



Resource Efficient Manufacturing

Improve business performance through better resource management

BriteGreen
Sustainable Strategy

 **MAESTRO**
BUSINESS

 **PULLMAN**
ENERGY

Resource efficiency is a critical issue for manufacturers

Raw materials and energy are a significant and increasing cost for manufacturers. On average raw materials and energy can make up more than 50% of total manufacturing costs. With commodity and energy prices increasing, this is likely to continue to rise especially as conditions ease in the global economy.

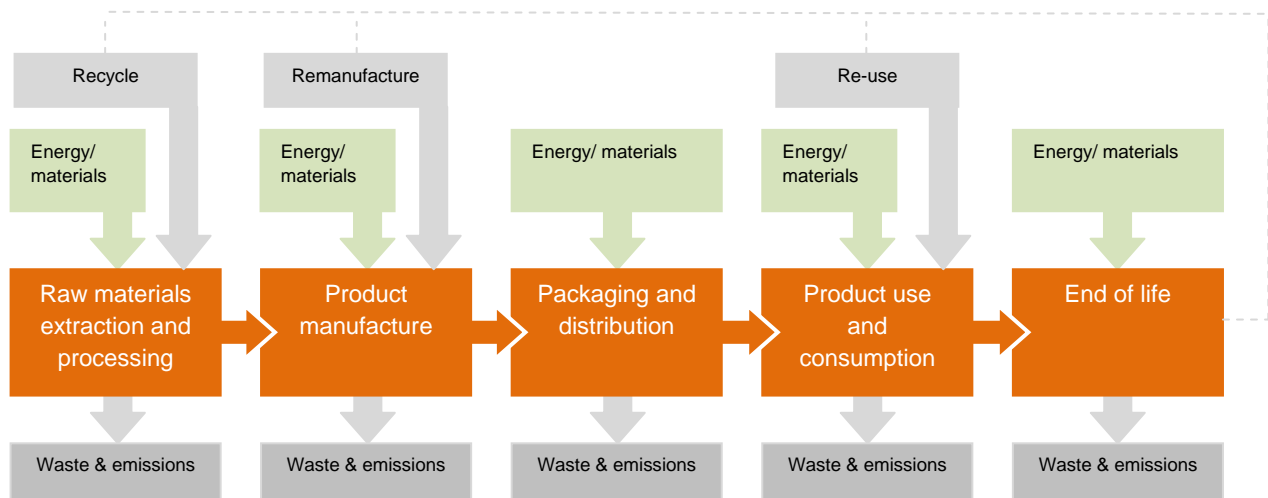
Further, manufacturers face more stringent environmental legislation and are increasingly subject to additional costs such as the CRC or the EU ETS. Investors and customers are also more interested in the environmental and sustainability impacts of products and companies and are asking for greater transparency and performance.

As a result, resource and working capital efficiency and effective inventory management are critical to successfully future-proofing the business. Those companies who are able to do more with less will be able to compete best.

Resource efficiency unlocks opportunities

Analysing a manufacturing process from a resource use perspective provides a useful tool to maximise manufacturing efficiency and financial performance. The key improvement areas are:

- Minimising energy and material use
- Minimising waste and emissions
- Enhancing inventory management



Minimising energy and material use

The quality of energy management in UK companies has improved significantly over the last 5 years. Increasingly sub-metering and energy management software are being used to provide detailed data on energy use and being used to redesign processes and policies to drive down costs. Energy efficiency is critical when procuring plant and management are starting to develop effective sustainability strategies for the business, which take into account the risks and opportunities to the business. In addition, low carbon technologies and renewable on-site generation have become more competitively priced and are supported by an excellent policy framework including grants and feed-in-tariffs.

Eco-design principles that take into account the whole life environmental and financial costs of products have identified innovative approaches to minimise material use and substitute out harmful and expensive materials in product design.

Minimising waste and emissions

Waste is a cost to a business. It can be direct (through landfill taxes or more stringent waste management requirements for hazardous waste), or indirect (where raw material is wasted in the manufacturing processes). Avoiding generating waste altogether is the most effective approach, and some companies have developed zero-waste objectives by avoiding non-recyclable materials. Where waste cannot be avoided entirely, minimising waste provides an excellent cost saving opportunity, and recycling waste (either in on-site processes or through a waste contractor) can turn a costly waste stream into an asset which can even become a revenue stream.

Enhancing Inventory management

Holding stock of materials, especially potentially redundant work in progress, and finished product (the most costly and least flexible inventories) can lock up significant amounts of working capital. Releasing cash from such "redundant" inventory can increase competitiveness now by funding cost-reduction, innovation and business development projects that might otherwise remain on the "back-burner" until after the recession(s). Linking and synchronising the manufacturing processes for much faster response to customer demand reduces inventory held. Manufacturers are able to release cash back into the business and increase responsiveness.

How we can help

Brite Green and Maestro Business & Academy have created a consortium that provides a full turnkey resource efficiency service to manufacturers.

We have extensive experience in identifying opportunities to reduce cost and unlock cash through improved resource efficiency and inventory management. Furthermore, we also have a track record on identifying the most cost effective technology and management solutions and will design, build, finance, install, and operate (where appropriate) these solutions.

Services

We provide comprehensive knowledge transfer and implementation services for process flow and low carbon solutions.

Knowledge transfer

Increase responsiveness:	Link and synchronise processes for much faster response to customer orders
Product Life Cycle Analysis:	Assess whole-life environmental impacts and costs of products and identifying energy use, material use and cost reduction opportunities in the new product introduction (NPI) space
Energy audit:	Identify key energy using equipment and processes and pin-point energy reduction opportunities
Technology assessment:	Assess the potential low carbon and micro-generation technologies, and determine rigorous comparative business cases based on the financial, environmental and strategic case.
Sustainability strategy:	Determine the legislative and market-based sustainability drivers for the company and determine a strategy to manage the risks and opportunities that they bring

Implementation

Working Capital management:	Reduced costs and internally funded growth through enhanced inventory management systems and processes
Management systems:	Design and implement effective environmental and energy management systems compliant with BS 8555, ISO 140001 and ISO 50001
Low carbon technologies:	Specify and install a comprehensive range of low carbon technologies including: <ul style="list-style-type: none">○ Solar PV○ Voltage optimisation○ Combined Heat Power (CHP)○ Power factor correction○ Anaerobic digestion○ Biomass

Why us?

- Our approach unlocks cash from within the business to fund capital expenditure with excellent payback and business case.
- We have extensive experience in UK manufacturing. We customise our solutions to ensure that they are appropriate for you and we make sure that we transfer the knowledge to you so you can continue to enjoy the benefits on a sustainable basis.
- We provide integrated resource-efficiency design and implementation – delivered as a seamless service.



BriteGreen Sustainable Strategy

Brite Green is an award winning sustainability strategy consultancy which specialises in delivering enhanced business value through improved sustainability performance.

With a service offering that covers business strategy, management systems, solution implementation, and sustainability reporting Brite Green delivers business-focussed solutions that drive financial performance through sustainability.

Darren Chadwick, Managing Partner

E: darren.chadwick@brite-green.co.uk

W: www.brite-green.co.uk

T: 0203 393 6777



Maestro Business and Academy work alongside successful manufacturers to help them release cash from redundant inventory for much improved working capital resource efficiency.

Michael Morris, Senior Partner

E: mmo@maestro-business.com

W: www.maestro-business.com

T: 01926 293 565



Pullman Energy specialises in implementing and financing energy-efficiency solutions, including commercial solar PV, heat pumps, anaerobic digestion and voltage optimisation.

Edward Porteous, Director

E: emport@aol.com

T: 01865 311 203