

# Costs in the round

In life-cycle costing, purchasers have to calculate all of the costs associated with buying, running and disposing of assets. Neil Fuller explains why it's emerged and how it works

**Life-cycle costing considers the full-cost profile over the lifetime of the asset and is concerned with the full cost of ownership of a capital acquisition. This includes costs associated with acquiring the asset, including transaction costs, the cost of using the asset, maintaining it and its eventual disposal.**

A full inventory of the costs associated with ownership would include: transaction costs, feasibility studies, research and development, design, maintenance, training costs, commissioning costs, replacement and disposal costs and depreciation.

This "cradle-to-grave" approach to the management of capital assets is sometimes referred to as terotechnology. Typically, the cost profile of an asset has high initial costs; costs that fall as operatives experience the learning curve and teething problems are overcome, rising again in later years as maintenance and repair costs rise.

If the life-cycle approach to asset management is adopted, it is essential that adequate records of all costs incurred are maintained to provide a basis for future purchasing decisions.

It should not be thought that life-cycle costing and other techniques such as discounted cashflow are mutually exclusive; ideally, the two concepts would be used in conjunction with each other.

Whichever approach or perspective is favoured, you should note the increasing influence and importance of the European Union in the buying process. The first European procurement regulation ("directive") came into force in

1971, and now has to be taken seriously by all involved in purchasing in the public sector.

However, and of increasing importance to all purchasers, the stated intention of the EU is to have all member nations reach targets for recycling and recovery of inputs that have been used in the production process. This is likely to have cost implications for organisations as they have to pay for reprocessing and materials recovery.

In June 2002, environment ministers from across the EU gathered in Luxembourg to set out how they believe recycling and recovery targets should be revised. Under the accord, member states would have to recycle at least 55 per cent (and at most 80 per cent) of their waste packaging by 2008.

Individual material specific targets were set at 60 per cent for paper and board, 60 per cent for glass, 50 per cent for metals, 15 per cent for wood, and 22.5 per cent for plastics.

The European Union also wants some manufacturers to take on the cost of disposal of their products.

From 2007, automobile makers will be responsible for the disposal costs of their products at the end of their useful life. This policy is still evolving, but its impact, spurred by the lack of landfill and the need to recycle finite resources, is sure to gather momentum. One commentator (*G Bylinsky, Fortune, February 1996*) estimated that 94 per cent of material taken from the earth enters the waste stream just a matter of months later.

## Disposal directives

Different countries across Europe are in different states of readiness for the recycling and disposal directives. In the UK in 2002, it was widely reported that the requirement to dispose of refrigerators in an environmentally sound way could not be met because of the lack of planning and investment in facilities to extract the raw materials from the appliances.

Other countries have already invested in environmentally friendly technology, anticipating the finite nature of the Earth's resources and more expensive waste disposal.

What the buyer should derive from the cases cited above is that wider environmental concerns are increasingly impacting on the business world, and legislation, and concomitant compliance by the organisation, is likely to add to costs - in the short term at least.

This can also be seen in the energy market, where environmental levies have already added to the price of gas and electricity (see Features, 30 January 2003, and News, 11 April 2002, News, 5 September 2002 and News, 3 October 2002).

## Checklist

### On 'new' commodity buying

Some years ago, German companies were made legally responsible for how their packaging is used, thereby encouraging firms to recycle and also to devise ingenious ways to reduce the amount of packaging.

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Within the first two years of the legislation, the amount of packaging waste was reduced by 4 per cent - some 600 million tons.

One of the most effective processes in this regard is known as design for disassembly (DFD). A good example of DFD can be seen in automobile manufacturing. For example, BMW is replacing glue and solder in bumpers with fasteners, thus making them easier to recycle. Eighty per cent of a BMW's weight already comes from recycled parts and the company hopes to get this as high as 95 per cent.

*Adapted from Behaviour in Organisations, Greenberg & Baron, 2000*

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