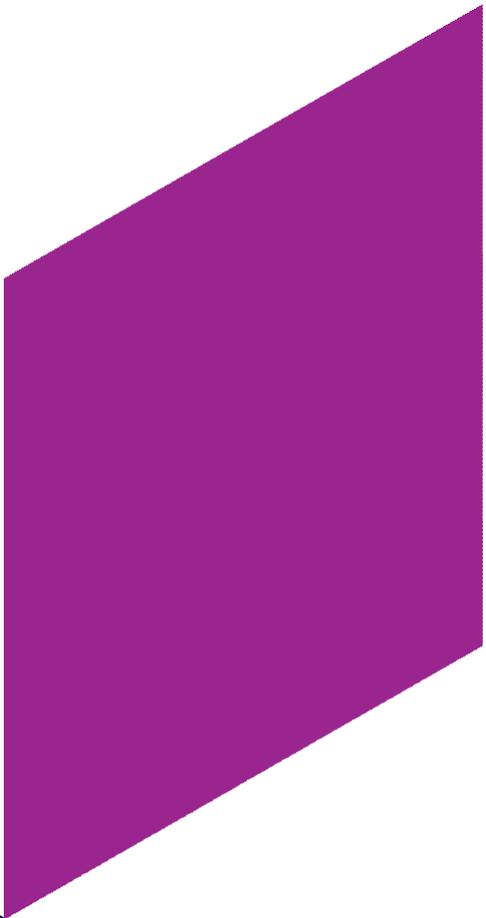


White Paper

Combining lots for tender evaluation decisions

Mike Ross, International Services Capability Lead, Principal Consultant
Commerce Decisions Limited



Contents

Contents.....	3
Introduction.....	4
Scope of this paper.....	4
Lot-based competition justification	5
Lot combinations in assessment schemes.....	8
Lot combinations – Commerce Decisions Methodology.....	10
Lot combinations – conclusions	12
About Mike Ross.....	13
About Commerce Decisions	13

Introduction

During Commerce Decisions' time supporting complex procurements, project teams have often expressed a desire to carry out their lot-based tender evaluation with a combined lots decision approach. A traditional lot-based approach treats each lot in isolation and effectively as a separate competition. This is entirely appropriate in many circumstances but there are also occasions where projects wish to consider the effects of combining lots (lot combinations) during the competitive process.

The desire to look at lot combination analysis tends to fade when some of the issues and complexities explored in this paper are encountered by project teams. Moreover, the risks associated with trailblazing a new solution approach are often felt to be too high, even in the context of the clear benefits available. The lack of other projects from which to draw guidance and learnings, as well as the absence of proven methodologies, tools and established legal procedures to support the approach are often key inhibitors.

This paper discusses the rationale for the use of lot combinations and some of the considerations and complexities in doing so. It also summarises a proven lot combinations methodology/toolset that is now in the marketplace following development by Commerce Decisions.

In studying lot combinations, this paper touches on some wider topics that are subjects in their own right - some are covered in separate Commerce Decisions studies and products. These are indicated as they arise in the paper by a '(see REFn)' note. They are then described in the References section at the close of the document.

Scope of this paper

Lot-based competitions are an established global procurement method and documented widely elsewhere – this paper will not therefore discuss the method itself. A lot-based competition enables the procuring entity (the buyer) to divide the product or services required into parts, with bidders able to compete in each part (lot) independently of the others. There are generally two approaches to a lot-based procurement:

1. Direct offer of preferred bidder/contract for each lot
2. Setting up of a framework to address all lots with multiple suppliers for each lot

This paper focuses on lot combinations in conjunction with the first approach. For context, where the buyer is running a competition across multiple lots with commitment to spend on contract award, the complexity/risk (along with contract value) is assumed to be Medium-High.

This paper does not address the second approach, where the initial competition selects eligible bidders to be part of the framework lot, but with no obligation to commit to a specific contract at that point. In this approach the buyer can call off services at varying times during the framework life. The complexity/risk (along with contract value) is usually Low-Medium.

Lot-based competition justification

The following points may have been considered in the decision to proceed with a lot-based competition (including but not limited to):

- a) The different parts of the requirement may be best delivered by very different types of organisations
- b) There may not be many players/bidders in the marketplace who can cover the delivery breadth of the overall requirement
- c) The desire to generate a competition environment that results in the selection of the best-in-class specialist providers in particular requirement areas
- d) The financial benefits of not using a prime or single organisation to manage the delivery of the entire requirement outweighs the potential risk of dealing with multiple suppliers.

The last point above is key. Using a basic scenario to illustrate the possible impact, imagine a homeowner dealing with both an architect and a builder when building a house.

As the builder begins construction, there are invariably points where they will blame the architect for inaccuracy in specification or lack of hands-on understanding of the conditions. If the architect pushes back and blames the builder, then the buyer has the challenge of working out a resolution with both parties. Every care can be taken in contract and responsibility definition, but risk or grey areas will exist more often than not.

Using lots, why would you then look to combine them?

You have decided on dividing your requirement up into lots using some of the considerations outlined above. Why would you then need to consider combining them? Using a simple lot example for discussion, we will look firstly at the best-in-class lot-based down selection and then why the use of lot combinations becomes attractive to buyers.

- **Simple best-in-class downselection**

Example scenario

Whilst nothing is certain prior to tender return, a buyer will normally understand which lots are of interest for each bidder. This may be understood through a qualification exercise or some other form of market engagement or analysis. We will use a two lot scenario and five different bidders with the following bidding profile:

	Lot A	Lot B
Bidder 1	YES	YES
Bidder 2	YES	YES
Bidder 3	<i>NO</i>	YES
Bidder 4	YES	YES
Bidder 5	YES	YES

All bidders are interested in all lots except for Bidder 3 who has no interest in bidding for Lot A.

In our example, we will assume a basic assessment scheme that returns bid scores of between 0-100 and that these scores take both the capability/quality and price/cost assessments into consideration.

In terms of the overall scores on completion of the assessment, it may look something like this:

	Lot A	Lot B
Bidder 1	82	76
Bidder 2	84	32
Bidder 3	<i>N/A</i>	79
Bidder 4	68	44
Bidder 5	47	58
Best in Class	84	79

In the above example, the Lot A contract would be awarded to Bidder 2 and the Lot B contract would be awarded to Bidder 3. This appears to give an optimal outcome for the buyer as they have selected the two best-in-class providers for the lots.

- **Considerations with simple best-in-class downselection**

Simple lot-based downselection has considerations for both the buyer and the bidders with regard to the process (including but not limited to):

- 1) The buyer may wish or need to restrict the number of lots that can be awarded to a single bidder. This is common practice, both from the perspective of the buyer's sensitivity to the amount of control passed to a single supplier (single point of failure) and also as a result of external factors placed on the project such as social value or economic consideration.
- 2) A bidder may only have the capacity to deliver a certain number of lots and may wish to reduce their own risk in this regard by stating an order of preference for each lot and an overall cap.

These considerations can be managed within the procurement process by both the buyer publishing guidelines in the invitation documentation and the bidder(s) including conditions in their proposals. The downselection result may then need to be adjusted accordingly, reverting to the second or possibly lower placed bids by lot, in line with buyer/supplier constraints.

- **Issues with simple best-in-class downselection**

The reason why a simple lot-based downselection approach may not produce an optimal outcome for the buyer from a financial and risk perspective is dependent on two key factors which cannot be easily managed or addressed. These are:

- 1) Missed opportunities for efficiency offerings from bidders; for example, if they were to be successful in two lots or more, they may have offered to reduce their costs by x . As well as cost efficiencies, delivery efficiencies and benefits may also have been realised across resources, infrastructure and a wide range of other factors covered by the bid.
- 2) The actual level of risk present when putting unrelated bids/bidders together (in the case of our example, Bidder 2 & Bidder 3).

The decision to proceed with a lot-based approach will have already taken some form of risk assessment into account and covered the generic risks of dealing with multiple organisations over a single organisation.

However, what it cannot have considered in detail are the specific risks that only become evident when

detailed unrelated bids are put together as a result of the best-in-class lot downselection. Examples of these risks could be (including but not limited to):

- a) Information sharing and collaborative working (a bidder combination may contain competitors and/or IPR and communication issues)
- b) Technical integration/interface – technical specifications may not assure this 100%
- c) Schedule/timescales – delivery schedules and project planning generally could highlight diverse interests/approaches and/or mis-matched assumptions.

The presence of these issues is why lot combinations are often considered. They are either considered after the event, (i.e., following a simple lot downselection where the project and associated risks are managed on-contract) or they are considered pre-invitation, as part of optimising the assessment process.

- **Considering lot combinations**

Bearing in mind the points raised above, the value of putting unrelated best-in-class bids/bidders together must be considered worth any risk that it creates. In the simple scored example used previously...was it?

Let's look at the results again in the form of all possible combinations. There are 20 possible permutations (4 contenders in Lot A x 5 contenders in Lot B). To visualise this using our example:

Lot A		Lot B		Combined	
Provider	Score	Provider	Score	Total	Rank
Bidder 1	82	Bidder 1	76	158	4
Bidder 1	82	Bidder 2	32	114	15
Bidder 1	82	Bidder 3	79	161	2
Bidder 1	82	Bidder 4	44	126	10
Bidder 1	82	Bidder 5	58	140	8
Bidder 2	84	Bidder 1	76	160	3
Bidder 2	84	Bidder 2	32	116	14
Bidder 2	84	Bidder 3	79	163	1
Bidder 2	84	Bidder 4	44	128	9
Bidder 2	84	Bidder 5	58	142	7
Bidder 4	68	Bidder 1	76	144	6
Bidder 4	68	Bidder 2	32	100	18
Bidder 4	68	Bidder 3	79	147	5
Bidder 4	68	Bidder 4	44	112	16
Bidder 4	68	Bidder 5	58	126	10
Bidder 5	47	Bidder 1	76	123	13
Bidder 5	47	Bidder 2	32	79	20
Bidder 5	47	Bidder 3	79	126	10
Bidder 5	47	Bidder 4	44	91	19
Bidder 5	47	Bidder 5	58	105	17

Looking more closely at the table above, simple best-in-class downselection means the winning combination is highlighted in pink (Bidder 2, Lot A & Bidder 3, Lot B). However, comparing this with the combination highlighted in purple, by selecting the pink combination the buyer is taking on the overhead and risk of selecting two bidders for a combined gain of 5 points out of 200 (2.5% competition wide). Bidder 1 was not best-in-class in either of the lots (lower by -2 & -3 respectively) but in hindsight, selecting Bidder 1 may have provided less technical risk and overhead in terms of the overall delivery of the requirement.

This kind of analysis (even without the consideration of bidder efficiency savings) gives rise to doubt over the traditional lot-based down selection. It encourages buyers to consider different lot combination strategies in their assessment in order to gain optimal project-wide outcomes in a multi-lot competition.

Lot combinations in assessment schemes

So, prior to starting a lot-based competition, a buyer may want to explore the use of an assessment scheme that analyses all possible combinations, if:

- a) They want to benefit from efficiencies that could be passed to them
- b) They want to address – as part of the selection process – the interface risks that may result from a simple best-in-class downselection

We will study these two elements, along with looking at some further considerations.

- **Applying bidder efficiencies**

Our previously used scoring example showed a possible 20 combinations (4 bidders in Lot A x 5 bidders in Lot B). These combinations were based on 9 individual assessments (4 in Lot A + 5 in Lot B).

Using this example, we will apply the ability for all bidders to introduce efficiencies, whereby should they win both lots, they will reduce their costs. There is an assumption here that an overall discount is acceptable but the confidence in the cost modelling and achievability of each lot is still required on high value/profile projects of this type. The buyer will therefore normally wish to see justification that Lot A will cost x and Lot B will cost y due to these identified efficiencies, should both lots be awarded. The introduction of enabling these efficiencies could have the following effect on the assessment:

- a) Possible combinations 20 (no change)
- b) Possible assessments 13 (+ 4)

Four of the five bidders are bidding on both lots. They could provide an additional bid for each lot, based on the assumption that they win the other, which will then also require assessment.

If it is purely a cost alternative that is provided, then the increase in assessment overhead for the buyer appears to be manageable. However, with these types of projects, in order to reduce costs, there would normally be associated delivery efficiencies, rather than simply a reduction in the bidders' profit margins. A bidder would benefit from savings elsewhere in their bid and have the flexibility to alter the way in which they deliver (e.g. resource sharing, facilities sharing, etc). The need for accuracy in assessment then moves more into wider variant bid territory rather than a simple cost adjustment. This assessment overhead may be less manageable and would need to be offset by the potential savings and timescale impact on the project.

If further lots were required in the competition (3 or more) you can see how quickly the assessment overhead would increase, as well as the risk of introducing mistakes and confusion.

When looking into this closely, a buyer commonly reverts to simple lot-based downselection. In doing so, a buyer can ask bidders for pricing that takes effect upon contract award in the event of them winning multiple lots, without requesting inclusion in the assessment and downselection. There may be some incentive for a bidder to offer this depending on the project and procurement environment, but not always.

- Applying interface risk

When combining lots, the most common way of accounting for interface risk would be to cost the risks based on a pre-published mechanism and then adjust the bid cost or cost score accordingly, in line with invitation process guidelines. An alternative would be to apply a weighted criterion (or multiple criteria) to the non-cost or technical lot evaluation criteria that enables the score to be adjusted for this risk. However, deciding the weighting to apply to this approach is challenging.

In both solutions you hit upon the difficulty of deciding to which part of the combination the weighting should be applied. Is it spread across the 2-lot bids to give a risk-adjusted lot position, or is it just an entity in its own right? This is a difficult issue to resolve as it exists in the middle and is owned by the buyer!

- Weight prioritisation when combining

In the example used, we simply added the scores together. When looking at a combination in an assessment scheme, it is likely that not all lots can simply be combined equally. What is considered a less important or lower value lot would not want to be seen to be driving the decision. In the instance of a simple best-in-class lot downselection, you do not have this issue.

- Legality/fairness/message/participation

When deciding to proceed with a lot-based competition, the message to any bidder can be clear. The best compliant bid in the lot will be the preferred bid. By adopting a lot combinations approach in the assessment scheme based on the points raised above, what happens? By adjusting bidder performance in the lot, or in the outcome (due to any risk, efficiency and weight resulting from forming a combination), you are significantly changing the message. The message is now...

The preferred bid will be the compliant bid that is ranked #1 as a result of performance. This is defined in terms of response to the lot criteria and takes into account any adjustments made for risks envisaged by the buyer when paired with a bid/bidder from a different lot.

The grey area in this revised message appears to increase the likelihood of confusion and/or challenge at the point of decision. They could also result in reduced participation from bidders as the positioning to win is rendered extremely difficult to gauge. They will have little visibility or transparency of what bidder(s) they might be paired/assessed with and may consider the investment in bid preparation too risky. The buyer may well end up losing the smaller specialist operators that were at the heart of the original decision to proceed with a lot-based competition. The procurement strategy would then become flawed.

- Summary – lot combinations in assessment schemes

Returning to the statement in the introduction to this paper, the desire for using lot combinations is understandable and has been demonstrated here. However, as discussed, the logistics and issues of doing so have historically normally led projects to rule out the approach.

This situation prompted Commerce Decisions to develop a robust approach to this challenge that could deliver some of the benefits sought by buyers. This approach was developed with one of our key clients and their legal team, in support of a high profile/value project. This methodology is summarised below.

Lot combinations – Commerce Decisions Methodology

- Methodology principles

Our methodology is bound by the following three principles:

1. The best-in-class individual lot assessment and winning (first-placed) compliant performer is identified and is not adjusted due to combination effects. This means that bids in positions 2 and below for that individual lot are excluded from the competition in line with the principles of a lot-based assessment.
2. A second phase of the assessment process compares the individual lot winners, when combined, with the best of any pre-designed combined bids from a single bidder (a virtual lot). This process effectively moves the strategic decision-making on the best approach to the end of the assessment, whereby the choice of individual lot providers versus a single provider, can be accurately assessed.
3. Integration/Interface risk, efficiencies and lot priority can be considered in the assessment decision.

- Methodology - approach to market

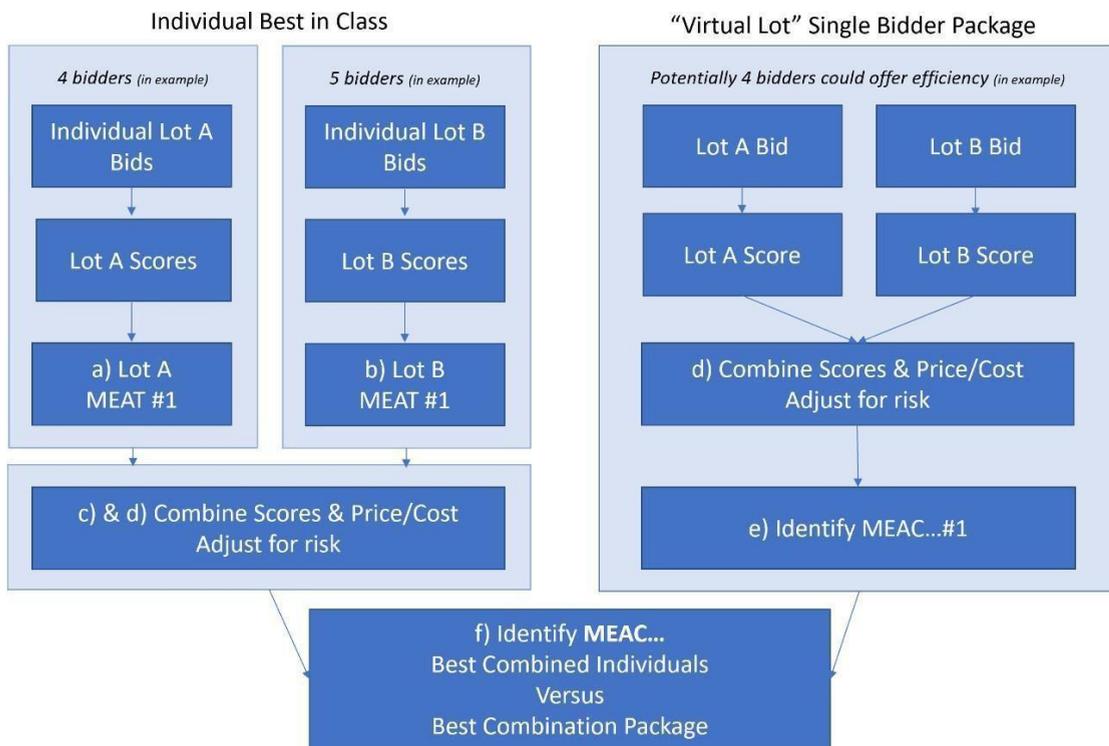
Using our Lot A & Lot B example, the project goes to market inviting proposals for:

- Lot A (a self-contained bid for the delivery of Lot A)
- Lot B (a self-contained bid for the delivery of Lot B)
- A virtual lot or a packaged Lot A and Lot B bid (a bid in response to the same lot criteria but based on the assumption of both lots being awarded, i.e. including any efficiencies. These lot bids from a single bidder cannot be separated).

- Methodology process steps

1. The Lot A assessment identifies the MEAT (Most Economically Advantageous Tender), and therefore preferred, individual Lot A bid. (In our example, Bidder 2 would win in our 4-horserace).
2. The Lot B assessment identifies the MEAT, and therefore preferred, individual Lot B bid. (In our example, Bidder 3 would win in our 5-horse race).
3. The two above are combined creating a combined lot-wide solution of potentially multiple bidders to compete with the virtual lot single bidder offering.
4. The risk that is perceived in joining the lots together is assessed using a pre-published mechanism in the same way for both the combined best-in-class individual winners and all the virtual lot participants. Note: whilst you would expect less risk in the virtual lot containing single bidder proposals, this may not always be the case. In the case of a priming organisation, there may still be risk across sub-contracts should they be formed. Given its potential impact, the design, robustness and transparency of this adjustment mechanism needs appropriate attention.
5. The 'Virtual Lot' or packaged Lot A/Lot B (no 3) assessment identifies the MEAC (Most Economically Advantageous Combination) and therefore narrows down to a single bidder in the virtual lot (in our example this would be a 4-horse race if all bidders were to be taken up and all offer efficiencies). At this point, the buyer has two potential solutions for delivering the total lot-wide requirement that need to be competed and down-selected. The combination of best-in-class lot winners versus the best combined single bidder proposal for both lots.
6. Using the same MEAC formula used in step 5, the best combined lot solution is identified and awarded contract(s).

This process is presented graphically below:



- Methodology mechanics

1. The methodology is based around the normal assessment components. Lot criteria (Financial & Non-Financial), weights and scoring mechanisms.
2. You will need to define a MEAT formula which demonstrates the attitude to value for money in each of the lots. This formula is used in the individual lot downselection.
3. The MEAT methodology or technique used should be the same in each lot, but the balance between price/cost and quality/value may be different. The methodology adopted in this case study is Commerce Decisions Real Value for Money (RVfM) ^(REF1 and REF2).
4. The MEAC formula is similar but as it is used with combinations, it needs to take into account combined lot scores, combined lot costs, different weights that might be assigned to the lots and/or the different value for money appetites that were defined and used in step 2.

To explain further, using our Lot A and Lot B example:

Lot A may be straightforward in terms of delivery

Lot B may be complex, risky and vital to success of the overall project.

- The buyer may therefore wish to weight Lot B higher than Lot A and may also be prepared to pay more for greater confidence or value than they would for Lot A.
- These preferences need to be maintained in the MEAC formula when looking at one combination versus another.

5. The MEAC formula is used twice as combinations are compared twice in the process. Firstly, in arriving at the best single bidder package in the virtual lot (see (e) on the diagram) and secondly when that

combination is assessed against the combined best in class bids (see (f) on the diagram).

The calculations required will depend greatly upon the project's strategy and its unique circumstances. The methodology itself is proven in practice and easily understood by buyer and bidder when set in context.

- **Methodology scalability – increasing lots**

The methodology is scalable in that the number of lots can vary, but we would recommend constraining the virtual lot functionality to support only those bidders who have the capacity and willingness to bid for all lots. Those bidders that only wish to bid for a sub-set would need to bid individually. Whilst achievable mathematically, the creation of further virtual lots would quickly multiply the assessment complexity/overhead if the assessments were to be performed satisfactorily and robustly for these types of projects.

Lot combinations – conclusions

As with many tender evaluation methodologies, upfront analysis and design work is required to gain confidence that the benefits sought by the project have been translated into the evaluation strategy and evaluation model. This process can be complicated, but failure to answer the difficult questions upfront will generally lead to greater consequences from any complications that may arise, either later in the evaluation process or post contract award.

The design of lot combinations can become complex, but with the considerable benefits to both buyer and bidder discussed here, it should be reviewed as an option.

For additional support and advice in lot strategy and the other areas covered, please refer to the references section of this paper or contact Commerce Decisions directly via our [website](#).

About Mike Ross

Mike is an experienced Consultant and Requirements Analyst with 30 years' IT Based Consultancy experience. Mike joined Commerce Decisions in 2007 having worked previously as a freelance consultant with major consultancy firms such as PWC, IBM and directly for the UK Ministry of Defence. With Commerce Decisions, Mike has had extensive experience in the deployment of AWARD® and the creation and implementation of a wide variety of evaluation strategies and decision making evaluation schemes, across a wide selection of international markets and complex, high value procurement projects.

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.

References – www.commercedecisions.com

This paper has made brief reference to subjects on which there is wider information available.

Ref ID	Materials	Type
REF1	Weaknesses of traditional supplier evaluation methods – introducing Real Value for Money	White Paper
REF2	AWARD® RVfM	Datasheet

info@commercedecisions.com

www.commercedecisions.com

