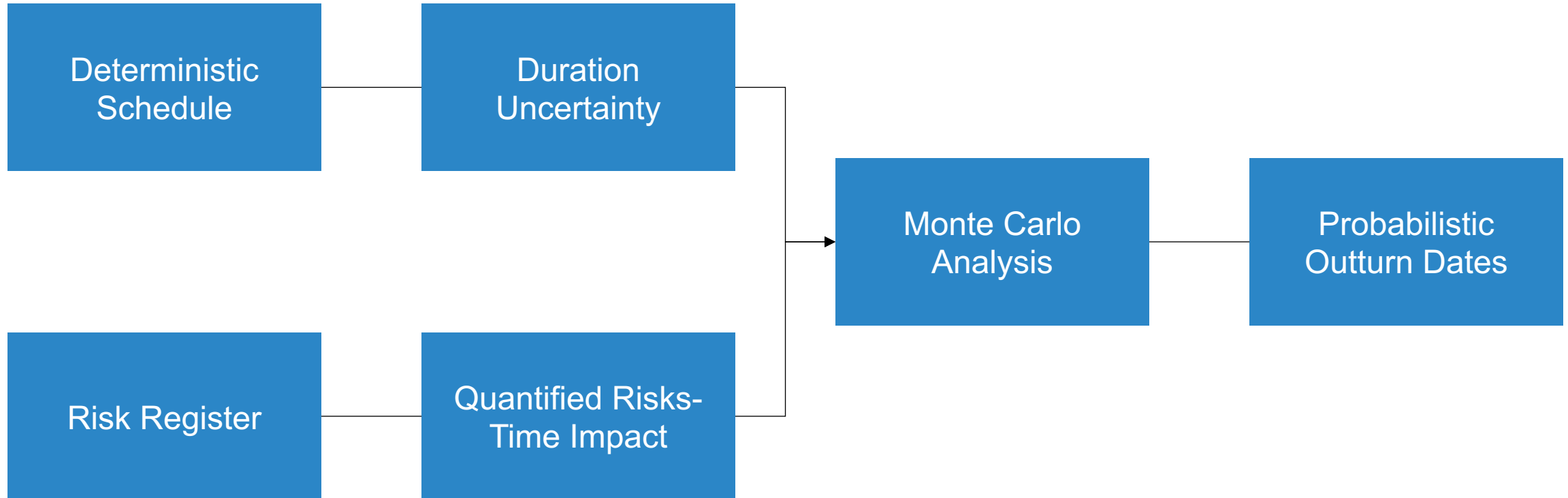


# Incorporate and adapt



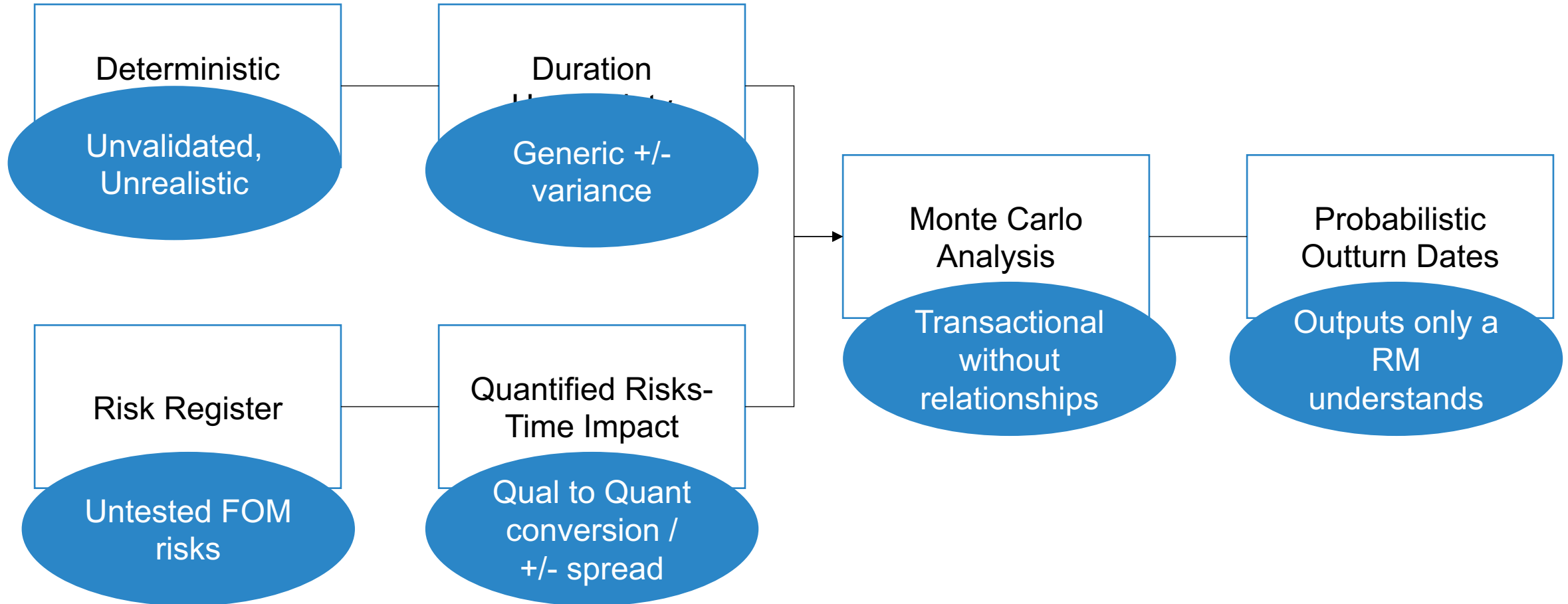
# QSRA: A use case example

Simple building blocks of a QSRA model



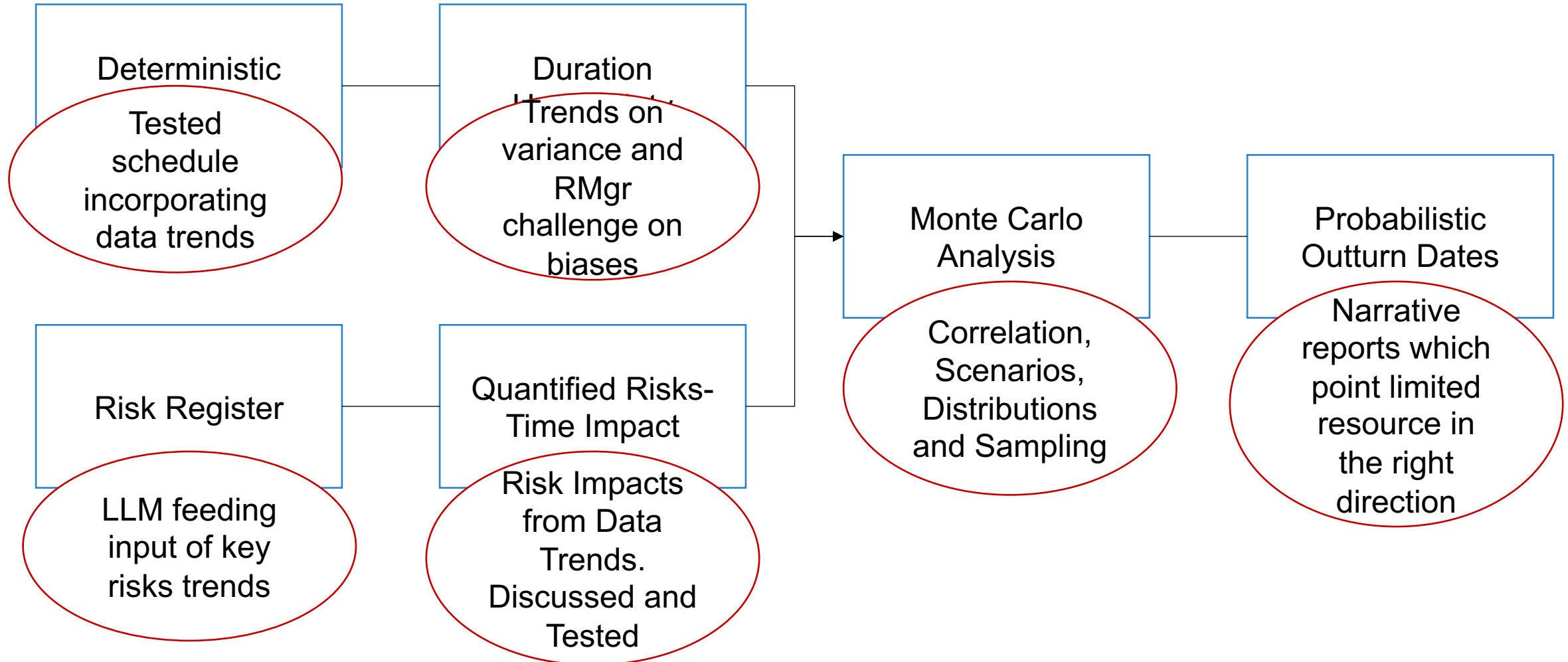
# QSRA: A use case example

Where Monte Carlo can go wrong...



# QSRA: A use case example

Using Risk Manager skills and AI to address the sources of error



## **3 key takeaways**

**A Risk Managers greatest skill is not in risk register maintenance or process development. It's in translating the uncertainty landscape (aka risks) of the people we engage with.**

**AI doesn't replace that skill (currently) as it builds on the biases, heuristics and lack of data we've always encountered.**

**But used well it is another source for us to translate, adapt and adopt into our risk models to better inform how to make the right decisions not the reactive decisions.**





**Thank you**

