

## TOOL C.5

### GETTING STARTED WITH COLLABORATIVE COSTING

The established costing practices within the UK means that it is generally extremely difficult to obtain realistic quotes from suppliers until the concept design is frozen. This is because suppliers had to simulate a “pseudo -bid” to produce their price.

Once initial quotes are turned in, the contractor establishes the cost gaps at project and work package level using the HRC and average market rates respectively. This triggers a new cycle of VE activities together with a negotiation process between the Contractors principal suppliers.

For example, in the BDB Pilot Projects the Prime contractor found it impossible to adopt a fully-fledged Target Costing approach described in the section on “Managing Costs For Mutual Benefit “, and instead followed a hybrid cost management method, introducing some elements of Target Costing into the traditional “cost plus” model. The Prime Contractors asked their Cluster Leaders to submit an initial bid that typically turned out to be simply a single gross figure. Experience demonstrated that suppliers did not on the whole identify in detail the elements of cost, but submitted an initial price built up upon their perception of the acceptable price for the work package in the marketplace. Prime contractors, in their effort to interrogate, challenge, and reduce the cost of the work packages quoted by cluster members once the design was frozen, needed to impose some structure upon this price, so that an element of “transparency” was introduced into the negotiation.

For this purpose, in order to get started with collaborative costing it is useful to introduce a relatively simple cost break-down structure, to be used in the negotiation process as a tool for identifying areas for further cost reduction initiatives (see Figure 1: Categories for *interrogating and negotiating the price of work packages*)

The cost break-down structure below uses categories which are close enough to those usually adopted by suppliers in Industry. Under no circumstances is the tool intended as a substitute for the existing costing model used by the suppliers, as long as they use one. Suppliers may well use different terminology for each element of cost: none of that matters provided that, during negotiations, Prime Contractors do not lose sight of the fact that all elements shown below need to be discussed in such a way that the Prime Contractor is finally satisfied that they have been considered and accounted for. So that:

- the Prime contractor is confident that the price agreed with each Cluster Leader is as low as is sensibly possible
- there will be no surprises for either of the parties during the construction phase, which will encourage the Cluster Leader to ask for more money
- all parties recover their overheads as planned and make the profit that they wanted.

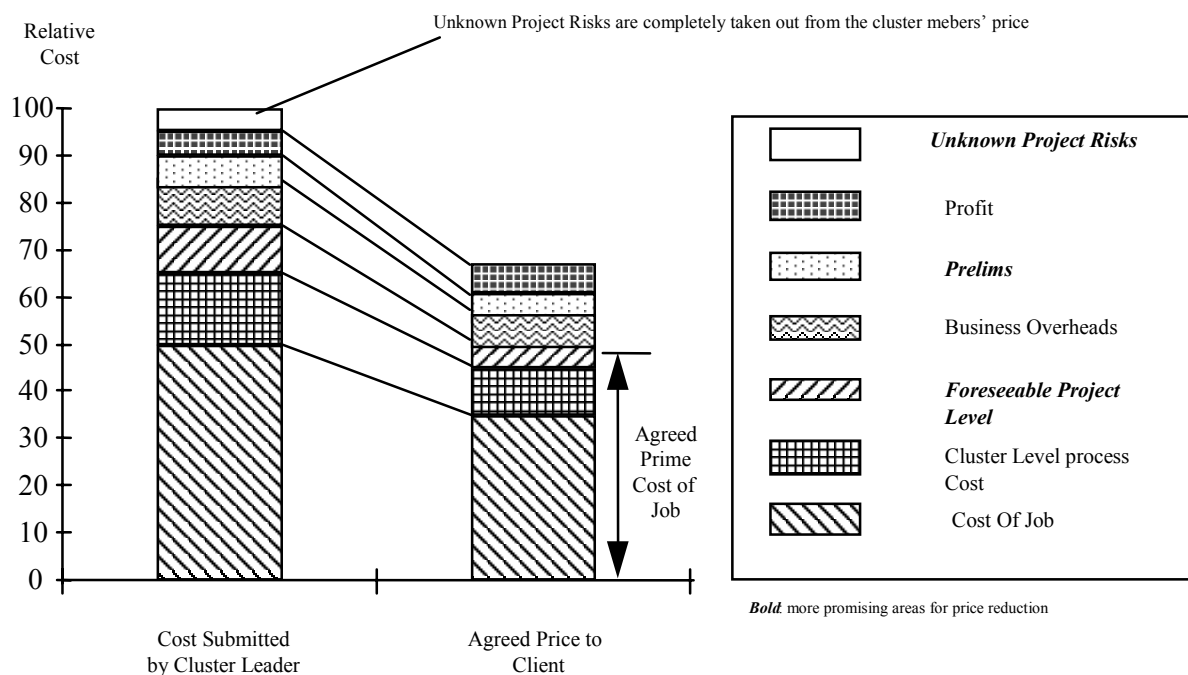
## Categories for interrogating and negotiating the price of work packages

- 1. “Unknown” Project Risks.** This is the element of risk to do with unforeseeables such as bombs under the site, rain every day of the construction phase, the client changing his mind, and all the other things that construction professionals deal with all the time. In order to minimise the amount of cash built into the bid, the contractor needs to take these risks upon himself, or pass them to the client. But it is necessary to ensure that the Cluster Leader hasn’t hidden away something in his own price that reflects his view of what is “unknown” risk. It is also important to discuss with him any ideas he may have to help reduce the amount the prime contractor builds into his quote.
- 2. Profit.** This figure will reflect what the contractor believes is reasonable in the light of knowledge of profit targets and achievements in the different sectors of the industry. One of the big tests of the success of this project will be the achievement of planned profits by all companies involved in it.
- 3. Business Overheads to be Recovered.** Again, the prime contractor will want to satisfy himself that each company is using a sensible and acceptable overhead recovery rate that reflects the nature of the company and the overheads that have to be carried. There is every reason to demand that this figure is justified.
- 4. Prelims.** While not a large item by itself, careful analysis of what the Cluster Leader has put into this category could result in better ways of handling some activities on site with attendant reduction in cost. Prelims and process risks are very much related, but the distinction is maintained here to follow the existing practices in the industry
- 5. “Foreseeable” Project Level Risk.** This is a category of risk for which the Cluster Leaders can be expected to add cost. They will do so on the basis of their past experience which is that, on all jobs they undertake, certain things on the project which are not under their control, but are the responsibility of others, always create problems for which it is sensible to build in contingency funding. This time, however, things will be different, since the whole project is being far better managed than is usually the case. They simply won’t need to put in the extra cost to cover risks that in this case will be managed out. It is up to the main contractor - in discussion with them - to make sure that all these contingent costs are eliminated, or accepted if they can make a good case that seems reasonable.
- 6. Cluster Level Process Cost.** This is a difficult category to define; it refers to those “risks” inherent in the subcontractor’s own activities (i.e. those not caused by any other trades in other clusters) for which a Cluster Leader will make a provision in his price. These might relate to delays caused by his own suppliers delivering items late or to the likelihood that his own suppliers will deliver a proportion of goods which are defective. There seems to be an acceptance that the Cluster Leader - and, in turn, every cluster member - will be adding in to his bid a contingency for such “risks” that may well happen on other jobs but are not “risks” at all - they are just sloppy habits and inexcusable inefficiencies. Because such sloppiness will

be prevented, it is necessary to ensure that anything put into a Cluster Leader's bid which is intended to cover this kind of issue is identified and removed.

- 7. Cost of Job .** Having dealt with all of the items above, the number that we are left with is the first stab that the Cluster Leader has made at the cost of actually doing the work - whether he recognises the number or not. If he has built up the number methodically, he will have based this estimate on his past experience and his current views of what constitutes reasonable productivity. The Prime Contractor will challenge this figure and demand that he justifies every aspect of its derivation - which also means that he has to justify what he has agreed with his cluster members. The result of the challenge will probably be an agreement on better levels of productivity, improved construction processes and better procurement of materials, thus leading to a lower cost for the job.

**Figure 1: Categories for interrogating and negotiating the price of work packages**



The suggestion is therefore that the negotiation of the bid with the individual cluster members progresses by discussing items from the top down, tackling each element in turn. Each of the category is in fact linked to a specific cost reduction strategy:

*Unknown project risks.*

Unforeseeable project costs will have to be totally taken out from the price at the subcontractor and cluster level, in that provision for this kind of event has been made at the project level through the establishment of a risk register. Unknown project risks will be owned either by the Prime Contractor or by the client.

<i>Profit</i>	Profit, as it appears from the figure, needs to be predictable and “protected”, that is, the approach discussed in this handbook is going to be successful if it guarantees a fair level of profit. However, the issue is very delicate and it will be difficult to discuss it with the subcontractors at the outset. At the same time, it is important to remember that the notion of “fair profit” changes across different segments of the industry and no agreed figure is available.
<i>Prelims</i>	Prelims include items such as scaffolding, cranes and cabins. Although usually distinct from site management, prelims costs may be substantially reduced by producing an effective work programme and improving site management which eliminates waste and duplication of efforts (e.g. multiple transportation of the same kind of items on and off site, duplication of machinery, etc.)
<i>Overheads</i>	Because of the established practices within the industry of charging overheads as a flat percentage on the total amount of the job, there seems to be limited scope for obtaining reductions here. Interrogating what goes into this category and how it is arrived at is a medium term objective of supply chain management activity.
<i>Project level foreseeable costs and opportunities</i>	This is a very promising category in that, as for prelims, foreseeable project costs and opportunities are very much within the range of influence of the Prime Contractor. Accordingly, many of the costs included in this categories can be tackled by improving the management of the site and by devising a better work programme. This can be obtained by discussing with Cluster Leaders the site set up and programme requirements, to optimise spatial arrangements and work sequencing. The use of a “construction interface register” can be of great help here. Sub-contractors usually do not have a say about such matters, and they have to live with what they find on site. The fact that they are included in the planning process will make them confident that the agreed arrangements will actually happen, and may convince them to reduce their estimated price accordingly.
<i>Cluster level Process costs</i>	Control over this aspect is very much with Cluster Leaders. However, the Prime Contractor may offer support to the Cluster Leaders on how to proceed to map and improve processes. AMEC has approached the issue by planning an introductory CI workshop during the clustering phase, so that Cluster Leaders can decide which tools to use when.
<i>Cost of job</i>	Within the BDB this figure is probably a given for practical reasons, although in the medium term CI activities will have to be embraced by the individual sub contracting firms in order to reduce this cost.

**Collaborating for the Built Environment (Be) – [www.beonline.co.uk](http://www.beonline.co.uk)**

Be is an independent body formed from a merger of the Reading Construction Forum and the Design Build Foundation in 2002. Its 100 member organisations come from the demand and supply chains of the 'industry formerly known as construction', ranging from public sector and private sector clients and developers to contractors, designers, consultants, specialists and suppliers. It leads research and implementation activities in support of a vision of delivering integrated built environment solutions through collaborative working.

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**Collaborative Working Centre – [www.collaborativeworking.co.uk](http://www.collaborativeworking.co.uk)**

The Collaborative Working Centre of Be is a not-for-profit organisation set up from members of the team that facilitated *Building Down Barriers* to provide consultancy, training and other continuous improvement services to support the development and implementation of collaborative working.

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