



## Chapter IV: The Cost of Sustainable Procurement

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### 1 Introduction

Is sustainable procurement expensive? The most common misconception about sustainable (or green) procurement is that the price of more sustainable products and services is too high and the benefits do not justify the time and effort it requires.

Whilst in many cases the price may currently be a little higher, this is certainly not true in all cases, especially if all costs related to the product or service throughout its lifetime (purchase price, usage, maintenance and disposal costs) are considered, not just the purchase price – **Life-cycle costing**. In many cases substantial savings are actually possible. This is before even considering the wider costs to society related to environmental degradation and social problems.

Furthermore, a number of other approaches/strategies can be employed to achieve further savings:

- **Minimising the need to purchase** – avoiding the need to purchase is the most direct way to cut procurement costs and achieve environmental savings
- **Joint procurement** – Combining the procurement actions of several public authorities can help to achieve significant savings through increasing your

buying power, and at the same time is a useful way to introduce sustainable procurement into a cautious organisation

- **Price ceilings** – If you are concerned about possible cost increases use environmental or social aspects as an award/evaluation criteria rather than a specification (minimum standard). If weighted appropriately this will ensure that prices cannot rise significantly

Each of these is explored in more detail below.

Finally it is important not to consider each product in isolation. If the costs of some goods increase this will often be balanced by savings made with other products. The City of Kolding in Denmark, which has “greened” virtually 100% of its tenders has found that overall this strategy has been cost-neutral.

## 2 Looking beyond the price: Life-cycle costs of products

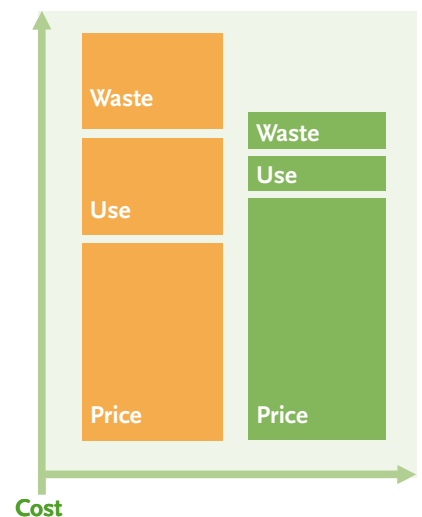
The most commonly used argument against sustainable procurement is that green products cost more. However, upon closer inspection, this generalisation does not hold true. In many cases the greener alternative is even available at the same purchase price as standard products, or at a marginally higher price. Energy efficient IT products, for example are generally no more expensive to buy than the less efficient alternatives, even ignoring the reduced costs during use. The same generally applies to greener cleaning products.

It is often the case, though, that the green product costs slightly more than the standard alternative, as the price will often include a premium for new technologies and design, and for many products economies of scale have so far not been achieved. Yet the real cost of a product for the buyer is much more than simply the purchase price paid by a procurer. In order to decide which alternative is the cheapest, the costs throughout the product’s *life-cycle* must be considered i.e. the costs of purchasing, operating and maintaining, and disposing of the product.

When examining the case for sustainable procurement, as soon as the “hidden” life-cycle costs are taken into account, the economic advantages of purchasing green products become obvious. As Figure 1 demonstrates, despite the higher up-front costs (*price* in the diagram), for many green products the reduced operating and disposal costs (*use* and *waste*) mean that they offer a significant return on investment. For example, a more energy-efficient building may cost more to construct, however, due to the lower operating costs (e.g. heating bills) it would have a shorter pay-back period and a higher return on investment. In the case of energy efficient products, a “high” purchasing price is often more than compensated by even higher long-term savings. For example, the price of compact fluorescent lamps (CFLs) is about € 10 each. These lamps are more expensive than conventional incandescent bulbs, but they last 10 times longer and use only a quarter of the electricity incandescent bulbs use. Therefore they offer savings of more than € 40 in utility bills during their useful life<sup>[1]</sup>.

### Note:

An Excel tool (LCCA Tool) for public authorities to use to calculate life-cycle costs is included in the attached CD-ROM (also available at [www.procuraplus.org](http://www.procuraplus.org)) together with an accompanying explanation guide. This tool was developed within the EU-funded DEEP project



**Figure 1:** Influence of use and disposal costs on overall cost

[1] Worldwatch Institute (2002). *Vital Signs 2002 Highlights*.

Many public and private organisations worldwide recognise the economic advantages of considering the life-cycle costs of products. Two good examples are given in Box 1 below.

**Box 1:**  
Savings through  
Life-cycle costing  
approaches

#### Hamburg, Germany

When the environmental authorities in Hamburg, Germany, substituted two old inefficient lamps with one energy-efficient lamp in 300 public buildings, they reduced the annual electricity consumption by approx. 4.5 million kWh (an equivalent of approx. 2,700 t of CO<sub>2</sub> emissions). Assuming a price of 5 cents per kWh, this equates to a saving of € 225,000 on Hamburg's electricity bill<sup>[2]</sup>.

#### Kolding, Denmark

In the City of Kolding, a new school building was designed to help the community save more than 50% in electricity and maintenance costs simply by installing a passive ventilation system

### 3 Keeping track of the “real” costs: The Procurement Scorecard

However, in the majority of public administrations in Europe, the accounting systems used make it difficult to track the real costs of procurement, and can often even work against the more widespread implementation of this approach.

The accounting systems of public administrations are complex, determined by national budget law. Sometimes this is complemented by economic analysis tools adapted from business economics. At the end of the day, they all have one characteristic in common: they do not report procurement costs accurately.

- Firstly, procurement costs are split all across the budget, because public financial officers are naturally more interested in knowing which department spends the money than what exactly the money is spent on.
- Secondly, public budgets do not go into sufficient detail and therefore it is difficult to distinguish between spending on different product groups (sometimes with the exception of products like “fuel” or “electricity”).
- Thirdly, public budgets do not provide data on the amount of products purchased – of course it makes a big difference, whether a budget of € 50,000 is needed for 50 or 100 computers.

This lack of properly structured data makes it difficult to track the real costs of procurement, and leads to a situation in which procurers are encouraged to buy the cheapest product without considering the life-cycle costs, as purchase price is what is most closely monitored.

Although this Manual (and the Procura+ Campaign) cannot remove these deficiencies in accounting systems, the Procurement Scorecard (introduced in Chapter V, Section 2.1.3 of this Manual) has been developed as a simple but effective tool for allowing the costs of specific products to be monitored.

<sup>[2]</sup> City of Hamburg Status Report, the RELIEF project: [www.iclei-europe.org/index.php?id=1854](http://www.iclei-europe.org/index.php?id=1854)

## 4 Minimising the need to purchase

Avoiding the need to purchase is the most direct and certain way to cut procurement costs. In concrete terms, this means that both the end-users of the product and the procurers have to review their product requirements and identify potential opportunities for increasing the efficiency of use. For example the City of Zürich, Switzerland, reports that “High Capacity Rebuild” toner cartridges saved 30% in purchasing costs, because they contain 30% more toner than the original cartridges and therefore last longer.<sup>[3]</sup> Some examples of this approach are outlined in Box 2.

- **Avoiding the need for the product in the first place:**

Using e-mail instead of traditional paper memos, for example, can eliminate the use of large amounts of paper while saving on purchasing, filing, storage, and disposal costs.

- **Cutting down on the materials required for a task:**

Packaging for product transportation for example, reduces the need to recycle or dispose of these materials when they are no longer needed.

- **Buying products and equipment that are durable, repairable, and upgradeable:**

Because these products need to be replaced less frequently, they reduce both waste and the amount of energy and materials needed to manufacture new products, while lowering purchasing costs.

- **Improving storage, inventories and stock management:**

Can help to reduce the costs of spoilage through obsolescence, and minimise administrative, transportation and distribution costs.

- **Buying products in bulk and in concentrated form (whenever possible):**

Minimises the shipping and packaging waste associated with delivery, and defers the need to buy new products.

- **Utilising Product Service Systems:**

This means using a service, rather than a physical object to meet the end users' needs. For example, cleaning contracts, leasing office furniture, a piece of equipment or vehicles. This can eliminate the need to buy, maintain, and ultimately dispose of material while minimising environmental impacts.

- **Postponing the replacement of products (for as long as possible):**

Organisations that use products as long as they function obtain maximum value from their purchases.

- **Training employees on more efficient use of the equipment:**

For example, training on energy-efficient features of the office equipment helps reduce electricity costs.

- **Ensuring that maximum value is extracted from products at the end of their useful life. :**

More and more alternatives to landfill are becoming available, from textile manufacturers that offer recycling programs for used carpet to re-manufacturers that clean and resell unneeded computers, reuse the parts in other machines, or recycle the components as scrap.

**Box 2:**  
Minimising the need  
for procurement <sup>[4]</sup>

[3] FIP (2001). RELIEF Status Report: Environmentally Favourable Procurement in the City of Zürich, Switzerland ([www.iclei-europe.org/index.php?id=1854](http://www.iclei-europe.org/index.php?id=1854))

[4] Adapted from: INFORM Inc (1999). Waste at Work: Prevention Strategies for the Bottom Line: [www.informinc.org/wasteatworkfront.pdf](http://www.informinc.org/wasteatworkfront.pdf)

Practice has proven that such actions go hand in hand with significant cost savings, as can be shown by the activities of numerous municipalities worldwide. For example, the paper waste prevention programme in the City of Zürich resulted in annual savings of approximately € 65,000 in storage and disposal costs in the first year of operation, and approximately € 125,000 in the subsequent years.<sup>[5]</sup> Another successful example is that of Wiener Neustadt in Austria, which achieved a reduction of more than 30% in cleaning costs (see Box 3).

**Box 3:**  
Minimising the need  
for procurement:  
The case study of Wiener  
Neustadt, Austria <sup>[6]</sup>

In 1996, the City of Wiener Neustadt, Austria, launched an initiative aimed at reducing the ecological risks associated with conventional cleaning. This approach involved changes in both the procurement of cleaning products – by centralising procurement and incorporating environmental criteria in the calls for tenders – and in their use. A number of specific measures were taken, including:

- **Analysing the cleaning situation:** A local cleaning company was asked to assess the current cleaning situation, which included examining the size of the area to be cleaned, the load and degree of dirt, existing cleaning equipment and cleaning chemicals, the type of cleaning, etc. This evaluation was then used as the basis for new tenders.
- **Identifying and implementing specific actions:** The approaches taken included reducing the size of the area to be cleaned, using alternative (e.g. mechanical) cleaning methods, and introducing an accurate dosage system.
- **Training employees:** Employees were schooled in the environmentally responsible use of cleaning products. Training topics included environmental criteria in purchasing; alternative cleaning methods; targeted dosage instructions; and information on the ecological and health risks of the products. Prior to the course detergents, for example, were used in a wasteful way, based on the false premise that “more detergent cleans more”.
- **Monitoring the results of the program:** Results include checking the consumption and choice of cleaning products and equipment by the central procurement office, and the monitoring of the area to be cleaned and of material requirements by a local cleaning company (at no cost).

**Results and effects:** The environmental impacts of cleaning were significantly reduced by curtailing the use of cleaning products by 20-30%. Motivated and informed personnel continue to contribute to environmental protection.

On the financial side, *the measures taken resulted in a saving of more than 30% in annual costs* for cleaning services.

<sup>[5]</sup> ICLEI (2002). Local Sustainability: European Good Practice Information Service, online: [www3.iclei.org/egpis/egpc-156.html](http://www3.iclei.org/egpis/egpc-156.html)

<sup>[6]</sup> ICLEI (2002). Local Sustainability: European Good Practice Information Service, online: [www3.iclei.org/egpis/egpc-159.html](http://www3.iclei.org/egpis/egpc-159.html)

## 5 Joint procurement

Within the public sector, many authorities purchase similar goods and services. There are many benefits to be had by combining your procurement actions with other public authorities - “**Joint procurement**” (JP):

- **Financial** – Combining purchasing activities obviously increases the quantities being purchased, and thus the buying power of the authorities involved. This will likely lead to more attractive offers from suppliers in response to tenders. For many small public authorities these advantages can be quite significant.
- **Administrative costs** – The total administrative work for the group of authorities involved in preparing and carrying out one rather than several tenders can be substantially reduced. How much it is reduced will depend on the type of JP arrangement used.
- **Skills and expertise** – Joining the procurement actions of several authorities also enables the pooling of different skills and expertise between the authorities. Procurement (and other) skills are scarce and not every public authority can develop high quality skills across the full range of local authority functions<sup>[7]</sup>. Smaller authorities in particular can benefit from the capacities of staff in larger authorities. This is particularly useful when procuring innovative products and services. Investigating new products/services can be time-consuming. However, if skills from different authorities are combined, the workload can be shared.

### Kallithea, Greece

In 2005 the municipality of Kallithea Rhodes participated in a joint procurement action and as a result is buying recycled paper at a cheaper price than they were previously paying for non-recycled paper (€ 2.34 instead of € 2.4), achieving both economic and environmental savings.

### Vorarlberg, Austria

In 2001 the “ÖkoBeshaffungsService Vorarlberg” (Eco-procurement Service) was established with the primary aim of accessing the economic and environmental benefits of joint purchasing for municipalities in the Vorarlberg region. Reports from 2005 show that substantial savings were achieved both on the prices paid for products (5%-10% lower) and administrative costs (20%-60% lower) – total savings reached € 286,507, without considering the savings on telephone and process costs.

These arguments, of course, apply to any form of public procurement not just **sustainable procurement**. However, JP also represents a very effective way of encouraging the market for more environmentally sound products and services and helping to reduce the costs of introducing sustainable procurement in a specific authority in a number of specific ways:

- **Entry-door for introducing sustainable procurement** – In authorities where there is little knowledge of, or support for sustainable procurement, persuading other internal departments to participate in an environmentally focussed JP action on the basis of cost may be an effective approach for getting sustainable procurement more generally on the agenda.

### Note:

A tool giving advice on how local authorities can set up and organise joint procurement actions is included in the attached CD-ROM (also available at [www.procuraplus.org](http://www.procuraplus.org)). This was developed within the EU-funded LEAP project.

### Box 4: Benefits of joint procurement

<sup>[7]</sup> Taken from Local Authority Procurement: A research report, commissioned by the UK Office of the Deputy Prime Minister, available at: <http://www.odpm.gov.uk/index.asp?id=1136756>

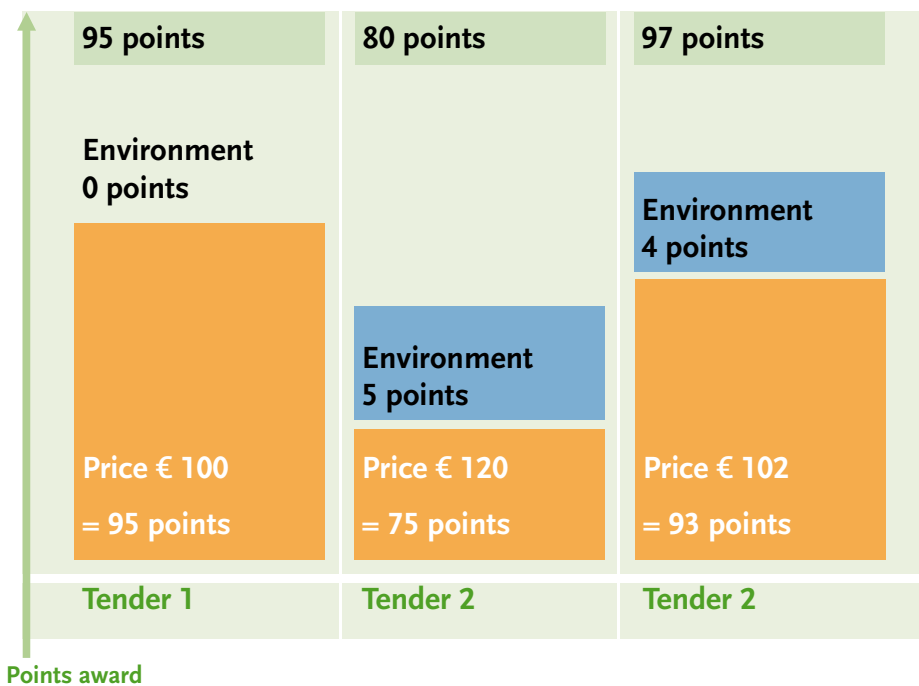
- **Launching customers for environmentally innovative solutions** – Through bulk purchasing, local authorities can provide the necessary demand to launch new, more environmentally sound products and services on to the market.
- **Reducing the price of environmentally sound products and services** – The greater the demand for products and services, the more prices will come down. This is especially the case for those not yet well-established on the market.
- **Introducing new products into national markets** – Both the availability and price of environmentally sound products varies considerably in different European countries. Tendering for large quantities can encourage suppliers to introduce new brands available in other countries and alter pricing strategies. The use of environmental specifications which have been successfully applied in other countries is a very effective way of trying to develop the market for such products.
- **Standardising environmental demands** – The more standardised environmental demands are, the easier suppliers find it to respond. JP can help to promote greater standardisation.
- **Pooling environmental expertise** – As with procurement in general, environmental skills and knowledge vary considerably between public authorities. JP can help to pool this expertise.
- **Encourage suppliers to develop new products** or invest in new technologies, which are less environmentally harmful, stimulating the market. This is particularly the case when a large demand volume with a long-term contract is guaranteed, something that an individual authority is less likely to do.



## 6 Keeping purchase prices competitive: Price ceilings

When an estimation of life-cycle costs is not possible for a specific product and/or the green alternatives are more expensive, award criteria can be used to limit the *price increase* to a maximum value – a price ceiling. This tool, which is sometimes also referred to as *price preference*, indicates the percentage (e.g. 5%) that a public authority is willing to pay extra for an environmentally superior product, based on clearly defined and transparent criteria

If a public authority includes sustainable procurement criteria in the award phase of a tender, it can define how much importance should be attached to these criteria. For example, a call for tender could be designed to allow a maximum of 100 points for a bid in the award phase. Of these 100 points, a maximum of 5 points could be allocated for fulfilling environmental criteria, the other 95 for price. Assuming that an increase in price of 5% above the cheapest offer leads to a 5 point deduction in the price category, all those products which have been allocated 5 points for environmental performance but have more than 5% extra cost compared to an equivalent alternative will not be awarded the contract<sup>[8]</sup>. The public authority will not spend more than 5% extra. Figure 2 demonstrates this calculation.



**Figure 2:** Using a price ceiling in the award phase of a tender

<sup>[8]</sup> Of course, a public authority may award points for other aspects such as quality, design, delivery time etc, however, as long as a 5% increase in price above the cheapest offer leads to a reduction of 5 points in the price category, the price ceiling will still work.