



RECYCLING WITHIN MANUFACTURING

REALISING THE VALUE OF WASTE MATERIALS



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Manufacturers are the largest consumers of raw materials, yet many believe they can't recycle or operate on a 'green' level. Great things can be done to ensure sustainable production, drive out costs, and even generate revenue back into the business with the right approach to waste.

To achieve maximum impact, manufacturers need to look beyond the waste produced during the production process and look at the **'how'** and **'why'** of the materials produced. By re-engineering processes across the board, you can truly achieve maximum value with a lean process.

WASTE HIERARCHY PRINCIPLES IN PROCUREMENT

The best way for manufacturers to improve environmental performance and reduce costs is to incorporate more in-house recycling into the manufacturing process.

The waste hierarchy ranks waste management options, prioritising those resulting in the best environmental outcome. It gives top priority to waste prevention, followed by re-use, recycling, recovery, and finally, disposal.

Considering alternative raw materials at the procurement stage can deliver valuable and easy to capture material at the end of production. Although it is hard to specify away from composite

materials like laminates and co-mingled plastics, alternative options are out there.

A great example is ready-meal trays - these are usually thermoplastic with a clear polymer cover. Currently it is difficult to find recycling routes for either, as the plastic used is of low quality and different grades. A move to a slightly more expensive suite of polymers can still deliver the performance required, but post-use results in a recyclable product - the whole life cycle is improved for low to no additional investment.

Procurement teams working with both engineering *and* waste in mind can achieve a significant improvement in material wastage. If waste is produced, is it of high quality? Could it be sold to achieve rebates instead of simply disposed to landfill or energy recovery facilities?

MANUFACTURING ERGONOMICS TO UNLOCK VALUE

Locating the most appropriate containers in areas that produce most of that waste stream can be beneficial. Positioning balers

and compactors at the end of alternate lines can ensure real-time disposal and increase segregation. Both are key to unlocking the value of your waste.

Segregating higher value materials, either through manpower or automation, can be costly. You have to evaluate *'if the juice is worth the squeeze'* to ensure the valuable resource is directed to get the best results. Making the best use of site labour can often negate the need for dedicated processing equipment. If segregated materials are clean, a baler may be all that is needed to release the value.

It is better to produce 'clean waste' line-side and work in partnership with your recycling partner to ensure the best value is achieved for each stream.

RE-ENGINEERING WASTE LOGISTICS

Reviewing the frequency a piece of waste is handled before disposal is another quick-win. Individual waste streams are often moved around a site between four and six times before reaching their final destination. Cutting waste 'foot miles' can be achieved through simple adaptations to on-site processes. This often removes manual labour and decreases health and safety risks through reductions in handling and transport.

Source - Whirlpool

**ZERO
WASTE TO
LANDFILL**

SUSTAINED AT
PETERBOROUGH

**80% ↓
REDUCTION
IN PLASTIC
WASTE**

THROUGH THE INTRODUCTION OF SEGREGATED
OFFICE BINS, INCREASED RECYCLING, AND USE
OF CONTINUOUS BIN LINERS

The carbon footprint associated with waste can also be minimised by reducing the number of additional processes required to prepare the material for reuse or recycling.

Improving deployment and use of labour are significant in increasing recovery and recycling within manufacturing. Double handling consumes both manpower and finite resources.

A good understanding of material and waste flows can avoid extra costs and delays in any production environment.

RECYCLING FOR PROFIT

Dealing with your waste correctly makes sense economically, as well as environmentally. If segregated correctly, waste can hold significant value and contribute revenue to the bottom line.

Recycling the right material at the right time is also paramount. Mixed metal could deliver rebates sub £100 per tonne, however, extracting the non-ferocious materials could achieve £500 or more, per tonne. Further segregation of more valuable metals could release significantly higher returns. The swing can be huge if you separate your waste at the right point.

ZERO TO LANDFILL

Many companies are seeking ways to improve their environmental performance, and one of the easiest ways of doing so is to insist on a 'Zero to Landfill' approach from their waste management

provider. This can be achieved relatively simply as waste-to-energy facilities become more available, both within the UK and on the continent.

Alongside 'Zero to Landfill', many companies will be seeking ways to increase their recycling levels to reduce waste and turn materials into commodities. Invariably this results in a 'win-win' position as environmental targets are delivered; waste costs are reduced, and an income is generated from waste.

Data from your waste management company can show staff where waste and recyclates end up, and the benefits derived - it's generally not in landfill. Engaging staff is key to making it 'part of what we do'.

OVERCOMING OBJECTIONS TO GET THE JOB DONE

Many companies think they can't ask their employees to sort waste...but they do it at home, so what makes them stop at the factory gates? Leverage the good stuff staff have done and deploy it to improve recycling and environmental performance.

If employers set achievable and realistic goals and provide a solution that is easy to follow with clear guidance, staff behaviour will follow. Employees want to do the right thing for the environment and the earth's finite resources, and good data can help with the virtuous circle.



175 tonnes
diverted from landfill

90%

**OF WASTE
NOW RECYCLED
(FIRST QUARTER)**



Source - LEVC (London Electric Vehicle Company)



£7K

NET POSITIVE RETURN

resulting from material rebates. Axil returned revenue to customer, over and above their monthly service charge.



£50K

REBATE RETURNED

from cooking oil, as well as increasing cardboard baling and recycling (previously costed to business).

Source - Birds Eye

MANAGEMENT INFORMATION & REPORTING

The adage remains true - if you don't measure it, you can't manage it. Your waste provider should be gathering and sharing data that you understand and can act on. Your data should not only be informing your waste processes but also your raw material choices, and everything in between. If it's not, then is it data you want?

In addition to your data informing your procurement choices, it should form the backbone of all audit and compliance

reporting. Providing a full and transparent suite of information enables audits to run smoothly without surprise. Waste should be considered in terms of 'cradle to grave'. Bespoke reporting software allows you to track the destination of your waste, ensuring your valuable intellectual property is protected.

WASTE & THE BOTTOM LINE

There are misconceptions around waste management costing you time and money - the fact is, if you don't manage your waste effectively, it will cost you more time and more money.

Social conscience has never been more prevalent than it is today. Customers and end-consumers expect that businesses are doing the right thing, and more commonly the demand is being placed on the manufacturer to demonstrate it.

Your waste is valuable, both as a commodity and a recycled resource, and is more than just a by-product of the production process. If managed correctly, waste can be extremely beneficial to your core business.

**PUT YOUR
WASTE
TO WORK**

How does your waste stack up?

- Do you have a single waste management partner?
- Are you achieving your environmental targets?
- Are you looked after by a dedicated Contract Manager and do they pro-actively support you with continuous improvements ideas?
- Do you have simple and transparent reporting that you understand?
- Are you receiving market leading rebates from your waste?

If you answered 'no' to any of these questions, speak to Axil to improve your waste management solution.

Challenge Axil to re-engineer your waste.

Arrange your waste review at axil-is.com/waste-audit or call us on **01536 216560**