

2.2 Why Should Small Businesses Care about Waste Reduction: The Plus and Minus Perspective

The argument has been made that reducing waste results in reducing operational costs. Waste reduction helps businesses be more competitive. This is illustrated by the examples for 3M and the Japanese auto industry outlined in Section 1 illustrate that point. However, let's consider detailed advantages or incentives that businesses have to commit the time and effort for efficiency through waste reduction.

At the same time, there are distinct barriers or obstacles that could discourage a company, or be used as a convenient excuse not to change. The challenge presented here is to understand both sides of the equation, and to help client businesses understand the ensuring net benefit.

Resistance to change is a constant challenge. Companies willing to change can reap the benefits at the expense of those who think change is unnecessary or not worth the effort. Many have seen the commercial trademark “Body by Fisher” in reference to automobile bodies. Fisher was a buggy manufacturer, willing to change to meet new market demands. Who remembers Cooper Wagon Works? Cooper, a major manufacturer of wagons and buggies, rejected an offer from Henry Ford to convert his plant to automobile manufacturing.

On the Plus Side

+ Reduced Regulatory Burden - Implementing waste reduction projects can reduce a company's regulatory exposure, and may eliminate the need for permits, manifesting, monitoring, and reporting. The paperwork burden related to regulated waste streams is costly for businesses, often requiring a full staff position.

+ Reduced Operating Costs - Over time, waste reduction activities can save money for a company, offsetting the cost of project development and implementation. The cost savings may be immediate or anticipated, based on avoiding future costs. Lower operating costs can result from lower disposal costs, reduced materials costs, and improved operating efficiency. Sometimes the cost is not connected to the product, but is considered an “overhead” cost. This is explored in the Full Cost Accounting section.

+ Reduced Exposure to Liability - Companies using hazardous or toxic materials have greater liability risks. Disposing hazardous waste from these materials can carry long-term liability for environmental damages when a failed disposal system allows materials to enter the environment. This has been an expensive liability for many manufacturers. Environmental regulations could result in stiff fines or criminal penalties for companies, and individuals in those companies, where there has been documented mismanagement of hazardous materials. Civil litigation related to environmental damages could extend well into the future. This is even true for some materials that may not be currently regulated as hazardous.

+ **Improved Worker Safety** - Reducing toxics and hazardous materials in the workplace has a direct, positive impact on a safe work environment. There is a direct relationship between workers' compensation costs and risks, and the amount and toxicity of hazardous materials used and produced in the workplace. Reducing the potential for leaks, spills, or other releases can reduce the exposure of workers, visitors, contractors, or others in the facility. Improved worker safety translates into better labor relations, lower insurance rates, reduced paper work, reduced worker training on using hazardous materials, and reduced use of sometimes cumbersome personal protective equipment or apparel.

+ **Improved Productivity** - Waste reduction is achieved through more efficient use of raw materials and through process and operations improvements. This includes good maintenance practices and better employee training and involvement. Old technologies were not driven as much by regulations, raw material costs, waste costs, and global competition as are today's markets. Even small improvements in processes may increase product yield and improve quality.

+ **Improved Quality Management Systems** - Waste reduction or pollution prevention strategies parallel total quality management and other related systems. These systems use employees and team techniques to improve access to information and ideas and to gain wider support for implementation. The reduction of waste and improvement in quality are common goals of pollution prevention and continuous improvement strategies. Ultimately, it could lead to product design strategies which would reduce waste during the manufacture and life of the product.

+ **Improved Public Image and Better Environmental Protection** - Varying companies from dry cleaners to manufacturers can gain significant goodwill from the community when there is a clear commitment to waste reduction. Important tangible benefits in terms of supporting future growth plans for a company in that community may be a direct outcome of employee morale, and good employee morale can extend to the community.

On the Minus Side

Companies often have several concerns when they have an opportunity to identify and implement waste reduction projects. These concerns are usually real and legitimate, but often can be overcome.

- **Project Capital** - Projects with significant capital requirements face serious funding challenges when competing with production funding requests. These challenges are overcome when reasonable paybacks are shown. This should include a complete analysis of all costs associated with the waste generated by the present processes of the target project.

- **Immediate Production Needs** - The best idea for waste reduction may not get implemented if customer demands are high and production cannot be interrupted. The time, money, and personnel needed for such changes may require a longer term strategy. A scheduled plant shut-down or other reasons to make plant changes may be necessary.

- **Customer Specifications** - In federal contracts, product design and manufacturing specifications are dictated by the terms of contracts or agreements. These may require materials with a higher cost or environmental impact, without necessarily providing the best quality or the least possible waste. For example, specifying virgin materials for automobile lubricants, when recycled materials would be suitable, can increase the cost and environmental impact without improving quality.

- **Customer Acceptance** - Customer acceptance is driven by the customers' perception of quality and cost. For example, customers may want a wide range of colors available for a product, but is that always necessary? Has the company studied customer preferences? Having several colors causes a great deal more waste for the manufacturer in terms of clean-up and potential disposal. Customer education can be a vital part of reducing waste. In some cases, suppliers find their customers increasingly insisting on reducing waste associated with the product.

- **Inertia, Time, and Resistance** - Good ideas, even when favorable economics are in plain view, are not always used. Projects must overcome the "if it isn't broke, don't fix it" philosophy and the lack of staff time available. In smaller companies the people responsible for environmental projects wear many hats. It is often necessary to focus on high priority issues to improve the probability that projects will be used, and to win longer term support to implement other ideas.

- **Lack of Expertise** - Companies may have good intentions, but may not have the expertise to identify options or to implement the necessary technology to be changed. The key in this situation is to help the company access competent, affordable help.

- **Quality** - At the same time, quality improvement is an incentive for implementing waste reduction projects. There is the view that tampering with a process that results in proven quality risks quality and customer satisfaction. Waste reduction projects don't guarantee that quality improvement is an outcome, but should opportunities to test the potential for improved quality, or at least to maintain existing quality while seeing other benefits.

- **Regulatory Issues** - When using processes that are regulated or require a permit or government approval, it may be necessary to modify the permit for a new process. This can be time consuming and costly. It may require trial periods, inspections, tests, or other activities that may mean long delays for full implementation.

Sources:

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Facility Pollution Prevention Guide, EPA/600/R-92/088, 1992.

Waste Prevention: Source Reduction Now, Minnesota Office of Waste Management, 1993.

A Business Guide to Pollution Prevention, Idaho Division of Environmental Quality, 1995.