



# risk decisions

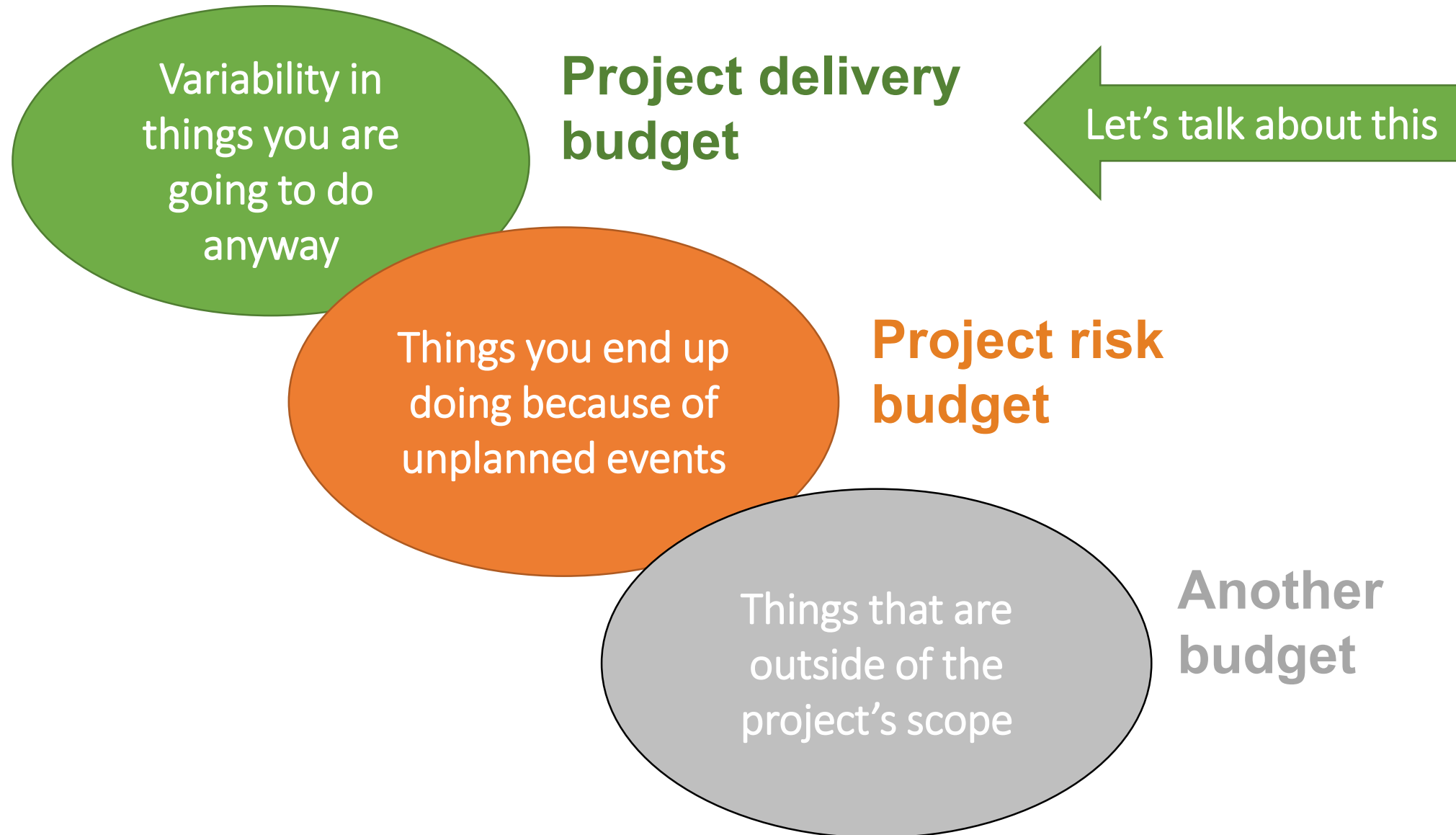


Shaping the Future of Risk

**Predict! Risk Analyser can do this?**

Susheel Chumber

# Project budget Uncertainty



# The challenge

- Project budgeting is challenging and time-constrained
- Often built up from a large Cost Breakdown Structure (CBS)
- Not feasible to estimate variability for each item
- Result: Single-point estimates, single value...
- ...one version of what might happen that we have to stick to!

Highway project		Cost
<b>Summary</b>		<b>£23,215,550</b>
<b>Design</b>		<b>£990,850</b>
Design management		£300,450
Design phase 1		£450,400
Design phase 2		£240,000
<b>Mobilisation</b>		<b>£5,206,400</b>
Site offices		£755,400
Phase 1 mobilisation		£134,000
Phase 2 mobilisation		£156,000
Overheads		£748,000
Materials		£3,413,000
<b>Preliminary work</b>		<b>£1,525,600</b>
Site clearance		£255,300
Services		£425,000
Environmental		£345,000
Temporary structures		£500,300
<b>Delivery</b>		<b>£15,492,700</b>
Main highway		£5,454,000
Secondary highways		£2,300,500
Street furniture		£890,500
Pedestrian walkways		£450,000
Communications		£650,900
Electricals		£377,000
Bridge 1		£2,315,000
Bridge 2		£2,100,500
Finishing		£954,300

Overheads		£748,000
Ancillary		£50,000
Labour		£410,000
Client management		£78,000
Project management		£210,000


  

Secondary highways		£2,300,500
Carriageway 1a		£567,000
Carriageway 1b		£444,500
Carriageway 2a		£534,000
Carriageway 2b		£755,000
Install crash cushions		£400,500
Road-markings		£280,500

What common uncertainties could affect the CBS?



**£23,216,650?**



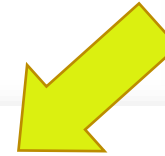
Consider if they affect each element of the CBS in the same way

# Using Predict! Risk Analyser

## Cost Breakdown Structure Deterministic estimates

Highway project	Base cost
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Identify and assess  
uncertainties in Predict!



Variability	Optimistic	Pessimistic
Steel quantity	95%	105%
Steel price	96%	110%
Exchange rate	97%	107%
Stone quantity	100%	105%
Stone price	97%	110%
Inflation	103%	106%
Marching army	98%	110%

Apply them  
to your CBS –  
you choose  
the  
mechanism &  
granularity

# Using Predict! Risk Analyser

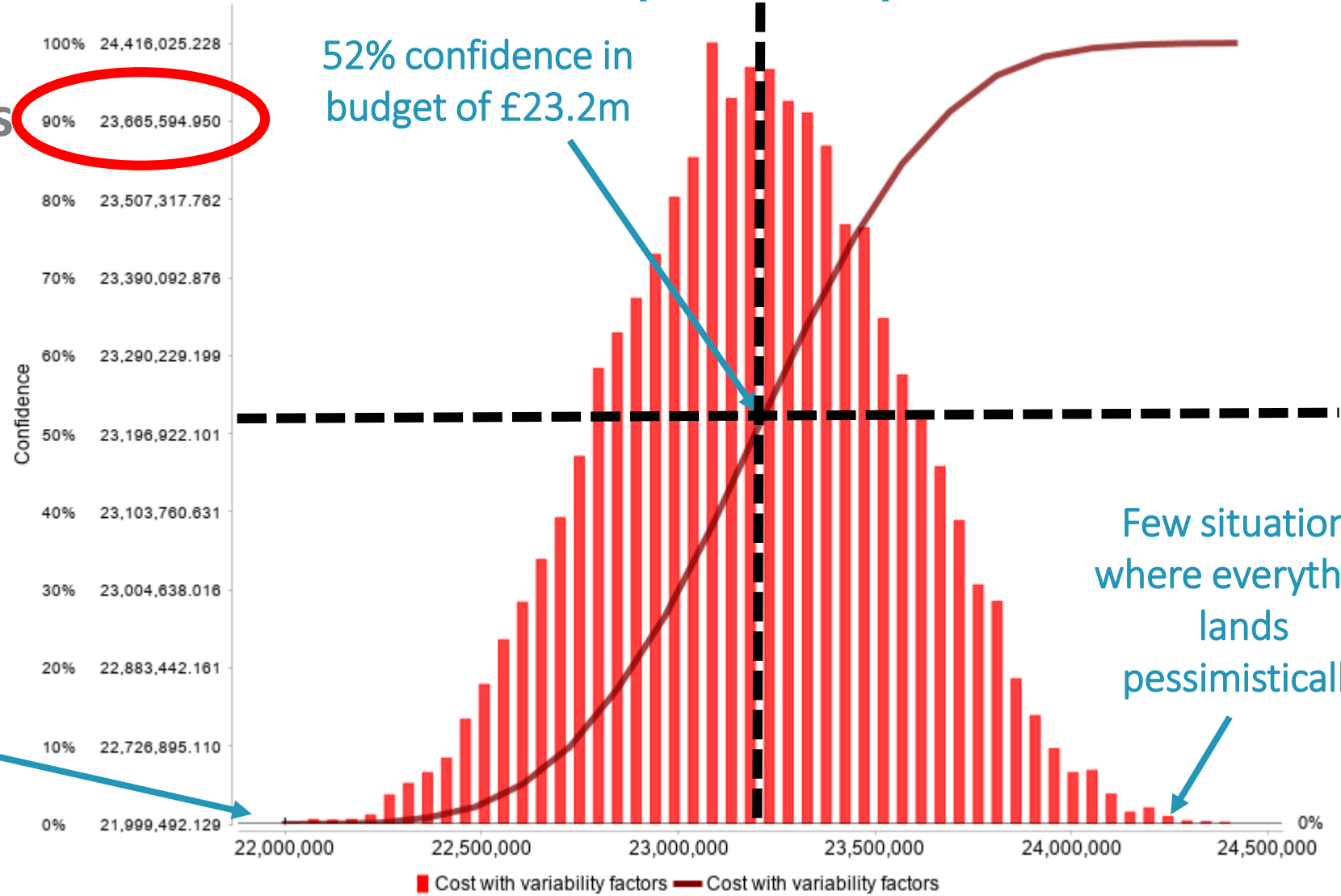
Predict! Risk Analyser uses Monte Carlo analysis to experiment with the possible range of outcomes

Few situations where everything lands optimistically

52% confidence in budget of £23.2m

Most likely outcomes

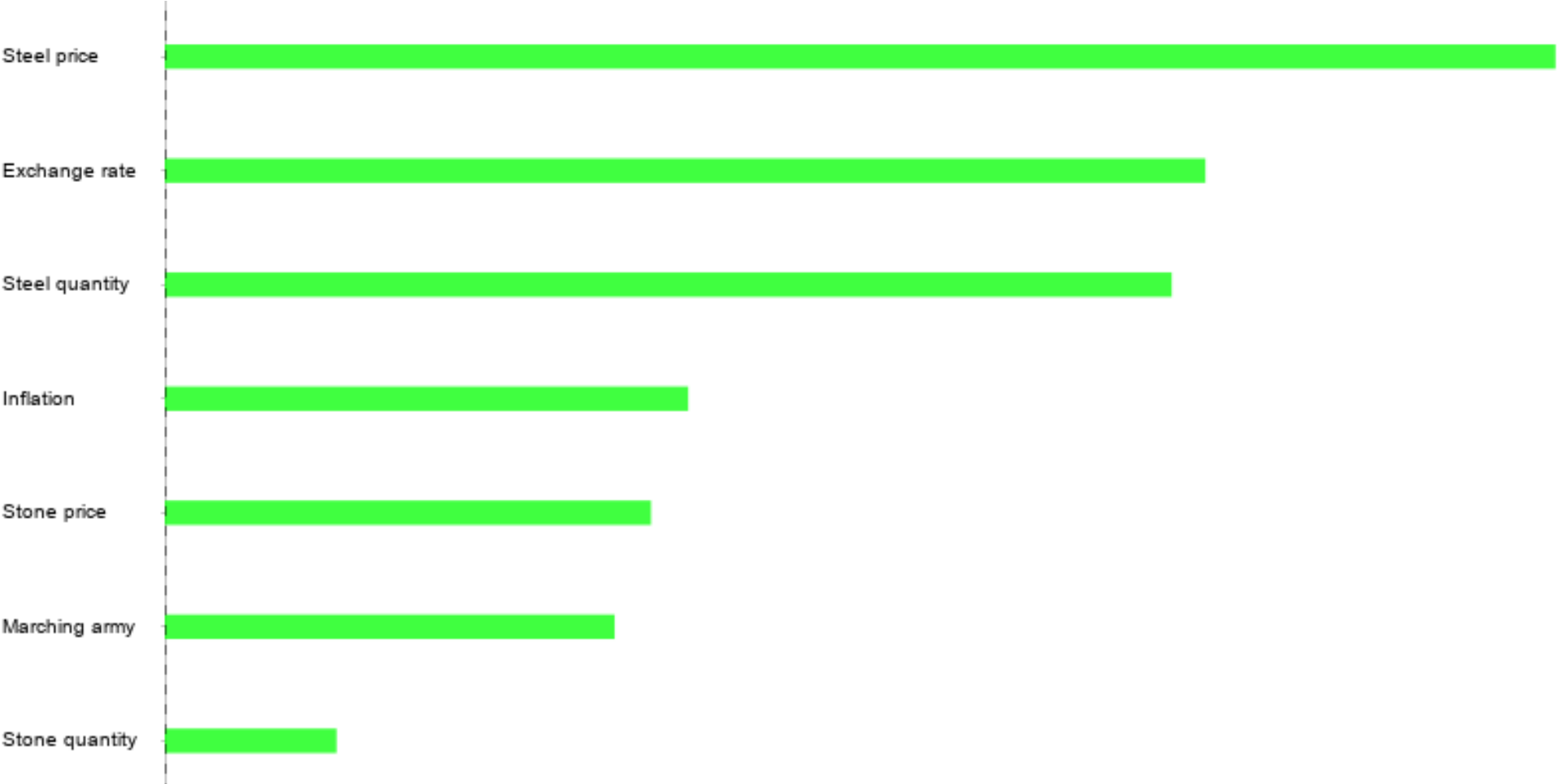
Few situations where everything lands pessimistically



Range of possible cost outcomes

# Using Predict! Risk Analyser

Use the Tornado chart to target the drivers – can these be controlled?





- **Project budgeting is challenging and time-consuming**
- **Little time to consider uncertainty in Cost Breakdown Structure**
- **Common themes can be set up quickly in Predict! Risk Analyser**
- **Interpret the results and target the drivers**

**ASK FOR A QUICK DEMO IF YOU WANT TO SEE HOW IT WORKS**



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