

## Fact Sheet 08

# Resource Efficiency

## Resource Efficiency and your business

### What is Resource Efficiency?

Sometimes known as waste minimisation, resource efficiency is a term for improving the way your business uses resources, ideally, across all areas and departments. While it is common to begin to analyse physical resources such as raw materials, energy and water, the same principle can be applied through Lean thinking across the whole organisation.

It is estimated that waste typically costs companies 4% of turnover.

With prices of energy and resources rising and profits being harder to obtain, resource efficiency makes perfect business sense, as it directly reduces bottom line costs and will help secure future resources at sustainable prices. Key world resources such as minerals, ores, fossil fuels and biomass are materials we all depend on to do business. Resource efficiency challenges us to make best use of these resources whilst still producing the goods and services that we need – essentially, doing more with less.

### Decoupling

A more recent trend, known as decoupling, is the notion of improving the rate of resource efficiency faster than the rate of economic growth. Currently as economic activity increases, so does resource use and associated environmental impact. Altering the direction of this trend is seen as essential due to the impact of rising global population and prosperity in the developing world. Average citizens in developed countries currently consume between 16 and 40 tons of key resources per head, per year. By comparison, average citizens in India consume around four tons per year. Therefore, the prospect of much higher resource consumption levels is 'far beyond what is likely to sustainable' (UNEP report).

The effects of increased demand on resources can only be reflected in higher prices to business. Therefore the more efficient a business can be, the more able it is to compete.

### What are the benefits?

By effectively managing your resources and reducing waste you can:

- Save your business money
- Reduce energy consumption
- Enhance environmental performance
- Reduce operating costs
- Comply with legal obligations
- Improve the image of your business

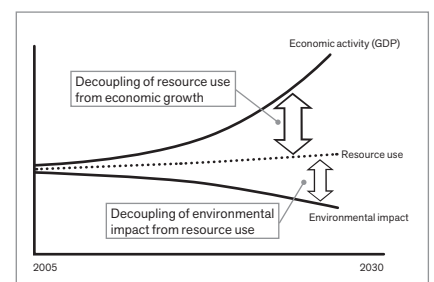


Figure 1 Graph showing decoupling, environmental impact and resource use relationship.

Even a simple review of your business waste can produce some quick wins – you could save £200 to £1000 per employee. Consider how many new sales you would need to make this amount of profit.

The waste hierarchy ranks waste disposal options in order of increasing environmental impact. When tackling waste, most companies start with recycling – but actually this comes below reducing and reusing, quite a long way down the hierarchy. The most preferable (and cheapest) option is to 'Eliminate' or avoid producing waste in the first place. This is where a thorough resource efficiency plan can make the most significant difference to a company's waste costs.

## The true cost of waste

Typically waste costs can be 4% of a business' turnover. The true cost of waste isn't limited to those visible costs but also includes the cost of wasted raw materials, energy, lost labour costs and lost sales opportunities, which can be 5 to 20 times the cost of the disposal itself. Think of the true cost of waste as the submerged part of the iceberg – the part you cannot see.

## Planning to succeed

1. Obtain senior management support.
2. Identify a resources champion or team.
3. Review resource use in one department or throughout the company.
4. Estimate the true costs of various waste and prioritise areas for savings.
5. Set realistic targets for improvements.
6. Produce a business case and allocate resources(time and finance).
7. Promote the scheme as widely as possible, incentivise where necessary.
8. Report the outcomes, review and repeat in different areas of the business.

## Quick ways with waste

Review waste bills for the past year – spot any irregularities, look out for excess charges, call out fees, rental for bins that are not full etc.

Avoid unnecessary costs by training staff to segregate wastes, 100% of the time. Hazardous and contaminated waste costs far exceed normal waste costs.

**MOST DESIRABLE**



**LEAST DESIRABLE**

## Walk round Resource Efficiency Checklist

Use this checklist to start your own action plan.

Type of Waste	Easy Checks	Estimate Cost	Person/Department
Waste paper in offices	Calculate paper use per member of staff.  <i>The average office worker uses about a ream (2.5kg) of paper per week! Aim for 130 kg/person/year or less.</i>		
Computers on with nobody present	Check how many PCs, printers, photocopiers are left on out of hours. Carry out spot checks. Switch off all equipment whenever practical. Sticker items that need to remain on.		
Overheated Rooms  <i>Heating costs rise by 8% for each 1% of overheating.</i>	Don't open the windows to solve the heating problem! Use thermostatic radiator valves to make local adjustments. Set thermostat to correct temperature (19°C in offices, 16°C in warehouses and 10–12°C in stores). Use blinds to minimise solar gain.		
Competing heating and air-conditioning	Do not open windows when the air-conditioning is on. Only heat offices when temp drops below 19 oC and do not cool them below 24 oC. Do not allow furniture or other materials to obstruct heaters or air conditioning vents.		
Lights left on  <i>Up to 50% of business electricity cost is for lighting</i>	Run a 'switch off' campaign, label switches to make it easier to isolate working areas and consider timer/sensor switches for meeting rooms, toilets, corridors, store rooms.		
Obscured light	Clean skylights, windows and light fittings on a regular basis. Keep blinds open and lights off when daylight allows.		
Skips or bins (possibly uncovered)	Identify sources of waste. Check whether waste can be compacted. Cover skips to prevent rain ingress. Check you are not paying for fresh air with half empty bins, or emergency collections when bins overflow.		

Type of Waste	Easy Checks	Estimate Cost	Person/Department
Unsegregated bins or skips	Segregate paper, card, plastic, metal, textiles, batteries where possible to reduce the final amount sent to landfill/recovery.		
Unused materials thrown away	Review marketing practices for publicity literature. Review unwanted mail and subscriptions. Reduce number of general waste bins to discourage 'throw away' culture.		
Waste packaging materials <i>Packaging is 'paid for' three times; by the supplier who packs the product, the customer who buys the product and the customer who pays to dispose of it.</i>	<p>Reuse clean packaging where possible. Use shredded paper as filler.</p> <p>Review packaging coming into the company – work with suppliers to reduce this.</p> <p>Choose easy to separate and easy to recycle packaging materials.</p> <p>Select packaging that is minimal – complain to suppliers when components are routinely over packaged.</p>		
Water	<p>Check taps for drips. Is the water too hot or do push taps run too long?</p> <p>Are urinals flushing on a timer or 24hrs a day? Do showers and taps have airators to reduce water flow?</p>		
Catering	Check meeting rooms for waste; how much food is wasted in the kitchens? What disposable items could be replaced? Are vending machines left on out of hours? Are plastic cups used everywhere? Is kitchen equipment left on, or wasting energy?		

## Supply chain ideas

Start a discussion with key suppliers to reduce waste coming in to your business. Together you can develop more resource efficient packaging, print designs and take back options. You may even stumble across a whole new service you could offer your customers.

## Reputation is everything

Customers, financial institutions, employees and suppliers have a growing interest in companies' environmental performance. The efforts you make to reduce waste help to demonstrate that you have good control of your operations and that you value the environment. A resource efficiency project could be the first step towards a sustainability policy or environmental management system.

## Where can I find further information?

Type of information	Link	What you'll find
Resources	WRAP - <a href="http://www.wrap.org.uk/business/">www.wrap.org.uk/business/</a> London Remade - <a href="http://www.londonremade.com/resource-efficiency">www.londonremade.com/resource-efficiency</a>	Guidance
UNEP Decoupling	<a href="http://www.unep.org/newscentre/Default.aspx?DocumentID=2641&amp;ArticleID=8749&amp;l=en">www.unep.org/newscentre/Default.aspx?DocumentID=2641&amp;ArticleID=8749&amp;l=en</a>	Guidance

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### Factsheets available on our website – log on to [www.insw1.com/greenbusiness](http://www.insw1.com/greenbusiness) for more information.

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| 01 The CRC Energy Efficiency Scheme          | 05 Green Marketing                           |
| 02 Energy Management for Facilities Managers | 06 Introduction to Environmental Legislation |
| 03 Environmental Management Systems          | 07 Waste Recycling                           |
| 04 Green Procurement                         | 08 Resource Efficiency                       |