

# CASE STUDY: BUSINESS CASE FOR GREEN

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## Purpose

To gain an appreciation of potential changes to reduce cost through efficiency and increase revenue through sales by taking a green (environmental) perspective within a business.

Read through this case and pay particular attention to the flows of material and money in order to:

1. Suggest where costs could be saved by using less resources or working in different ways.
2. Suggest where revenue could be increased through different offerings to existing or new customers.

## Overview

A manufacturer makes garments: sources cotton/polyester fabrics and other materials; sells garments under contract to major global brands. It also buys and sells fashion accessories (no production) to the same brands.

The company has had a traditional organisation structure with the Health and Safety (H&S) manager having responsibility for compliance and pollution control. Recently, that person has been promoted to a new position of sustainability lead for company and is looking to create an atmosphere of continuous improvement by first changing behaviours of staff and then considering technological changes.

Led by the facilities manager, the company has recently installed a combined heat and power (CHP) plant that provides heat and electricity to the plant. The heat is currently used for steam, space heating (winter) and electricity (mostly used on site). At times of excess the electricity is sold back to the grid.

The new strategy director foresees a green transition that will create opportunities to radically reduce costs, secure current market position and open up new markets.

Across the company, there is a spectrum of views on 'green' from across the staff from disengaged to neutral to progressive and enthusiastic.

## Customer offering

They sell garments and accessories under contract. It is judged that end consumers are sensitive to brand, quality and cost but, despite apparent consumer environmental values, environmental impact of the product is not part of the purchasing decision at the point of sale. Increasingly the brands/customers (not end consumers) are taking an interest in environmental impact and are requesting certification, audits and management systems. One customer is particularly demanding.

## Sourcing

The company's main raw materials are cotton fabric, polycotton fabric and packaging.

Following discussions with the purchasing manager, subsequent audits of the supply chain and a very recent basic Life-Cycle Analysis (LCA), the sustainability lead has uncovered:

- ❑ Raw materials purchased are responsible for a significant proportion of the company's carbon footprint. The 'hot spots' are fertiliser use and water.
- ❑ Water and energy consumption (and later water disposal) are considered to be normal for the industry but represent significant costs. There are no water shortages regionally but the water supply to the factory is at near capacity due to antiquated infrastructure which limits future expansion currently.
- ❑ Packaging waste, through a combination of customer requirements and company policy, is high. A significant amount of paper, card and plastic packaging is used for each garment and bulk packaging. Purchasing decisions are driven by cost.

## Production system

Notable features of the production stage are:

- ❑ There is a combination of high labour content (marking up, cutting, joining, finishing, inspection and packaging) and high automation (dyeing, washing and drying)
- ❑ Materials enter at one end of the plant and exit at the other. Speed and flow are key objectives to maintain schedules. Washing and drying operations are therefore at high temperature for speed. Processes are 'always on' to enable rapid use and avoid any issues with re-starting.
- ❑ Dyeing operations use significant quantities of controlled chemicals and therefore a significant amount of waste especially waste water. Operators use personal protective equipment (PPE) in this area for safety.
- ❑ The factory environment can be hot and stuffy, particularly in summer. Air conditioning units have been switched off due to rising energy costs.
- ❑ The factory has ample high level lighting but operators do complain of difficulties with lighting at ground level in some areas.

## Utilities

The two major resource consumers are (1) the gas CHP plant for creating steam, space heating and producing electricity and (2) the air compressors for providing compressed air for the production operations. The energy consumption profile is fairly constant during shifts, dipping lower when the shifts are not running at weekends when few staff are present.

## Waste management

The company handles wastes responsibly and is proud to be 'compliant' in its handling of product scrap (products that are scrapped as well as material offcuts), packaging and waste water by obtaining waste permits and using reputable waste handling companies. Packaging from incoming products/materials is relatively low due to bulk receipt of goods. Any packaging waste is placed in bins for disposal. There has been no analysis of waste volumes or waste value. The company has not considered selling any of its wastes.

## Hints on how to proceed ...

- ❑ Where is the company potentially wasteful with existing resources (materials, energy, water)?
- ❑ Where wastes could be considered as valuable nutrients to sell?
- ❑ Is the sustainability lead on their own or are there others to engage or help?
- ❑ Are there alternatives to selling a product that will never to be seen again?
- ❑ Could the customer (or end consumer) be encouraged / incentivised to use less?
- ❑ What could be realistic targets (what have other companies done) and what is that financially?
- ❑ Companies are not deliberately wasteful, so how can you convince them to change?

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## Further reading

Braungart, M. & McDonough, W. (2009), *Cradle to Cradle. Remaking the way we make things*, Vintage.

Esty, D.C. and Simmons, P.J. (2011), *The green to gold business play book: How to implement sustainability practices for bottom-line results in every business function*, New Jersey, USA: John Wiley & Sons, Inc.