

Uncertainty Deconstructed

'We should have seen it coming'
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Z/Yen Group, FS Club: Monday 3rd October 2022 11am
Chaired by Professor Michael Mainelli

Science, Technology and Innovation Studies

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Uncertainty Deconstructed

A Guidebook for Decision Support
Practitioners

 Springer

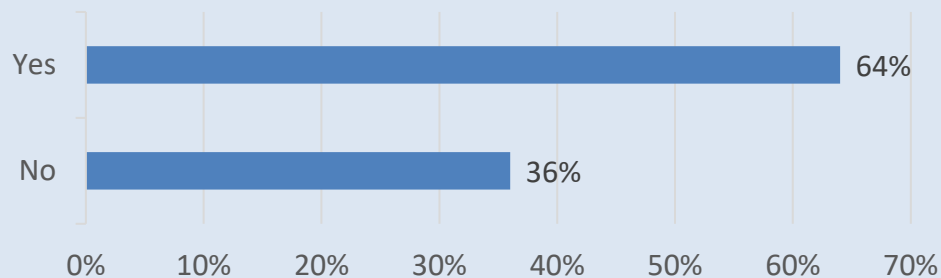
Poll 1 of 2

➤ Do you agree with this Statement

“Uncertainty is not really uncertainty at all but just demonstrates a lack of foresight, imagination, and vision.”

➤ Please answer: Yes / No

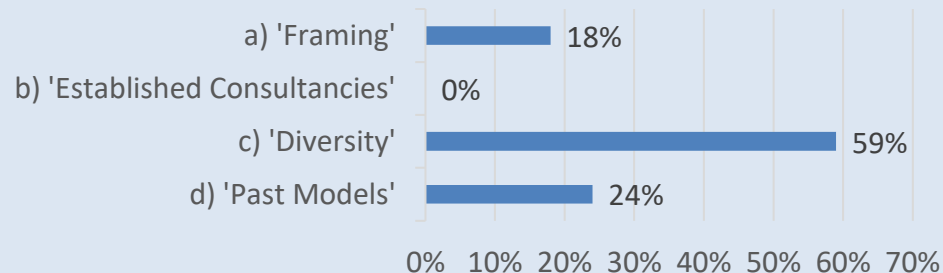
- The two polls were conducted, by the Chair, just before the start of the formal presentation in real-time with results shared immediately.
- Poll 1 showed 64% agreed with the statement “Uncertainty is not really uncertainty at all but just demonstrates a lack of foresight, imagination, and vision.”



Poll 2 of 2

- What one factor will improve decision-making given uncertainty?
- a) Framing the question/challenge in multiple-ways
 - b) Bringing in established management consultancies
 - c) Having more different, diverse and challenging people and viewpoints
 - d) Better understanding of past and existing models
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- The two polls were conducted, by the Chair, just before the start of the formal presentation in real-time with results shared immediately.
- Poll 2 showed 59% believed statement c) 'Having more different, diverse and challenging people and viewpoints' would improve decision making given uncertainty.
 - Interestingly 0% voted for statement b) 'Bringing in established management consultancies'

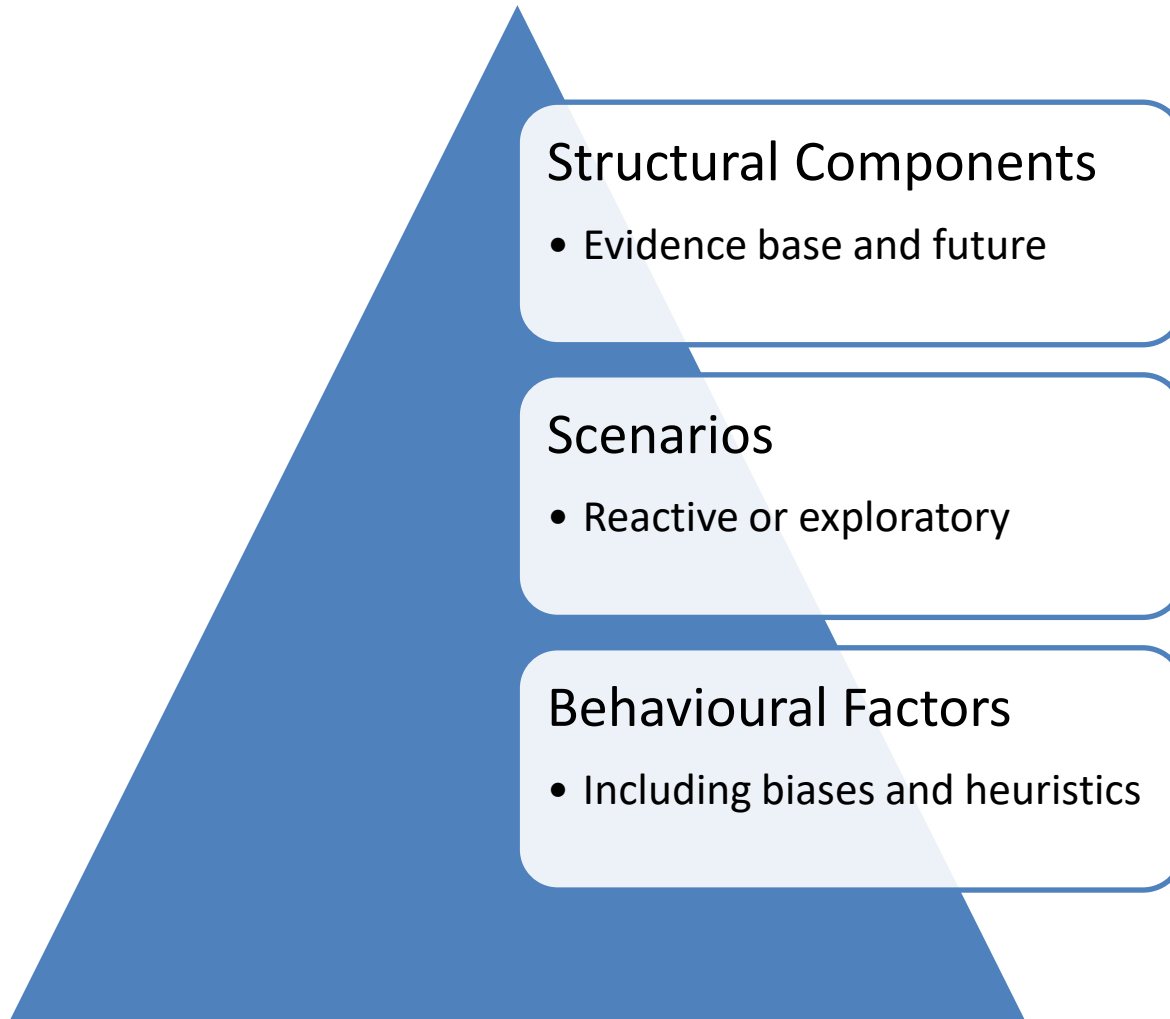


Uncertainty

- The order or nature of things is unknown
- The consequences or magnitude of circumstances or events are unpredictable
- Credible probabilities to possible outcomes cannot be assigned
- A situation where neither the probability distribution of a variable nor its mode of occurrence is known.

It is different from ‘risk’!

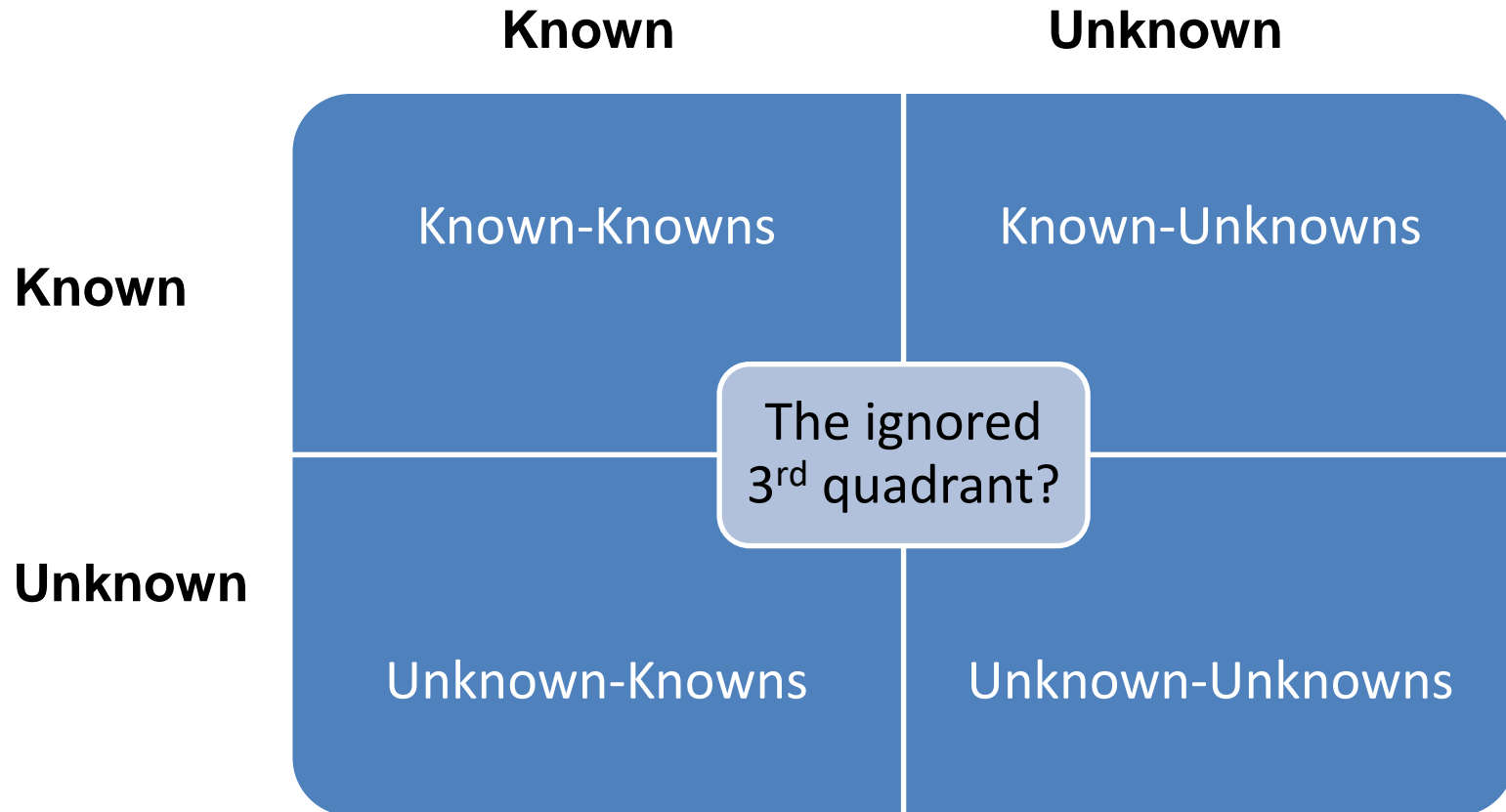
The Three Axes of Uncertainty



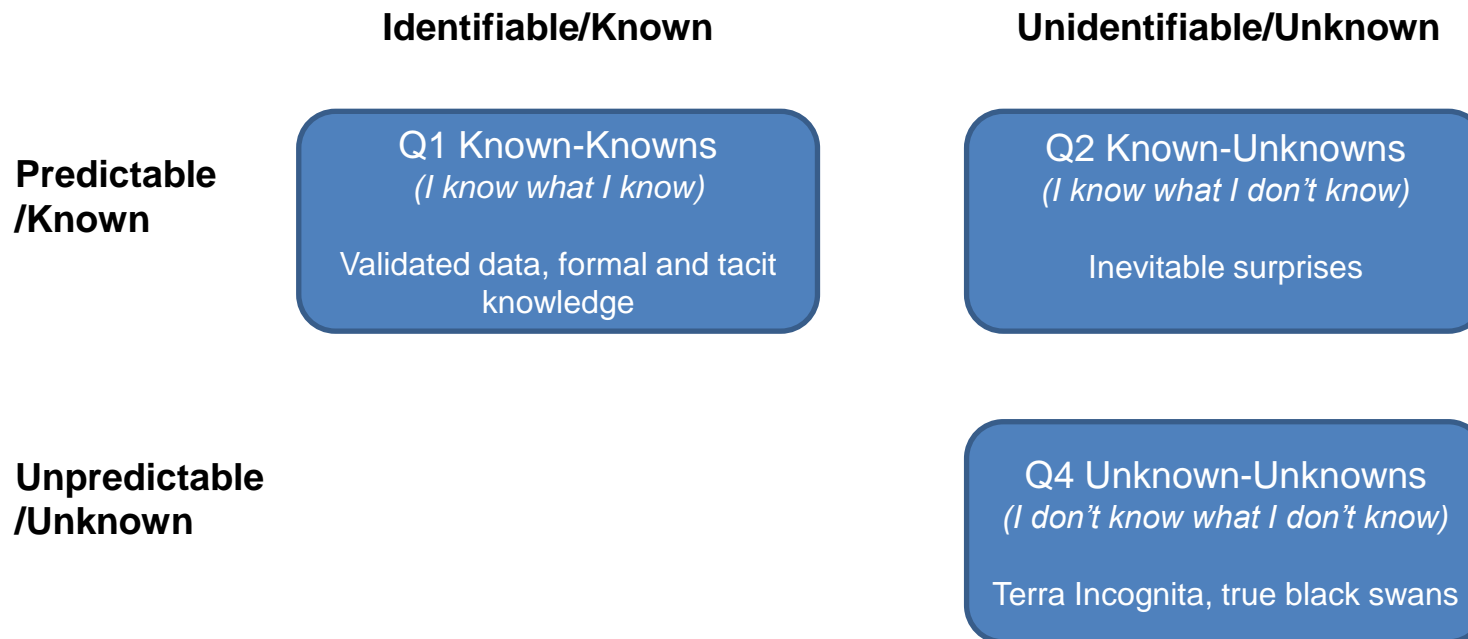
Deconstructing the Three Axes

- Structural components of uncertainty
 - Locating uncertainty along the risk spectrum
 - Problem status
 - Time-based criteria
 - The evidence base
 - Ways of seeing the future
- Scenarios and their role in dealing with uncertainty
 - What are they, why are they useful and how can we best use them?
 - Scenario derivatives, second and third order scenarios
- Behaviour – the hidden influencer in how we deal with uncertainty
 - Behavioural factors – cognitive biases, dissonance and alienation
 - How to mitigate the impact of the behavioural minefield

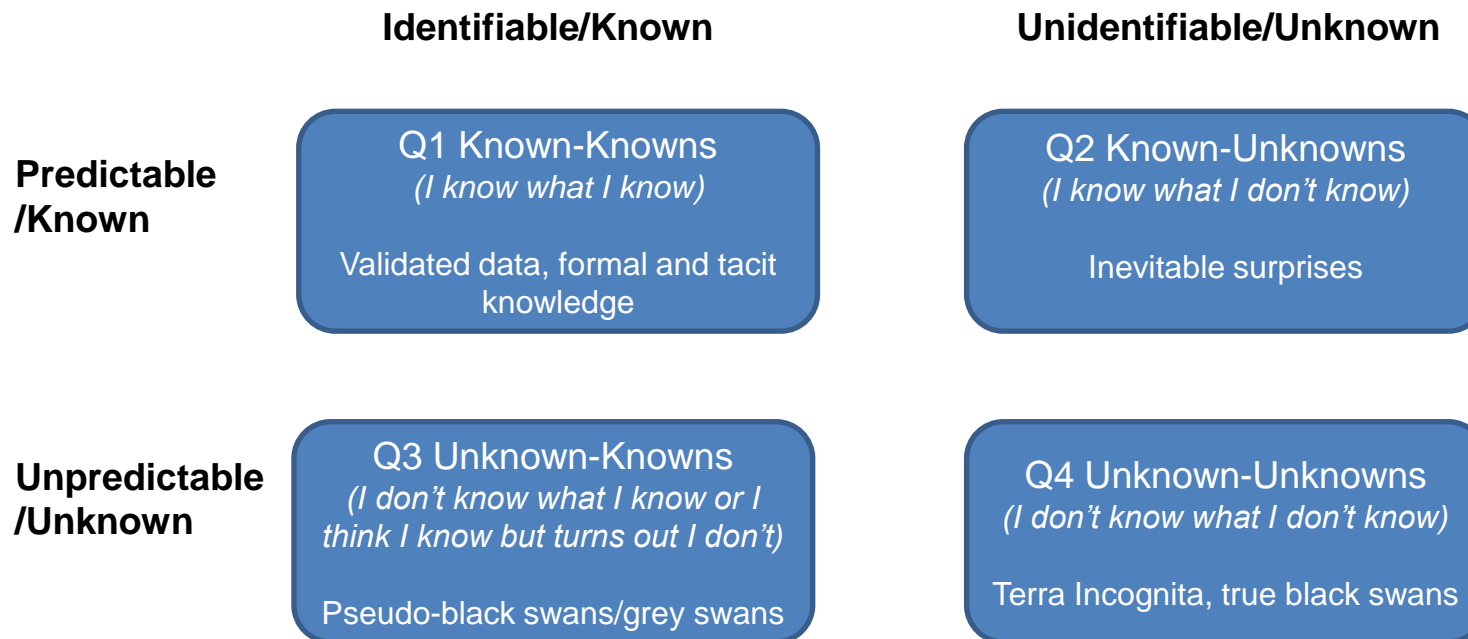
The 'Rumsfeldian' Interpretation



Uncertainty Profile Template



Uncertainty Profile Template

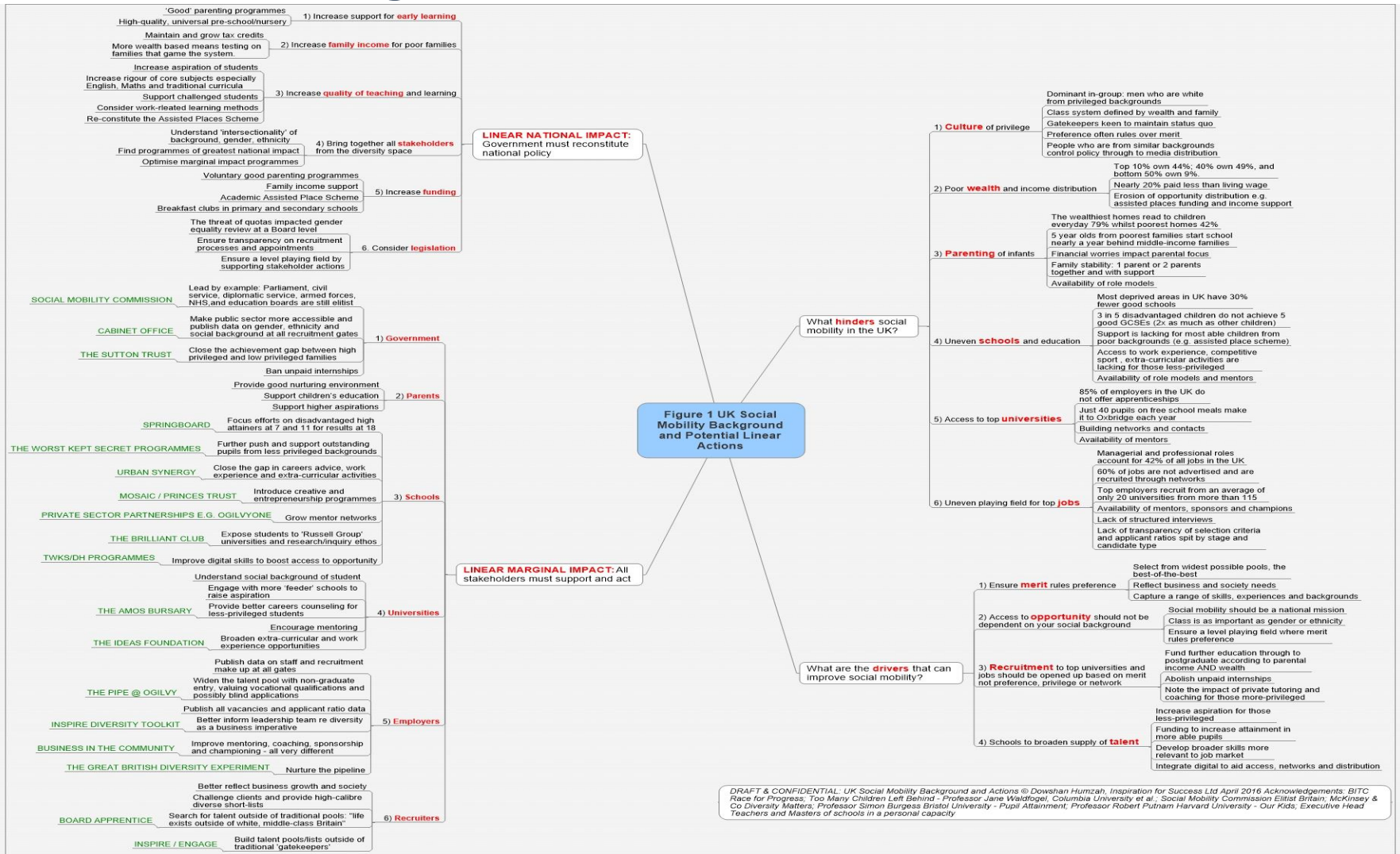


Case Study of a ‘Wicked Problem’: Social Mobility

- The UK, generally, remains a deeply divided society
 - Not really given gender, race, disability, age or any other protected characteristic
 - But between the ‘haves’ and the ‘have-nots’
 - Based on privilege, money (wealth and income) and opportunity
- Improving social mobility and inequality can help address this

“We still live in a country where an individual’s future potential is more defined by the circumstances of their birth – especially parental income, family wealth, and privilege.”

Contextualising the Problem and Solutions



A Process to Simplify Wicked Problems

Phase 1

Generate the entire problem space
(Steps 1-6)

- Select a diverse, high-quality team representing key stakeholders and different viewpoints
- Determine the focus question and main problem areas
- Facilitate an open culture with challenge actively welcomed

Phase 2

Perform pair-wise analysis
(Steps 7-8)

- Software converts the problem space into a matrix for pair-wise analysis by the team
- Identify inconsistent pairs given the parameters

Phase 3

Generate the solution space for decision support
(Steps 9-10)

- Software eliminates configurations where pairs are consistent - producing more viable consistent solutions
- Solutions are presented as 'what-if' scenarios
- Team applies creative thinking for more oblique solutions

Key Takeaways

- Is the difference between strategic and tactical in decision making understood?
- How resilient do you want to be?
- Identify early on as to what is at stake – are you prepared for some uncomfortable truths?
- Try not to fall into the trap of oversimplification
- Get acceptance and understanding that foresight actions are not just about the longer term future but that the future starts now

Key Takeaways

- Be anticipatory rather than reactive
- Make the planners aware that the future is dynamic – move away from fixed cycle planning and control
- Operationally, pay serious attention to frequently updating contingency plans, run regular simulation exercises
- Uncertainty – not left to one person or department – needs to be disseminated across the organisation and to defend its ground
- Always challenge management thinking! Have we transformed ourselves? What have we learnt? Have we been creative/different?

Postscript: Our Perception of Uncertainty

- We need to change the perception of uncertainty as something that happens in the future which we have no awareness or control over, to a proposition that the majority of future events are foreseeable when seen as ‘inevitable surprises’ or ‘known-unknowns’

“A whole array of biases and a lack of imagination prevent us from making the effort to think about uncertainty as treatable”

