Commerce Decisions

Insights from Peter Marshall

Value for Money: the Cost-Quality "landscape"

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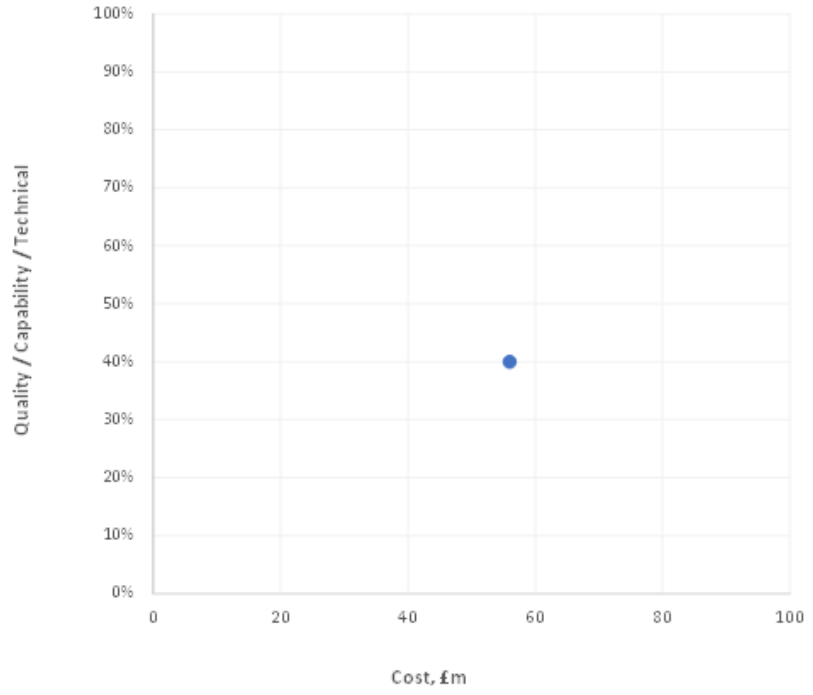
Value for Money: the Cost-Quality "landscape"

Cost-quality landscape - it's a very simple concept with some powerful applications. At its simplest it is a two-dimensional representation of the cost and quality of either actual solutions proposed by bidders (if we have got to the response stage of our competition), or of hypothetical solutions if we are earlier in the process and still preparing the invitation/RFI that will go to industry. We can illustrate this as a chart with cost on one of the axes - our normal convention here at Commerce Decisions is to put it along the bottom - and the non-cost considerations (normally "quality", but sometimes "technical", "capability" or even something else) along the other axis.

There are three things that we represent on these diagrams.

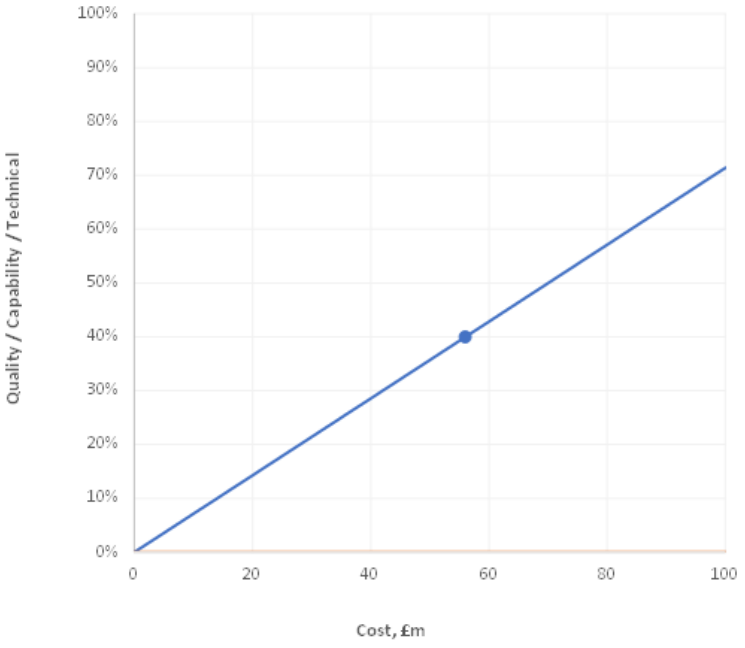
1. **A solution.** This can be an actual solution that has been proposed by a bidder and evaluated by the buying team, so that the cost and quality scores have been determined. Or it can be a hypothetical solution that the buyer has "invented" (E.g. "let's imagine we are offered a solution that costs X and scores Y for quality"), or even an option being considered by a bidder (e.g. "we could put the cost up to X so that we can offer enhanced quality that we think might score Y"). All of these can be represented as a simple dot on the diagram - because each has a specific cost and a specific quality and therefore appears in our cost-quality landscape in a specific place.



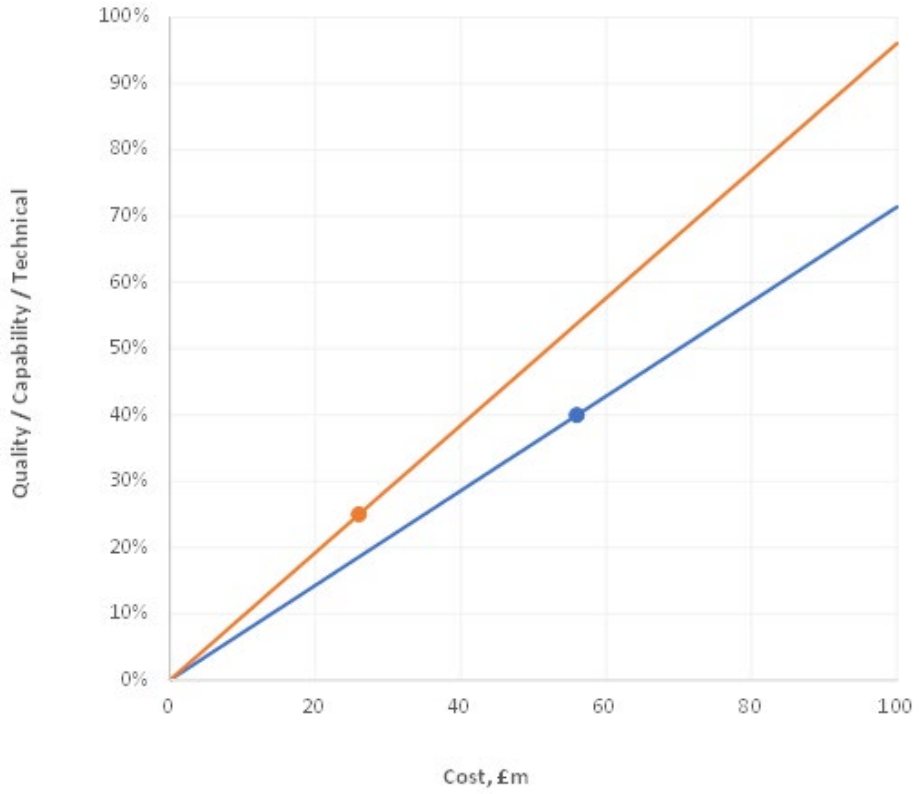
2. **A score.** The solution that appears in the diagram above will have an overall score that is computed somehow. Of course, there are a huge number of different methods for combining the cost and quality scores of a solution to produce an overall score (I'm not going to get into them now, but I do plan on looking at some of them in future blogs). For now let's imagine that we are using the simple method often called "bang per buck" whereby we take the quality score and divide by the price. Under this method, if the quality doubles and the cost doubles the score stays the same. Or if the quality halves and the cost halves we also end up with the same score. There are in fact an infinite number of ways we can get the same score- because we can increase / decrease the quality by any amount we like and so long as we increase / decrease the cost by the same proportion we end up with the same score.

So we represent a score on our cost-quality landscape as a line - as shown below. (In this case, because of the choice of a "bang per buck" scoring method, the line is straight and goes through the zero-cost and zero-quality point in the bottom left corner.) A score line shows all possible points on the cost-quality landscape - that is, every possible combination of cost and quality - that achieves a specific score, and these lines can be straight or curved.

We use colours on these diagrams to signify different solutions and also to link together a solution and its score. In the diagram below, both the dot and line are blue, signifying that the line shows all combinations of cost and quality that get the same overall score as the blue solution.



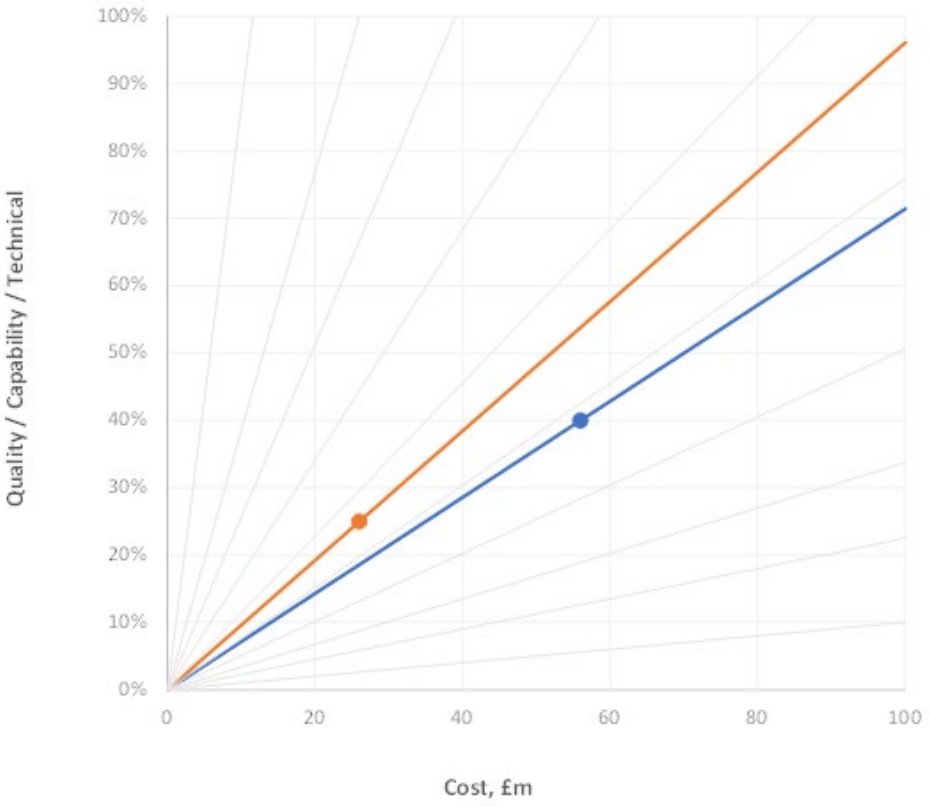
We can include multiple different solutions and their scores on the same diagram to see how they compare. Below we have added a new solution and its score - coloured orange.



We normally take this a little further and add lines on the diagram to represent specific scores at set intervals - but not necessarily scores that have actually been achieved by any of the solutions on the diagram. We colour these lines grey to signify that they do not correspond to any of the specific solutions shown on the chart in colour - the grey lines are just there to show us what the "landscape" looks like, by showing us how different areas on the diagram score differently. There's an example shown in the diagram below.

Think of these grey lines as contours on a map showing the height of the land - only in this case the "height of the land" is in fact the overall score obtained by combining a specific cost and quality score. In the same way that you can read a map and use the contours to understand where the high ground is and get a feel for the shape of the hills and valleys, you can use these grey "score contours" on our cost-quality landscape to understand how the chosen scoring methodology will favour different areas within our cost-quality landscape.

When you look at one of these cost-quality diagrams drawn in the way we do at Commerce Decisions - with cost along the bottom and quality up the side - the highest scores (or "highest ground" to continue the map analogy) are always found in the top left corner of the diagram. This is obvious when you think about it because the highest-quality and lowest-cost solutions are always found at the top left, whilst the lowest-quality and highest-cost solutions are found in the bottom right.



This means it's easy to see which solution on a diagram will score the highest and win a competition - it's always the one that sits on the coloured line nearest the top left-hand corner. In the example above it's the orange solution, despite it being lower quality that the blue solution. Why? Because it's also sufficiently cheaper to be considered better value for money by the "bang per buck" method.

3. **Areas, or zones** - sometimes what Commerce Decisions refers to as "zones of acceptability" - which show the buyer's attitude to different areas of the cost-quality landscape.

For example, the diagram below identifies three zones of acceptability, each in a different colour.

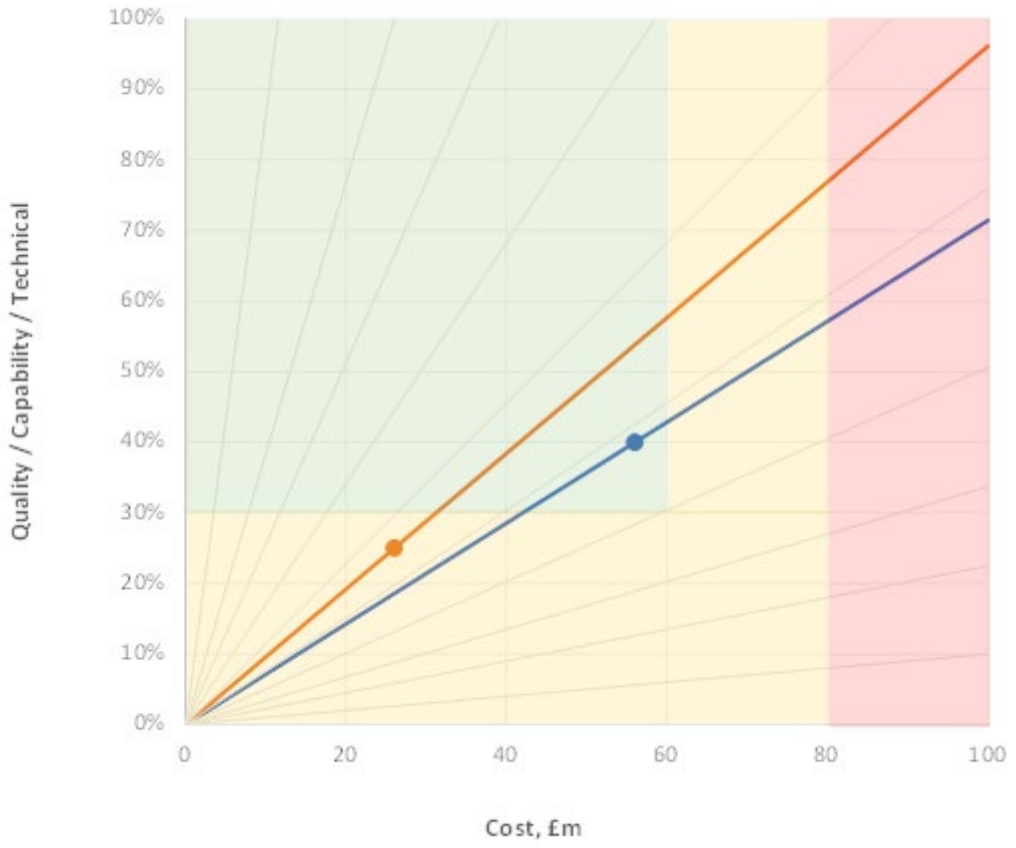
The red zone shows the area in which solutions that appear on the chart are unaffordable because we don't have the budget to pay for them. We don't want the winning solution to be within the red zone - under any circumstances - because we won't be able to buy it. This is to the extent that even if we only get offered one solution and it's in the red zone we would prefer to cancel the competition and start again.

(Sometimes there is also a red zone for very low quality - which is to say that we would define a lowest acceptable quality score below which we don't want a solution to be able to win the competition.) Normally we "enforce" the red zone by defining a mandatory requirement - for example, a maximum allowable cost - that ensures more expensive solutions are rejected in the

competition. Sometimes though, buyers do not want to publish a maximum cost because they think it might encourage bidders to aim for this "budget", and in these circumstances it can be much harder to ensure that a solution in the red zone cannot win. (I'll be exploring this in a future paper.)

The yellow zone shows solutions that we would prefer not to buy - if we can avoid it - but that we would be willing to buy if there's no alternative. In the chart below the yellow zone includes any solutions that are above £60m and also any solutions with a quality or technical score below 30%. We might have chosen this yellow zone because if the cost exceeds £60m we would be eating into project contingency or would perhaps have to go back to budget holders for more funds, but also because we really want to avoid a low-quality solution if a higher one is available.

The green zone shows the area in which we are hoping the winning solution will appear. Solutions in this zone are both affordable and have a quality or capability that is closer to what we are seeking to achieve for the budget.



The reason why we sometimes super impose the zones of acceptability onto these diagrams is to check that our scoring methodology will have the effect that we want it to. Looking at the example above we can see a problem, because according to the scoring methodology the orange solution will score higher than the blue solution (it's on "higher ground" on our cost-quality

landscape, being on a "contour" nearer the top left-hand corner), but it's also in the yellow zone because its quality score is below the 30% that we were hoping to achieve. If we are not happy with the possibility that the orange solution would win a competition against the blue solution, we will need to adjust the scoring method somehow, because the current method doesn't achieve it.

So that concludes my quick introduction into the cost-quality landscape diagrams we use at Commerce Decisions. I'll be building on this in my coming papers to show how we use these diagrams to design and test scoring mechanisms that deliver value for money outcomes for a procurement.

>>Find out more about RVfM on our website or get in touch with the team here.

About Commerce Decisions

Commerce Decisions has been supporting strategic, high-risk procurements globally since 2001, and is at the forefront of best practice procurement. With a unique focus on complex evaluation, we have unrivalled experience in tender evaluation and are a trusted provider of procurement services to the public and private sectors. We deliver a robust and defensible procurement process to our clients, proven time and time again across many sectors including construction, transport, education, health, defence and facilities management – to date, we have supported over 17,000 strategic projects, collectively worth over $500billion.

This enviable experience and in-depth knowledge have enabled us to develop proven methodologies, supporting clients to deliver the best possible outcome on strategic and complex procurement projects. Headquartered in Oxfordshire, UK, and with offices in Canberra, Australia, and Ottawa, Canada, Commerce Decisions provides software and services to support complex procurement processes for buyers. We improve the efficiency and effectiveness of the evaluation process to make the best buying decision based on all the relevant criteria, underpinned by our AWARD® software.

About Peter Marshall

Peter is an experienced Principal Consultant and Professional Services leader with 20 years' strategic public sector procurement experience and prior to that, 10 years' experience of training and consulting in the software process improvement and requirements management industries.