



SCAF Conference Case Study Workshop

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Practical Solutions to Complex Problems

www.polarisconsulting.co.uk

- The Team: Polaris Consulting Ltd
- The Challenge
- Assumptions / Boundary / Timeline
- Approach to Data Gathering
- Uncertainty Analysis
- Risk Modelling
- Output costs
- Lessons Learnt



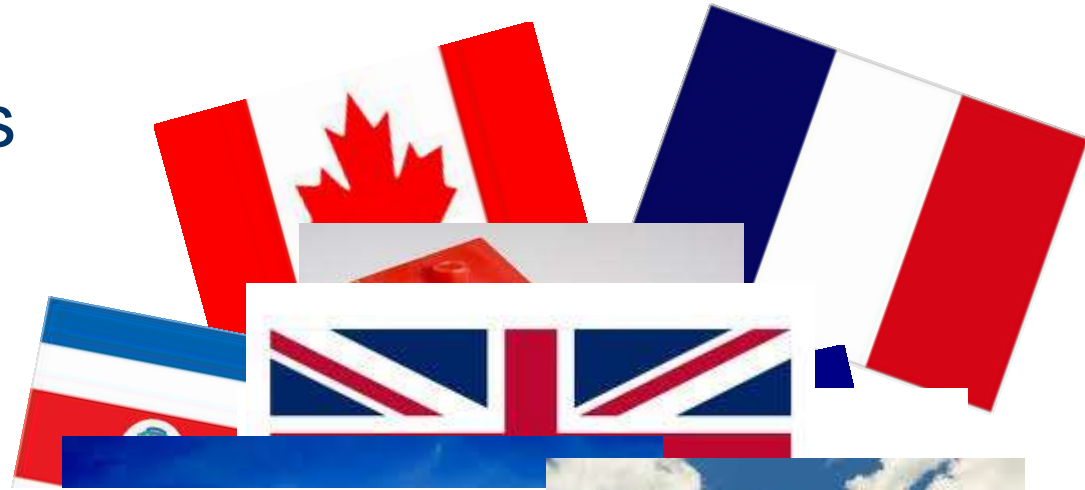
- Andy Nye:
 - Junior Consultant



- Alyck Spraggins:
 - Junior Consultant

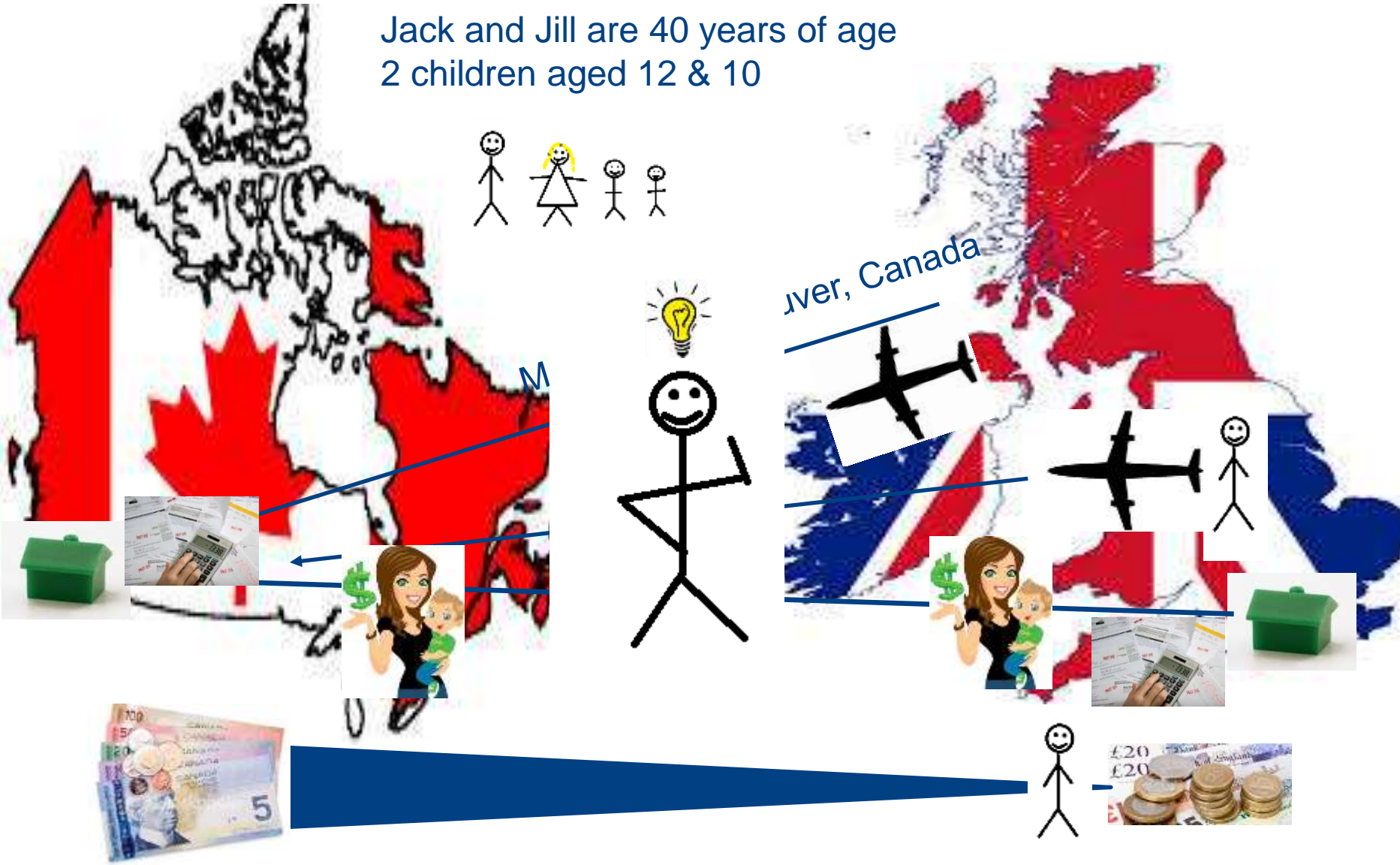


- The Challenge
 - Moving overseas
- Imagination

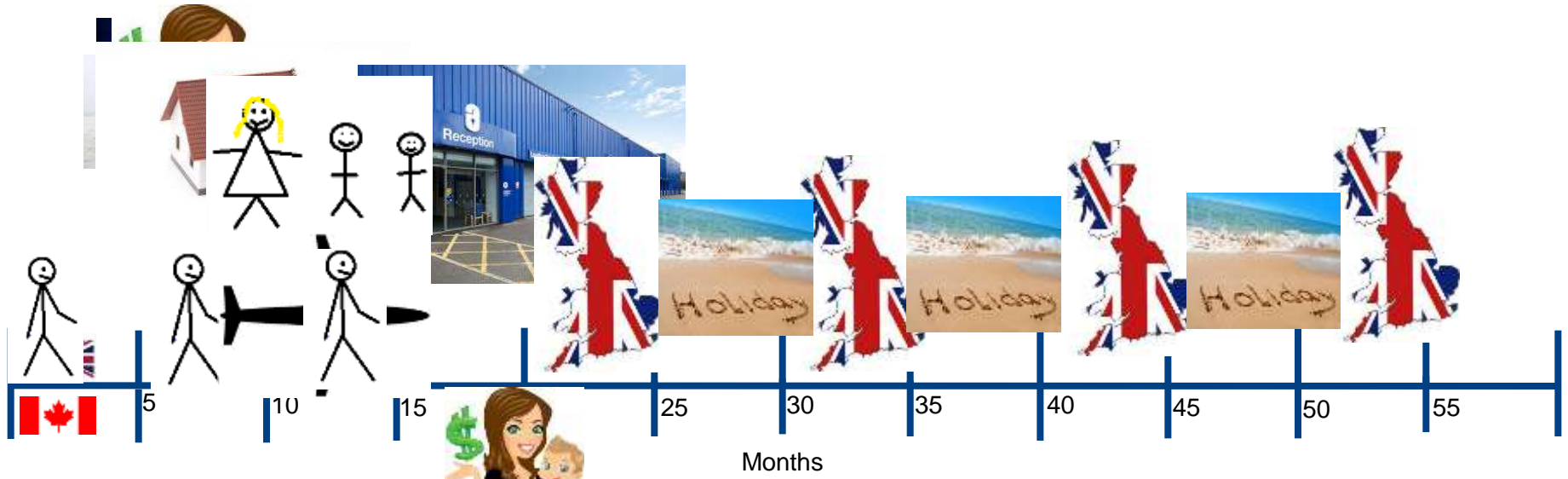


Boundary/Assumptions

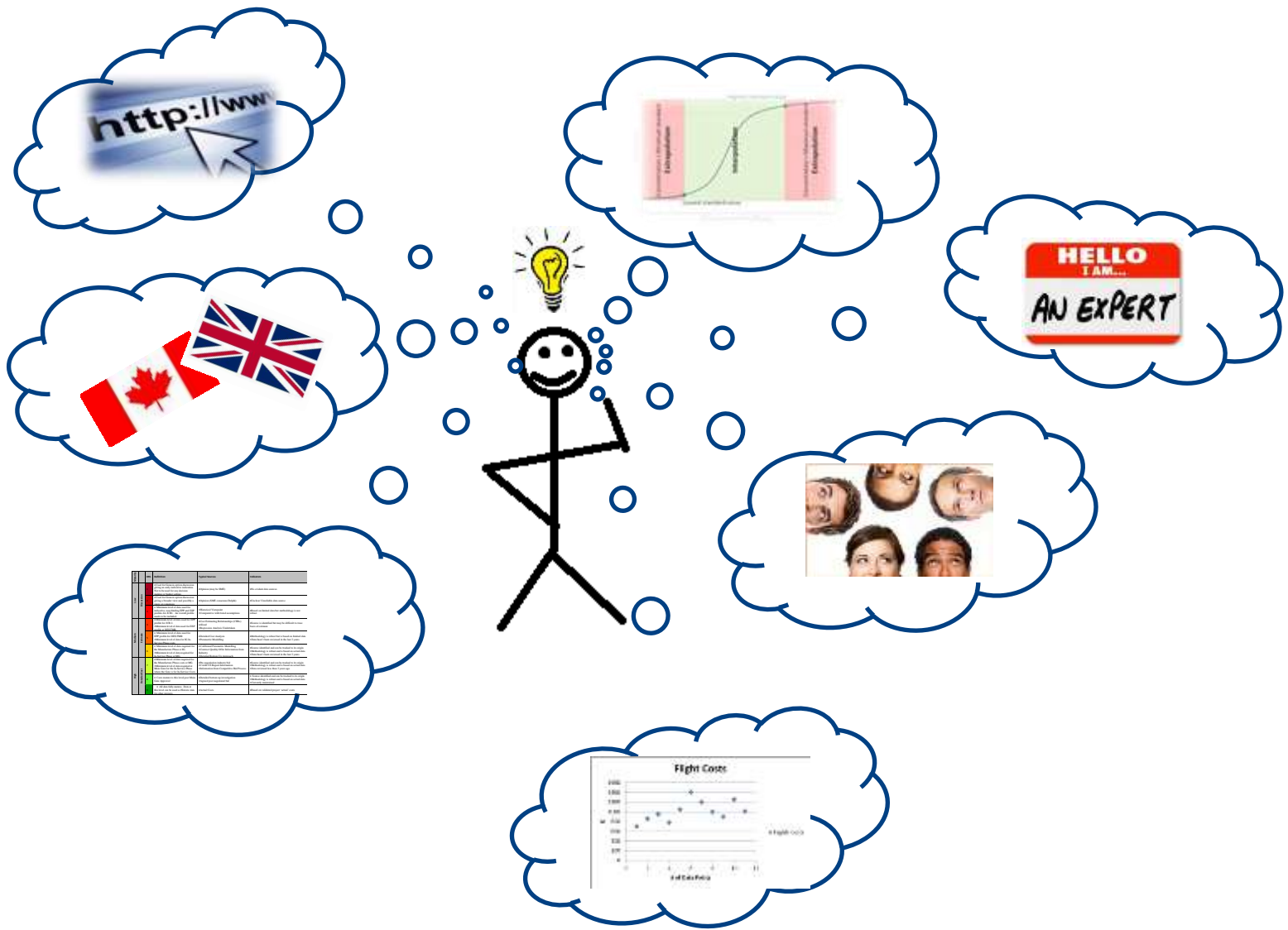
Jack and Jill are 40 years of age
2 children aged 12 & 10



Timeline



Data Gathering



‘the variation surrounding the planned baseline resources or schedule required to deliver a project’ SCAF, 2014

- Data Readiness Levels
- Min, ML, Max.

‘the probability of an event causing a deviation from the planned baseline and the impact of the event in terms of cost and schedule’ SCAF, 2014

- Risk Modelling Considerations:
 - Quantitative Risk Techniques
 - Qualitative Risk Techniques



Impact	H	Yellow	Red	Red
	M	Green	Yellow	Red
L	Green	Green	Yellow	
		L	M	H
		Probability		

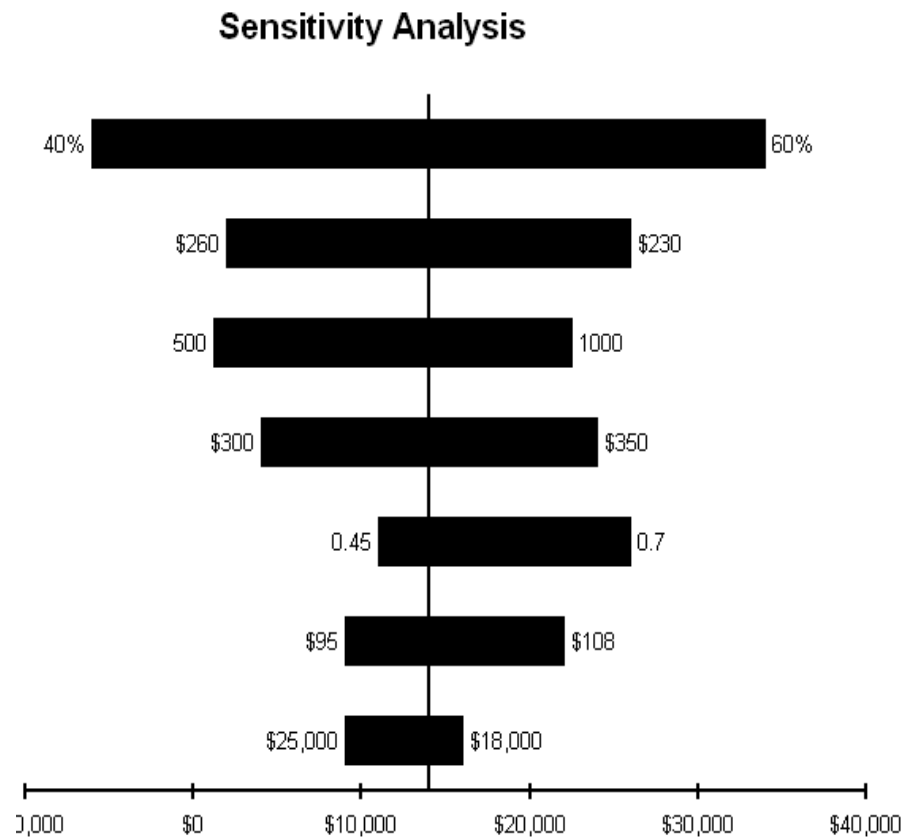
- Risk Examples:

- Wife does not find employment

- Implication: Expected monthly income is reduced



Risk	Probability	Probability DRL	Probability Source	Probability Impact	Risk Adjusted Cost
Wife does not find employment	20%	7	Canada Unemployment Figures	-£1500	-£300



- Sensitivity Analysis



Cost Model

Raw costs	Normalised costs	Inflation	Constant costs
DRLs	Monthly profiles	VAT	Outturn costs

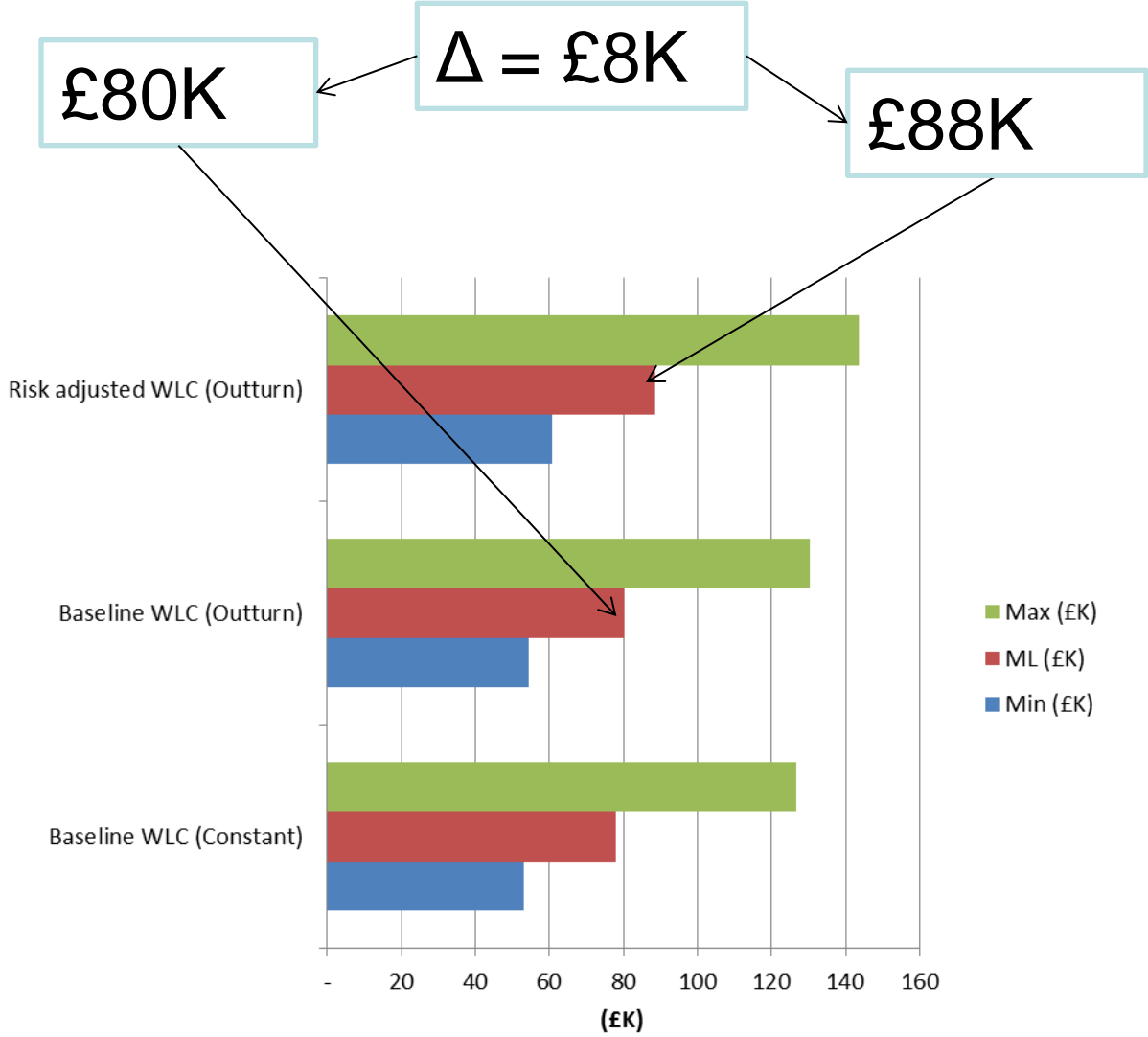
 Stay in the UK
 Take the job in Canada

Risks	Schedule Risk	RIC
	Cost Risk	ROC

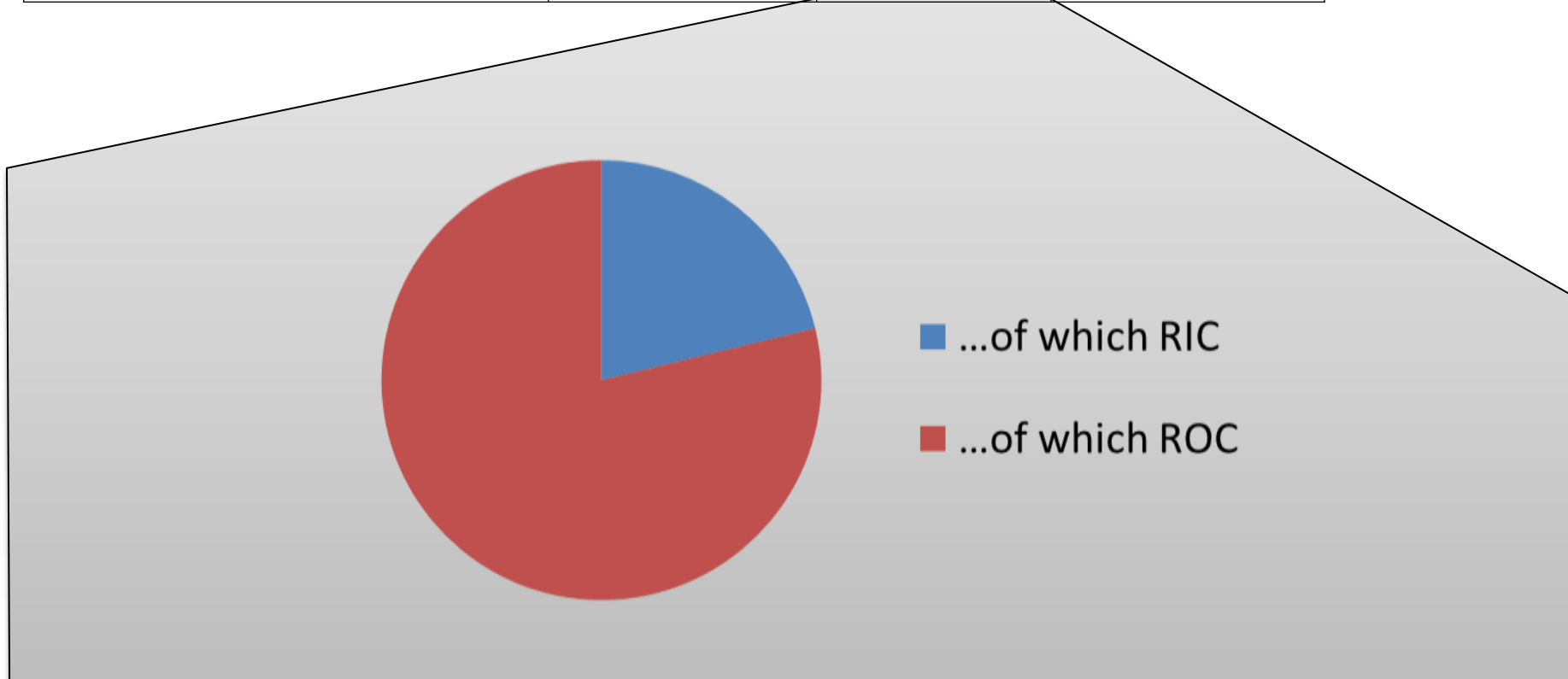
Sensitivity Analysis

Uncertainty Analysis

Cost Outputs

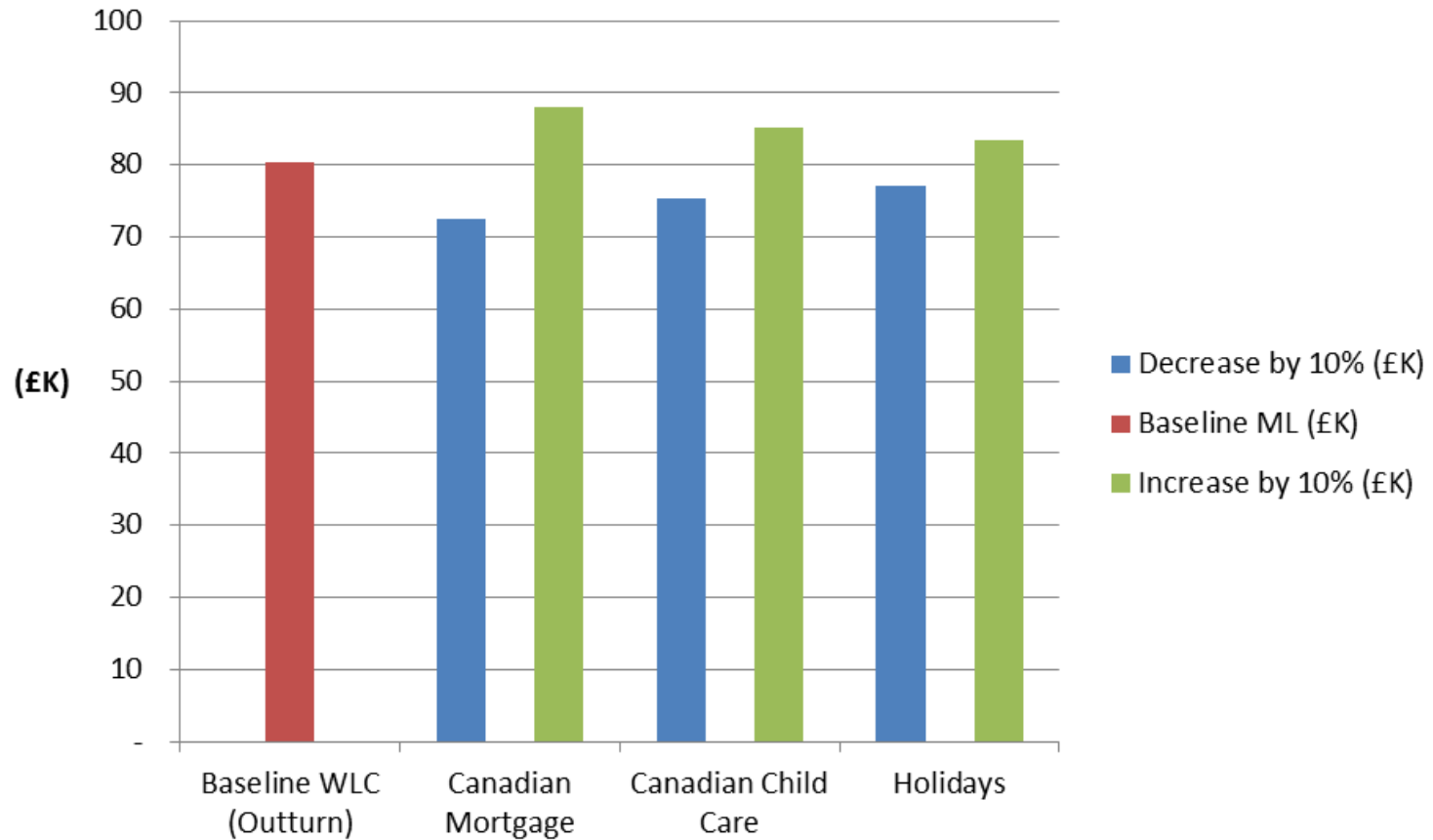


Risk adjustment	Min (£K)	ML (£K)	Max (£K)
Net increase	6.26	8.20	13.02

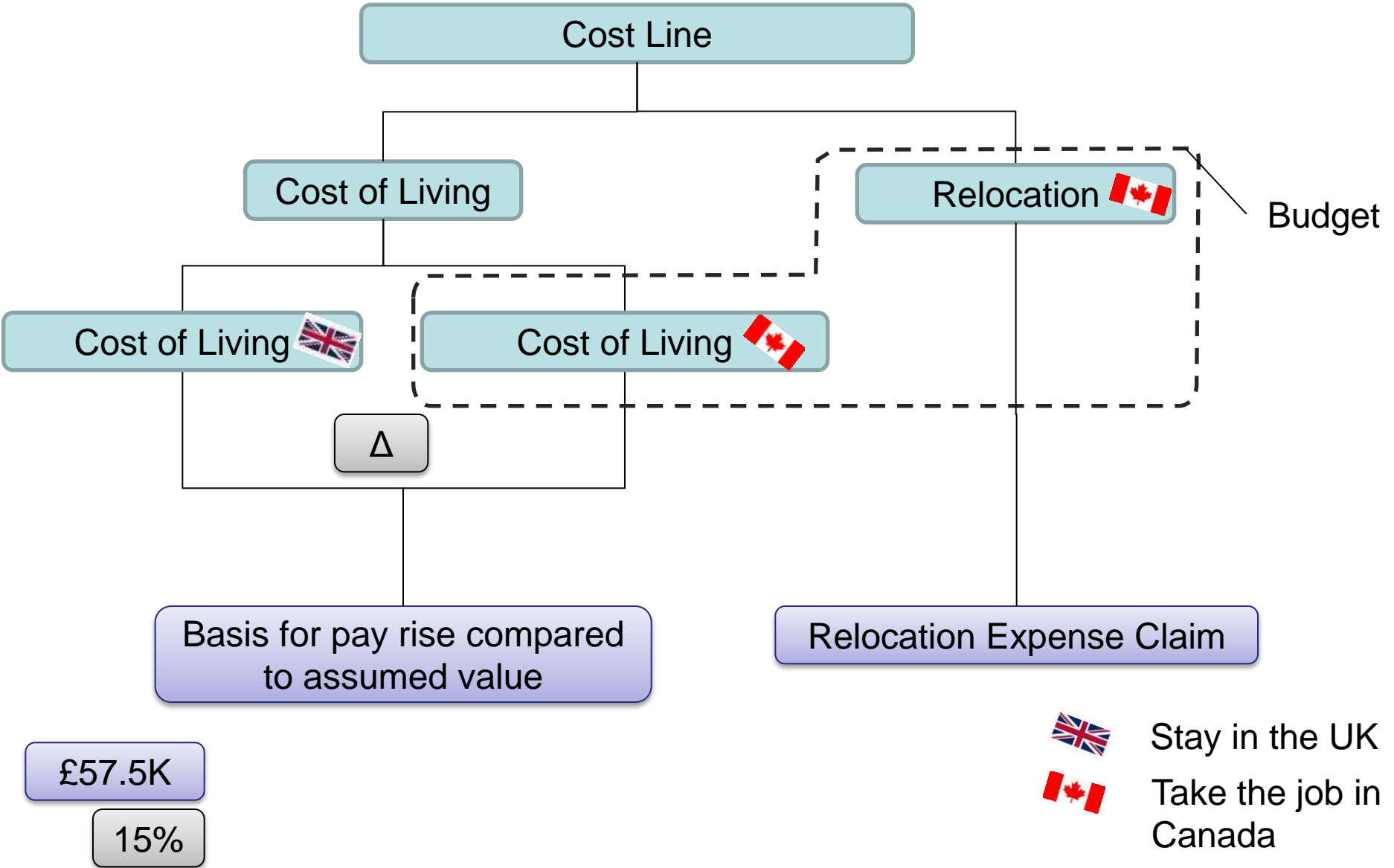


We have also performed a Sensitivity Analysis on the top 3 cost drivers >>>

Sensitivity Analysis



Budget and Relocation Expense Claim – Methodology



Budget

Outturn ML					Relocation
	Cost Group	(£K) CoL	(£K) CoL	(£K) CoL	(£K) Re
Income	Salary	- 284.8	- 286.1	- 1.3	-
	Transport	-	- 7.0	- 7.0	-
	Bills	-	-	-	-
	Leisure	-	-	-	-
	Housing	-	-	-	-
	Childcare	-	-	-	-
	Total	- 284.8	- 293.1	- 8.3	
Expense	Salary	-	-	-	-
	Transport	19.4	34.7	15.3	11.1
	Bills	48.3	74.6	26.3	2.9
	Leisure	44.6	41.8	- 2.8	0.5
	Housing	88.2	85.0	- 3.2	24.5
	Childcare	35.1	49.0	13.9	-
	Total	235.7	285.3	49.6	39.0
Difference	- 49.2	- 7.9	41.3	39.0	

High-Level Relocation Expenses

6 months rent included in this!

~ £8K per year on top of £57.5K
- i.e. ~£66K

Basis for pay rise



Stay in the UK



Take the job in Canada

Relocation Expense Form

Relocation Expense Form	£K
Flights	5.73
Temp Accommodation	8.01
Relocation bills (e.g. visa)	1.29
UK House Fees	8.99
Car Rental	1.10
UK Storage	1.06
UK Taxi	0.09
Canadian House fees	7.12
Transport of goods	4.15
Total	39.00
Total (ML Risk adjusted Outturn)	47.20

Lessons Learnt	Action Plan
Multiple viewpoints	Appreciate that multiple viewpoints exist and assumptions should not de-value particular views.
Think outside the box	Question the questioner. Apply logical thought to what is being asked to ask for clarifications.
Risk	Risks can have DRLs attached to them too.

Thank you for your attention

Are there any questions?