**Briefing Note: Whole Life Costing**

**Context**

The University of Birmingham is committed to Sustainable Procurement. This means we seek to integrate environmental, social and economic considerations as part of our overall value for money assessment when making purchasing decisions. One aspect of this is to consider the overall cost of the purchase, using a Whole Life Costing (WLC) approach, rather than the simple price. This often also focusses on environmental benefits.

**What is Whole Life Costing?**

WLC is a technique that takes account of the total costs of purchasing a given item over a specified period; not simply the cost of buying (or leasing) an item but also operating, maintenance or running costs in addition to costs associated with end of life (disposal costs). These costs can be used to inform decisions about which of the means of meeting the requirement offer the best value.

WLC can be applied to many purchasing decisions but is most appropriate to capital purchases (vehicles, equipment, buildings etc.) and it is just as applicable to leasing and hire agreements.

WLC allows bids to be easily compared on a like-for-like basis. Whilst there is no single agreed format to undertaking a WLC as a minimum the following need to be considered:

* **Acquisition**Delivery costs, installation and commissioning costs
* **Operating** Energy, spares & costs of maintenance
* **End-of-life** De-commissioning and removal costs

At its simplest level, a spreadsheet could be produced for the requirement with all the elements of cost individually listed along the rows and the product options listed down the columns. A simple way of demonstrating that the total costs have been considered is most valuable before making the final purchasing decision.

An example of this approach is provided below and can be adapted as necessary for identifying and comparing costs across different bids from either the same or different, suppliers:

**What are the key benefits of WLC?**

There are a number of benefits associated with taking a WLC approach:

* Firstly it identifies clearly the full cost of any particular purchase and allows easy comparison of different bids.
* Secondly, and in line with our clear commitment to environmental sustainability and social responsibility this approach allows costs associated with potential environmental impacts (especially in relation to energy or water consumption and waste disposal) to be exposed, and considered transparently before purchase.
* Thirdly it offers:
* **Improved awareness of total costs** - WLC has been shown to provide buyers and decision-makers with a better grasp of the factors governing cost and the resources associated with a particular purchase.
* **Better forecasting & budget planning -** WLC allows the full cost of a purchase over a period of time to be calculated with reasonable accuracy. This is obviously of considerable importance when major investment decisions are being made.
* **Performance trade-offs against cost -** Using WLC it is relatively straightforward to assess the reliability characteristics of a piece of equipment in the context of its cost profile; it might cost more but last longer for example.

**What are the basic steps in WLC?**

If you have never used WLC before the key is to keep it simple. It is a really useful technique but for most purchases it is better to assess full cost in a simple manner rather than over-complicating things and either doing it badly, or confusing the assessment totally.

Below is a simple worked example based on buying a television monitor/interactive display for a meeting room:

**Step 1: Be clear about what the requirement is.**

What exactly is the need? If you are clear about what you need it makes the whole activity much easier.

**Step 2: Identify the possible products which may meet this need**

At this point we are assuming it is a piece of equipment that fulfils the requirement. In this example we know we need new televisions for 5 meeting rooms; we also know there are four products that meet the need we have identified.

**Step 3: Identify the costs you would like to take into consideration**

Use the document provided (Appendix 1) to help identify the costs you might want to take into consideration.

**Step 4: Produce a simple spreadsheet to collate the cost of each product.**

Identify the costs you have chosen to consider.

Things that you may wish to consider are shown below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Product A | Product B | Product C | Product D |
| Purchase Price |  |  |  |  |
| Delivery Cost |  |  |  |  |
| Installation Cost |  |  |  |  |
| Energy Cost |  |  |  |  |
| Maintenance |  |  |  |  |
| Consumables |  |  |  |  |
| Disposal |  |  |  |  |
| Total |  |  |  |  |

**If you want to buy something bigger**

Simple is still good and can be used but for really significant purchases this may not be enough. Please get in touch with the Procurement Team - [procurement@bham.ac.uk](mailto:procurement@bham.ac.uk).

**Appendix 1: Whole Life Cost Considerations**

A more comprehensive,(though not exhaustive) breakdown of potential cost considerations in Whole Life Costing is provided below.

Choose from the following when implementing WLC

|  |  |
| --- | --- |
| **Pre-acquisition costs** | **Acquisition costs** |
| • specification and design  • budget allocation  • preparation and issuing of invitation to tenders  • cost of tender evaluation  • cost of letting contract  • preparation for receipt of the requirement  • professional external advice (e.g. legal) | • purchase price  • delivery charge  • insurance and taxes (inc. import duties, etc)  • installation and commissioning  • training and support  • internal costs associated with changing from the incumbent supplier (which should be identified prior to tenders being received)  • integration of systems  • storage requirements |
| **Operating costs** | **Maintenance costs** |
| • labour  • materials  • consumables  • energy supply and consumption  • contract and supplier management  • transaction costs  • environmental costs  • cost of change, for instance, a decision to use alternative materials | • specialist labour  • specialist tooling  • spare and replacement parts  • reduced output with age  • frequency of maintenance and recommended downtimes  • servicing and inspection regimes |
| **Downtime costs** | **End of life costs** |
| • lost profits or use of equipment  • extra costs of overtime or sub-contracting  • costs associated with breakdown of equipment  • claims resulting from non-performance | • safe disposal  • re-sale  • ongoing liabilities  • decommissioning  • removal for sale or scrap  • donation or re-use elsewhere  • re-instatement of land or buildings for alternative use |