05 March 2019
Prince Philip House

Survey Responses

Decision Making under Deep Uncertainty workshop

Lucas Kruitwagen
DPhil Candidate - University of Oxford

AU4DM
Network
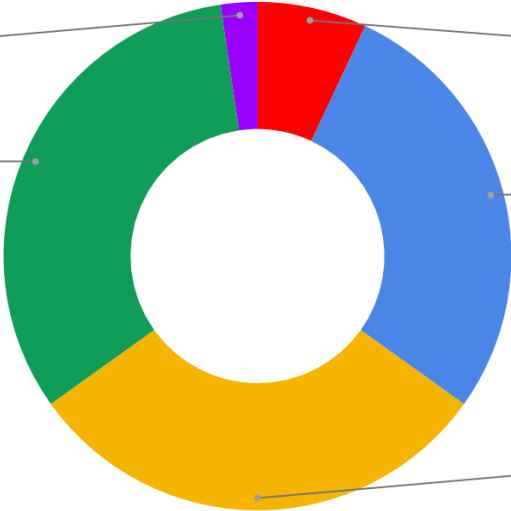
Who's here?

What kind of organisation do you work for?
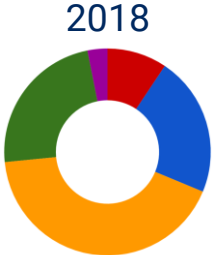
Private - Finance
2.3%

Public - NGO
7.0%

Private - Corp
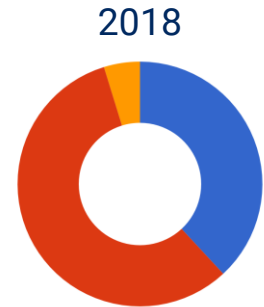32.6%

Public - Gov't
27.9%

Academia
30.2%

N=43

2018

What do we do?

Do you consider yourself a decision-maker or an analyst?

Analyst
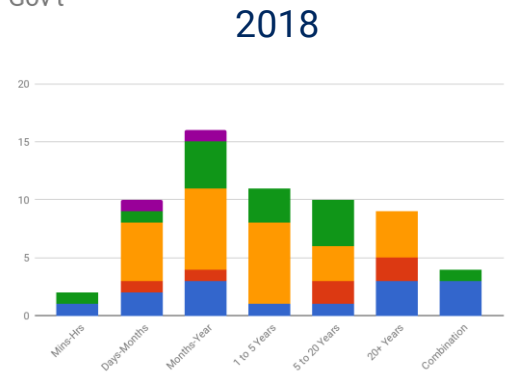45.5%

A bit of both
54.5%

N=43

2018

AU4DM
Network
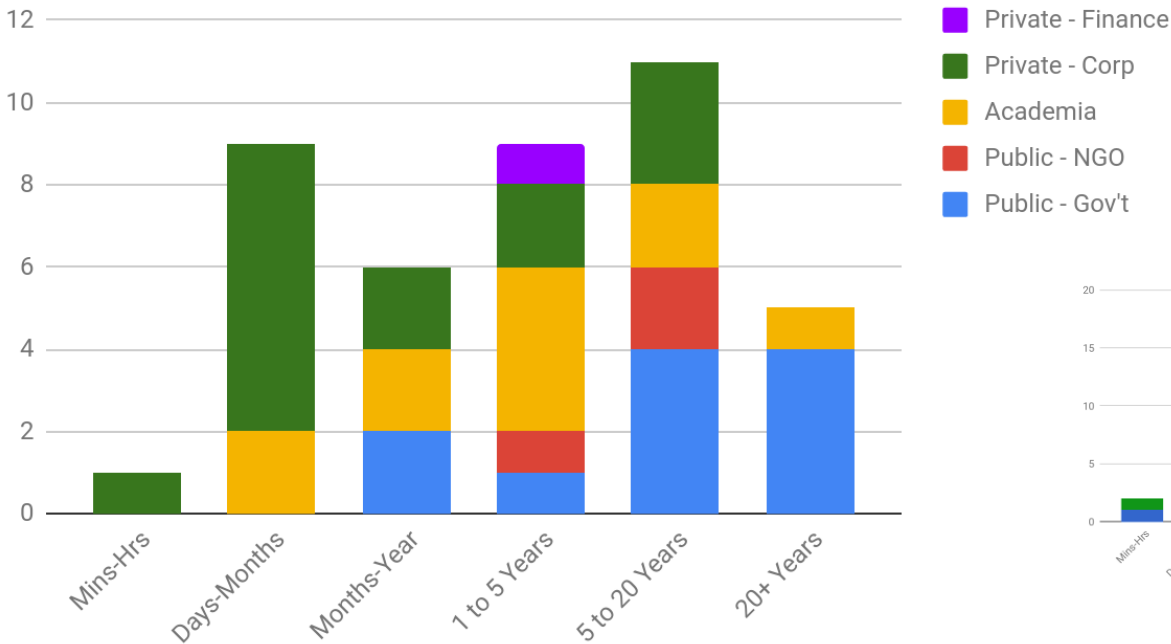
On what time horizon?

What time horizon is most relevant to your decision-making?

Legend:
- Private - Finance
- Private - Corp
- Academia
- Public - NGO
- Public - Gov't

2018

What tools do we use?
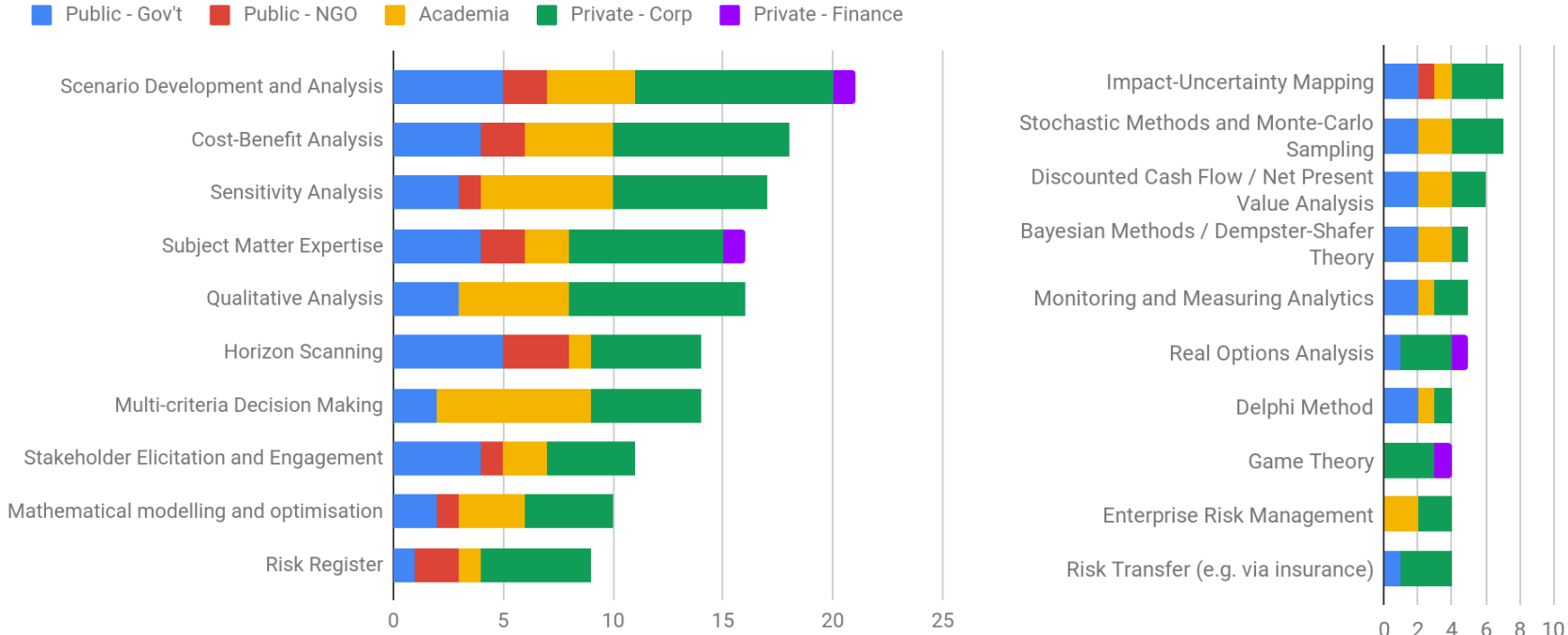
What do we seek to optimise?

What do you seek to optimise in your decision making or analysis?
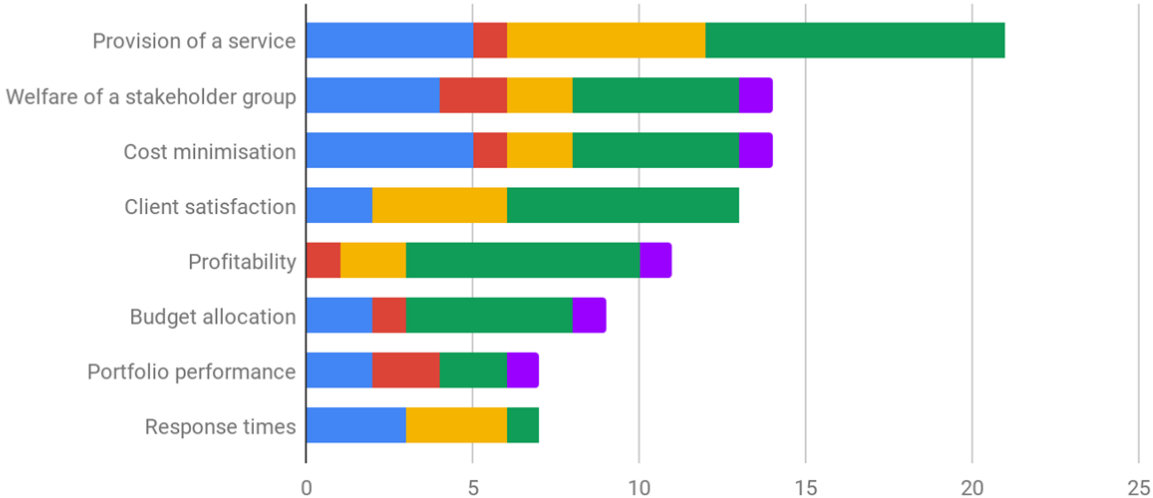
What do we seek to optimise?

What else?
- "lsdipfsdpf"

"My decision making is substantially constrained by a regulatory or public mandate."

Legend:
- Private - Finance
- Private - Corp
- Academia
- Public - NGO
- Public - Gov't

2018

AU4DM Network
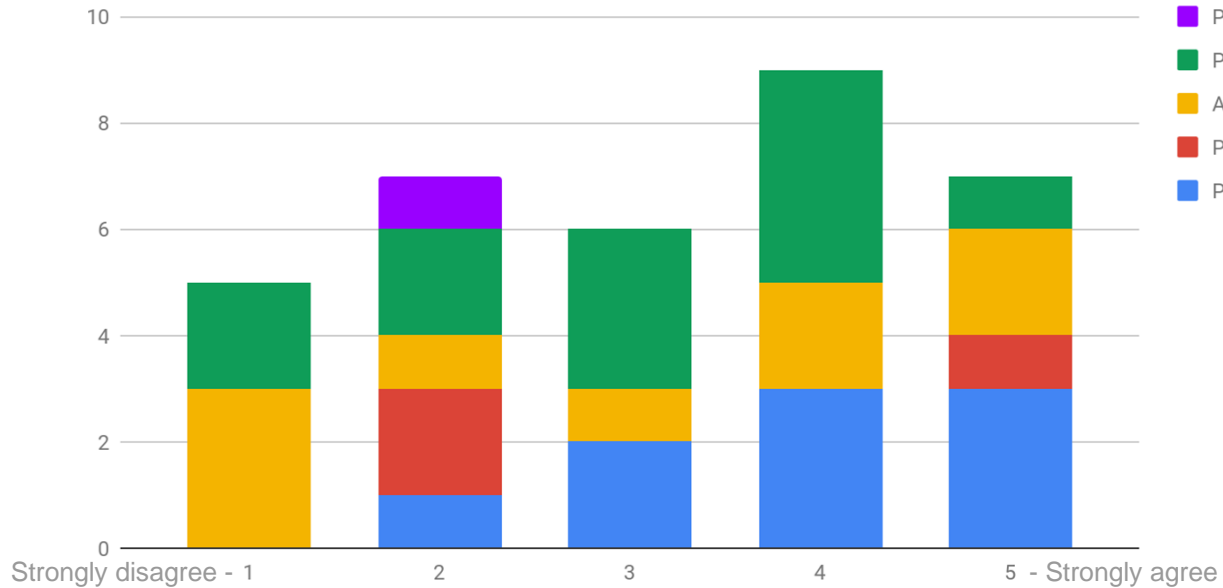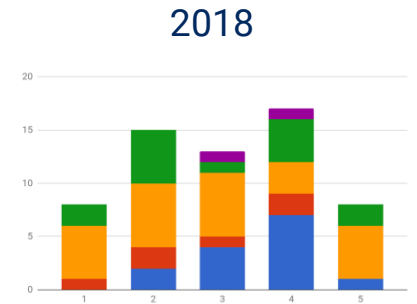
"A large portion of the risk and uncertainty in my decision making is strategic."
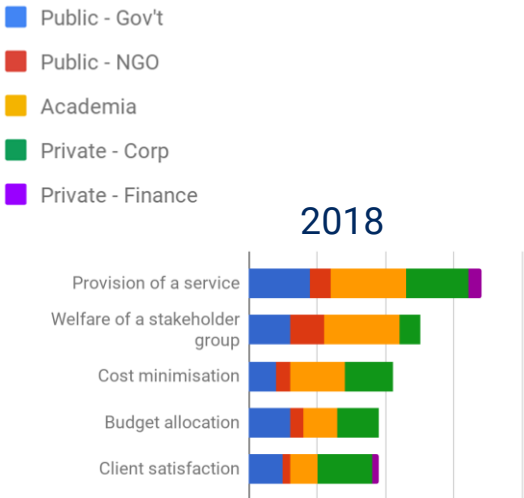(i.e. uncertainty in the decisions and counterdecisions of other decision makers such as competitors)

2018

Private - Finance
Private - Corp
Academia
Public - NGO
Public - Gov't

Strongly disagree - 1   2   3   4   5 - Strongly agree

AU4DM
Network

What barriers do we face?

Legend: Public - Gov't | Public - NGO | Academia | Private - Corp | Private - Finance

Barriers (top to bottom):
- Organisational inertia and entrenched processes
- Down-side risk aversion
- Overemphasis of short-term risks and/or results
- Communication of underlying assumptions coherently
- Sufficiency of data
- Groupthink
- Differences in risk cultures across organisation
- Shortage of top-management time and attention
- Insufficient emphasis on qualitative methods
- Preference for single-point estimates or answers (rather than confidence intervals)

X-axis: 0, 50, 100, 150

AU4DM Network

What barriers do we face?

What else?

- "Gaps between academia and practitioners"
- "Flawed methods, e.g. preferences for single-value NPV calculation"
- "Fear of political masters' reactions"
- "Creating robust, repeatable approaches"

*"What do **you** need to make a good decision?"*

*"What do **you** need to make a good decision?"*

Information

- "timely, reliable, quality, science-based information with error/uncertainty range"

- "Sound evidence"

- "More data and better IT"

- "Strong statistical conclusions"

- "Usable signals of concern and change with an indication of uncertainty"

*"What do **you** need to make a good decision?"*

Context

- "Understanding how to structure questions and meetings"

- "Good problem definition"; "problem framing"

- "The appreciation of uncertainty on all sides: people producing forecasts, people using forecasts and people the forecasts will impact"

AU4DM
Network

*"What do **you** need to make a good decision?"*

Tools and Algorithms

- "An agreed world model ... an agreed decision process"

- "A good understanding of the options and the risks"

- "Understanding the robust trade-offs and synergies of decisions"

AU4DM
Network

*"What do **you** need to make a good decision?"*

The Objective

- "Objectives as clear as possible, including risk appetite and tolerance for ambiguity"

- "Clarity on policy objectives"

AU4DM
Network

*"What do **you** need to make a good decision?"*

X?

- "Fundamental understanding"

- "The right intuition and the right timing"

- "Space and Calm"

AU4DM
Network

"What new or emerging problems did your organisation face this year?"

- Policy: Brexit x 5; "regulatory changes"; "funding cycles"

- Opportunity seeking: "recommending new portfolio opportunities"; "priority areas for greatest impact"; "seeking new areas of business to invest in"

- Technology change: "Cyber risk"; "digitisation"; "digital transformation"; "new technology disruptions"

- Operational: "staffing turnover"; "operational decisions"; "operational autonomy"

AU4DM
Network

"How were these problems complicated by elements of uncertainty?"

- "insufficient/incomplete evidence and engagement"

- "Naive stakeholders"

- "Unclear what happens at the intersection of devolved parts"; "some accepted capabilities of the organisation were actually capabilities of individuals"

- "Difficulty in modelling system complexity"

- "Multiple scenario-uncertainty dimensions that imply fundamental societal choices"

"What new steps did you organisation take this year to better understand uncertainty?"

- "Invested in new technology for better data"

- "Map what we know we know"; "explicit labelling of uncertainty"

- "Implemented an expert judgement panel"

- "Employed a modeller"; "employed an advisor"

- "Scenario planning and sensitivity testing"

- "Not enough"; "limited"; "very little"; "nothing new"

AU4DM
Network

"What new steps did you organisation take this year to make better decisions?"

- "More computer power for modelling (is the engineers' answer)"

- "Future-proofing"; "asking: what happens if we happen to be wrong?"

- "Employed new staff"; "employed new directors"; "changed out CEO"

- "Explicit inclusion of mental models"

- "None"; "nothing new"; "very little"

AU4DM
Network

"What new challenges, limits, or set-backs did your organisation discover in trying to implement better decisions under uncertainty?"

- "Tension between risk appetite and performance demands"

- reluctance/failure of senior management to "accept the concept of irreducible risk"; "appreciate and invest in novel tools";

- "Data gaps and dependencies"

- "Competing objectives, even in the same company"

- "Organisational maturity"; "big changes to implement overnight"

AU4DM
Network