



Government  
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# Hackathon Question from the Government Commercial Function



**Government spends around £300bn every year with third parties.**

**The Government Commercial Function is responsible for making sure we use that money as efficiently and effectively as possible.**

**One way we do this is by making sure we use delivery models for our services which meet our objectives and deliver value for money.**



**We do this through Delivery Model Assessments (DMAs), which help us identify all the possible options, balancing in-house and external resources, to deliver a service, and work out which of these has the best chance of meeting HMG's objectives.**

**A standard delivery model assessment takes about 10-12 weeks to do, usually involving a cross-functional team of about 8-10 people, with about 10-20% of the resource used to build cost models. More complex DMAs can take considerably longer and on many occasions the extended duration is due to the cost modelling process.**

**We need your help to change this!**

## At the moment, we're reliant on manual processing to do the modelling part of the DMA

The Should-Cost Model does 2 jobs:

1. Create a reliable cost estimate for the service to inform the business case
2. Identify risks that might impact the cost of the service.

At the moment, poor data capture across the lifespan of an estimate completed in the should-cost model process (App. A) leads to a vicious circle of poor benchmarking and poor initial estimates / budgets.

In practice this means:

- We have to react to cost pressures when they happen instead of proactively managing risks which might contribute to them.
- We are dependent on our suppliers to tell us how much more their services are costing to deliver and why.

This in turn contributes to more wasted time trying to retrospectively explain the cause of variances to budget, and government reputational damage when we spend much more than we planned to.



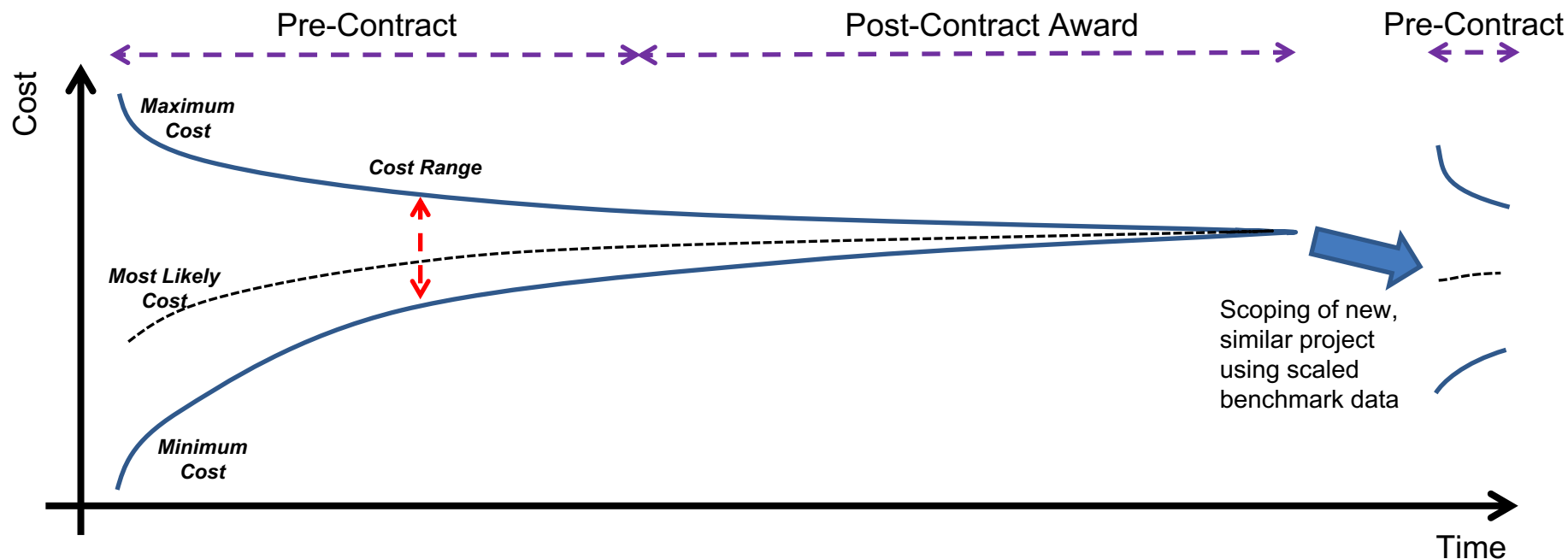
## How can you help?

- Use open-source data to research and explain (against suitable bridge headings) the rationale for a UK government contract of your choice going under- or over-budget;
- Use lessons learnt from the analysis above to create a 'virtuous circle' estimating programme which:
  - Uses data captured on previous similar projects to create a database of parametric benchmarks (App. B);
  - Recommends an appropriate RAM (App. C) to produce an initial estimate range for a new, similar project. This new project may contain a mix of new scope (which needs to be estimated using near-neighbour comparisons from wider external projects) and previously completed scope (which may use different parameter inputs);
  - Uses simulated, realistic, 'live' contract performance data captured against the RAM to narrow the initial estimate range and give advance warning of when a project is going to be early/late or under/over-spent;
  - As the project progresses, keep track of a live bridge between the initial estimate and current outturn and highlight any initial assumptions which are now incorrect and which are causing a material change to the cost;
  - Flags up potential risks to be managed based on lessons learnt;
  - Recalibrates the parametric equations upon project closure;
  - Runs a new simulation based on a new, similar project - the benchmarks, initial estimate ranges and flagged risks must learn and improve upon further simulations.
- Recommend how this programme could be implemented practically into a business or department which may have a different pre- and post-contract commercial team.



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## Appendix A: End-to-End Estimating

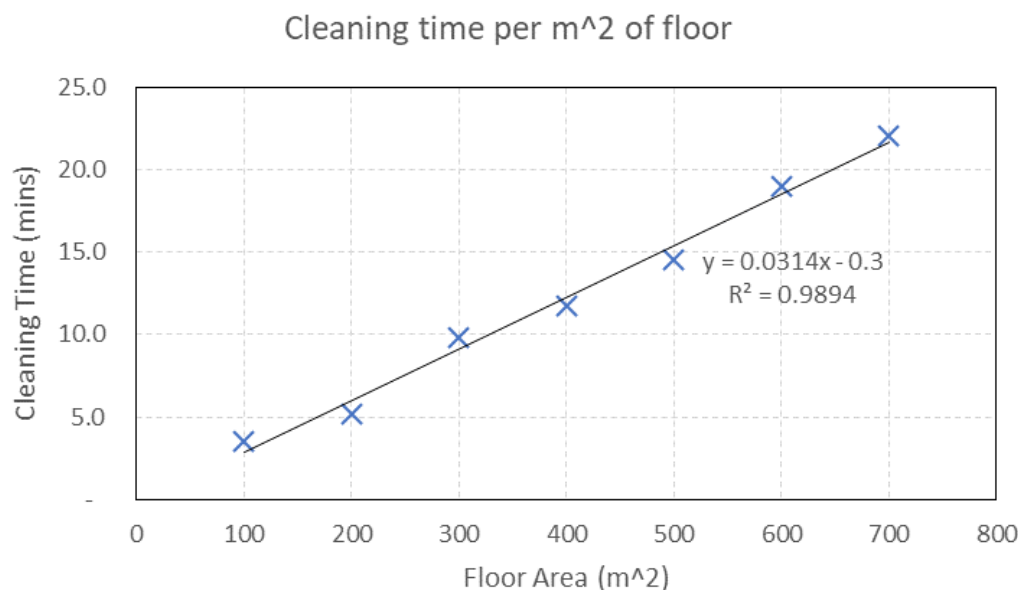


- Projects start off with immature and uncertain scope, leading to large cost estimate ranges;
- As the project matures, iterative estimates mature the scope and narrow the range;
- As the project completes, the uncertainty reaches zero and a set of outturn benchmarks are formed;
- A good estimate story will tell a future estimator exactly how the outturns differ from the estimate – what went 'wrong' with the original assumptions?



## Appendix B: Parametric Benchmarks

- Consistently-captured parametric benchmarks allow future Estimators to go through the archive of past estimates and use the set of metrics and actuals gathered to calculate estimates for future contracts.
- It is critical that the data reported on, and captured, throughout the project allows for the creation, improvement or validation of benchmarks. As the contract moves towards Closure, these actuals allow the Estimate to be compared against outturns to understand the lessons learnt.

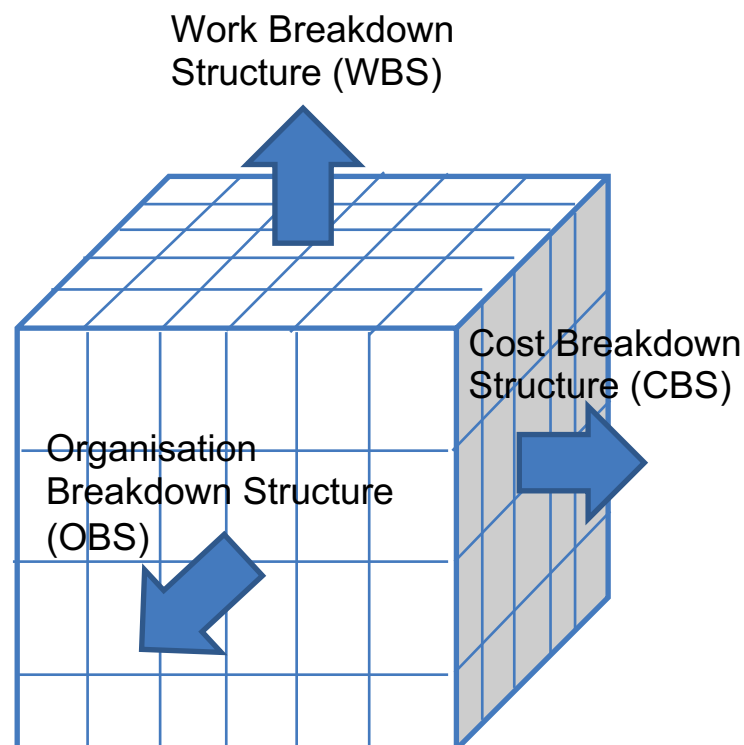


- In this example, by collecting the same data consistently from multiple contracts, a parametric equation can be established between area and cleaning time.
- If a future cleaning contract was placed in a location with a different area, this relationship could be used to calculate the expected time (and thereby the expected cost) of cleaning the floor.



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## Appendix C: RAM



- A Work Breakdown Structure (WBS) breaks the full project down into work packages (any subcontract requires additional commercial variables, such as supplier risk & margin);
- An Organisation Breakdown Structure (OBS) categorises the key budget holders and defines who 'owns' the cost and assumptions for each element of the estimate;
- A Cost Breakdown Structure (CBS) is a financial breakdown and categorises each element by the 'type' of cost expected (eg. labour, overhead etc).
- A Roles & Accountability Matrix (RAM) is a matrix which runs through every WBS element, defines who 'owns' the estimate assumptions from the OBS and what type of cost is expected to be provided.
- The RAM allows the estimator to know who is the responsible person for each area of the estimate and what type of cost to expect from them for better planning.





# The Delivery Model Assessment is a process which answers the question: What if we did things in a fundamentally different way?

## 1 Frame the Challenge

Clarify the programme objectives, timescales and drivers of change. Identify stakeholders and set up working teams and governance approach.

## 2 Define the Service, Delivery Model Options and Data Inputs

Identify the service components and the options for how they might be delivered, including how service components might be combined or disaggregated to best deliver the desired outcomes.

## 3 Establish strategic and operational evaluation criteria

There are many potential issues to consider in the selection of a delivery model. Evaluation criteria will be specific to each programme but the following areas give some examples of the potential key issues that might determine the most appropriate strategic approach for delivery and the relationships you will need to develop with the supply chain.

### Strategy and Policy

Consider how well the delivery model aligns with departmental and government strategies and policies. How will it ensure delivery of strategic objectives, such as SME engagement, equalities or social value?

### Transition and mobilisation

Consider how easy it will be to transfer existing services into the new model. If this is a new services, what challenges will you face setting up and mobilizing the service? Consider issues such as recruitment (or TUPE implications), timescales and systems developments.

### People and assets

Consider the capabilities and skillsets needed and existing capacity (internal or in the external market). What flexibility will you need (e.g. if volumes change) and how well can the delivery option meet these needs? What will the training and recruitment impact be? What other investments may be required and who will own any assets (including intellectual property)?

### Service delivery

Consider how the delivery model will guarantee ongoing service quality, innovation and continuous improvement. What management structures will be required, whether insourced or outsourced? How will you manage SLAs and KPIs?

### Risk and impact profile

Identify the commercial and operational risks that may impact the delivery of services.

Who is best placed to manage these risks and how might they be mitigated by the delivery option?

## 4 Assess the whole life cost of the project

Use your strategic approach and service definition to identify the cost drivers for the transition and mobilisation phase and a period of running. All projects should develop an appropriate Should Cost Model.

## 5 6 Conduct the evaluation and align the analysis

The cross-functional team should assess each of the evaluation criteria against the agreed weightings.

Learn from objective evidence, past projects and colleagues across the public and private sector (this may include engaging with the market) to test and sense-check your findings. Consider a Red Team review to validate your findings.

## 7 Recommendations and approvals

Develop and document your recommendations and ensure approval via the project board

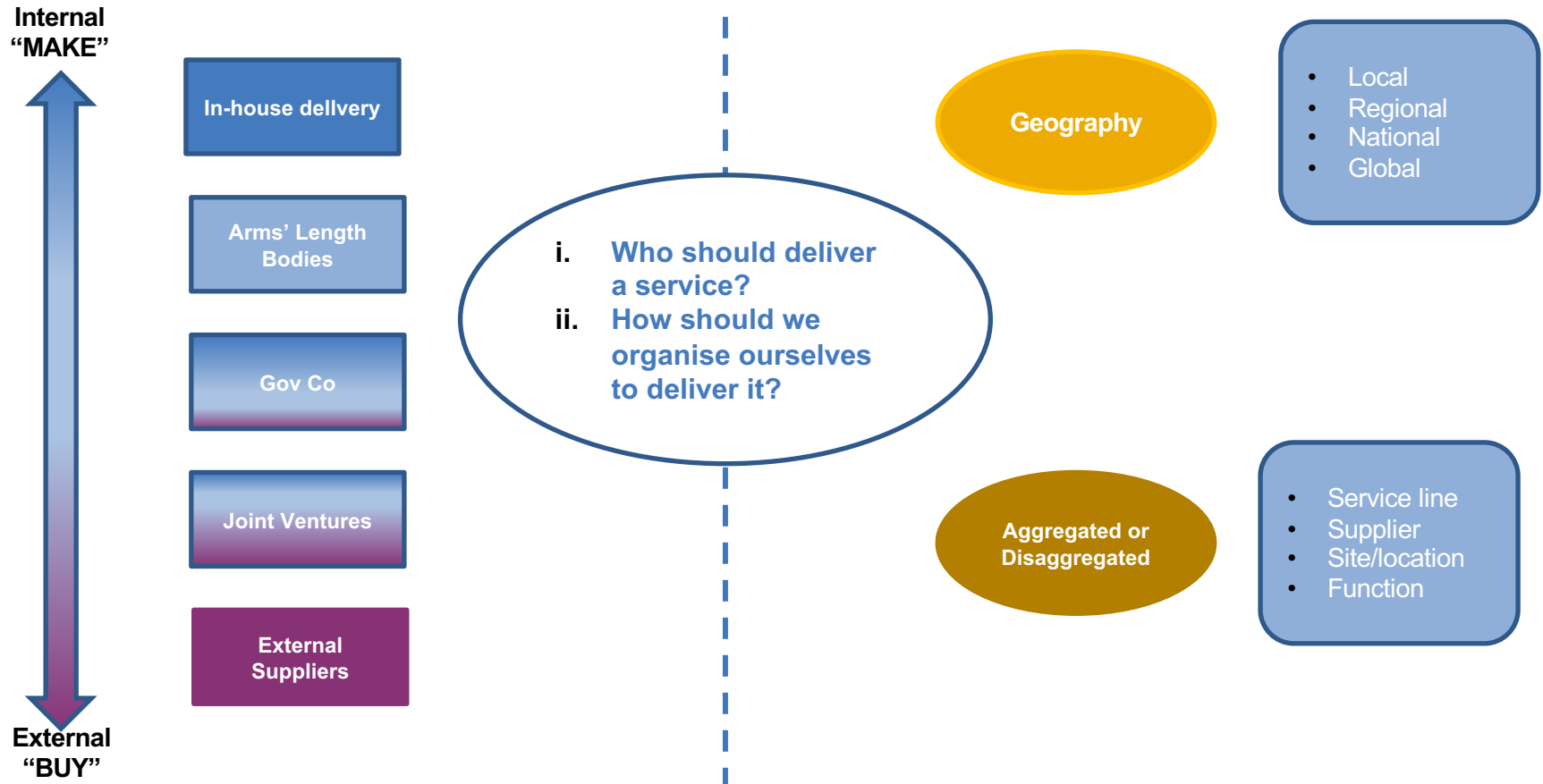
## 8 Piloting and implementation

Build your commercial strategy and identify any requirements to pilot the outcome of your assessment (see Guidance Note)



# What is a “Delivery Model”?

Essentially, the DMA process is answering two basic questions



The DMA process assesses potential options against criteria including strategic alignment, quality, deliverability, capability and capacity of the supplier/in-house teams... and cost