

The Business Case for Sustainable Manufacturing

Manufacturing

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Sustainability and Competitiveness

Why are companies embracing sustainability as a means to enhance their global competitiveness?

COSTS:

In an increasingly competitive world with variable energy and materials costs, manufacturers must realize every efficiency possible.



Recycling an aluminum can saves 95% of the energy used when making cans from virgin ore and produces 97% less water pollution.¹



CUSTOMERS:

Companies are facing greater demands from all kinds of customers— other manufacturers, retailers, government, households – for greener products and more data about these products.



In 2007, Wal-Mart announced that it would only sell concentrated liquid laundry detergent in an effort to reduce water use and packaging.² Detergent producers had to comply with the new policy.



COMPLIANCE:

There is an increasing number of both domestic (federal, state and local) and international environmental regulations that make compliance more complicated.



The European Union's REACH regulation requires industry to provide chemical safety information on approximately 30,000 substances.³



¹ "Recycling Fun Facts," Can Manufacturers Institute.

² "Wal-Mart to Only Sell Eco-Friendly Laundry Detergent." GreenBiz.

³ "REACH Overview for US Firms." Rosemary Gallant. U.S. Commercial Service.



Benefits of Sustainable Manufacturing

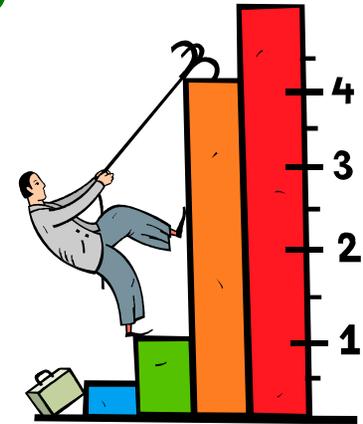
Being proactive about sustainability can help your company save money and create value.

A 2009 study from consultancy A.T. Kearney found that during the economic slowdown, companies that were recognized as being “sustainability-focused” outperformed others in their industries by an average of 15% over six months.¹

The advisory board for the Hollings Manufacturing Extension Partnership named “embrace green and green lean” as one of the four main areas of opportunity for action for U.S. manufacturing.²

A 2006 study of four industries considered high polluters found that companies that improved their environmental performance over time saw improvements in financial performance such as cash flow and profitability. At the same time, companies where environmental performance worsened saw opposite results.³

A 2009 survey by the Aberdeen Group found that the major drivers for companies’ implementation of sustainability initiatives were a basic desire to promote stewardship, a goal of improving company reputation, and a focus on improving competitive advantage.⁴



¹ A.T. Kearney, “Green Winners” 2009

² Hollings Manufacturing Extension Partnership Advisory Board, “Innovation and Product Development in the 21st Century.”

³ “Does it Really Pay to Be Green? Determinants and Consequences of Proactive Environmental Strategies” Peter M. Clarkson, Li Yue, Gordon D. Richardson and Florin P. Vasvari.

⁴ “The ROI of Sustainability: Making the Business Case” Jhana Senxian and Cindy Jutras. Aberdeen Group.



Business Leaders are Focusing on Sustainability

- In a 2009 business survey by MIT, **92%** of those surveyed said that their companies were **working to address sustainability** issues.¹
- In a 2010 Accenture survey of more than 750 CEOs whose companies are members of the UN Global Compact, **93% said they believed sustainability issues would be important to the future success** of their businesses.²
- The 2009 report from the Aberdeen Group found that best-in-class companies were more likely to view **sustainability as necessary** for their long term business prospects, and they were able to **match the issue of sustainability to measurable benefits to their bottom lines**.³



In **this** video, Ray Anderson, CEO of Interface describes the business basis for sustainability.

¹ MIT Sloan Management Review, "The Business of Sustainability"

² Accenture and the United Nations Global Compact "A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010."

³ "The ROI of Sustainability: Making the Business Case" Jhana Senxian and Cindy Jutras. Aberdeen Group.



The Challenge of Sustainability

- While there's tremendous business opportunity in sustainability, it isn't necessarily easy.
- **It isn't very easy for smaller companies:** In a survey of manufacturing executives by the American Small Manufacturers Coalition, 20% of respondents said that their company had made no progress towards sustainability, and another 59% said their company had made either some or average progress.¹
- Making the business case for sustainable practices is not always easy. In the MIT Sloan study, they found that **more than 70% of the respondents to the survey said that their company had not yet developed a clear business case.**²
- However, **companies that had made a commitment to sustainability were able to find opportunity in it.** A key result was the suggestion that *"the more people know about sustainability, the more thoughtfully they evaluate it and the more opportunity they see in it—and the more they think it matters to how companies manage themselves and compete."*²



¹ American Small Manufacturers Coalition "Next Generation Manufacturing Study Overview and Findings"

² MIT Sloan "The Business of Sustainability"



Economic Benefits: A Closer Look

Sustainability can have a positive effect on a number of business areas.
Click on each item to learn more.



Resource and
Production
Costs



Regulatory
Compliance
Costs



Sales and Brand
Reputation



Financing and
Capital



Employee
Hiring and
Retention



Resource and Production Costs



- Forty-four percent of CEOs from the Accenture survey reported that **revenue growth or cost reduction was a major motivation** for their sustainability efforts.¹
- Sustainable manufacturing practices increase production efficiency, primarily through increased resource efficiency. Resource efficiency includes things like energy, water, and material efficiency. **Increasing your resource efficiency will lower your material and input costs.**²
- Sustainable manufacturing can also **lower the cost of waste removal**, as you produce less waste and byproducts, and **reduce transportation costs** through lower product weight and more efficient transportation.³

Some Ways Sustainable Practices can Lower Production Expenses³

- **Efficiency** - Using fewer materials, energy, water and other inputs to produce each product.
- **Waste** – Reducing or reusing scrap or wasted energy. Recycling materials
- **Substitution** – Use cheaper and more sustainable materials and energy sources

¹ Accenture and the United Nations Global Compact “A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010.”

² UNEP Life Cycle Initiative “Life Cycle Management”

³ “The Sustainability Advantage.” Bob Willard.



Resource and Production Costs (continued)

- By taking advantage of internal and external waste streams and viewing them as potential inputs or resources that can be sold, sustainable manufacturing approaches also identify **new sources of revenue and materials**.¹
- For example, scrap material can be sold or recycled. Waste streams or byproducts from other companies may be used as inputs in your processes.



Example

- Southwire, a producer of wire and cable products, conducted a series of sustainability projects that reduced its water needs by more than 9 million gallons a year (saving \$70,000 annually), cut energy use for lighting in half, and reduced scrap from processes by 30%.²

¹ "The Sustainability Advantage." Bob Willard.

² "Path Toward Sustainability Leads to Significant Water Savings" Green Suppliers Network.



Regulations: Reducing the Cost of Compliance

- When you work to make your company more sustainable, it can **cost less to be compliant with current and future environmental regulations**. You can go beyond compliance.
- For example, reducing hazardous materials from your production process can lower the cost of complying with hazmat regulations. It can also result in **lower handling costs, free up staff time** that was spent handling hazardous materials, treating waste, or monitoring compliance, and create a **safer and happier work environment**.¹
- Putting your company or facility on a zero pollution track can significantly **minimize your pollution permitting costs** and the extent to which local, state, and federal regulations impact your company.



Example

- Texas manufacturer Betaco switched from using a lacquer based coating on heat exchangers it makes to a water based coating. This and other projects lowered the amount of hazardous waste the company produces so much that it is now a conditionally exempt small quantity generator instead of a large quantity generator under hazmat regulations.²



¹ "The Sustainability Advantage." Bob Willard.

² "Betaco." Case Study Database. Zero Waste Network, Center for Environmental Excellence



Regulatory Compliance Costs

- Fines for violating environmental regulations can be costly, and not complying with regulations can damage your company's reputation significantly.
- Sustainable manufacturing practices put you in a better position to **navigate any future regulations** related to carbon emissions and other pollutants. If you are already compliant with new regulations, then those regulations are only a burden to your competitors.¹
- Being ahead of the curve can help ensure that voluntary actions are recognized by policymakers.¹
- Pollution can also **lower the value of property** you want to buy or sell.
- Before making a loan, banks may review whether the property you seek was contaminated by previous owners. If you can show that you have a good environmental track record, you might have protection against having to pay for previous contamination.²



¹ "A Profitable Shade of Green: Compounding the Benefits of Carbon Management & Sustainability Measures." Deloitte Review.

² EPA Small Business Division, "Practical Guide to Environmental Management for Small Business"



Sales and Brand Reputation: Sales

- When done right, sustainability can allow you to differentiate yourself from your competitors, attract customers and enter new market segments.¹
- Customers increasingly prefer environmentally responsible products. A 2011 survey found that **70% of Americans** said they **consider the environmental impacts** of their purchases sometimes, regularly, or every time they shop.²
- In the TANDBERG/Ipsos MORI survey, **42 percent** of respondents from the United States said they would be **more likely to make purchases from companies with good environmental reputations**.³
- In reaction to consumer demand and other drivers, many **retailers** are demanding that manufacturers produce more sustainable products and provide more sustainability data on their products.⁴
- Many **OEMs** are asking that their suppliers become more sustainable and provide data on products as well, utilizing supplier codes of conduct and requiring suppliers to meet international sustainability standards.¹



¹ "The Sustainability Advantage." Bob Willard.

² "Americans Value Honesty over Perfection in Environmental Marketing." Trend Tracker. Cone.

³ Tandberg. "Corporate Environmental Behavior and the Impact on Brand Values."

⁴ "Retail: A Pivot Point for Sustainability." Five Winds International.



Sales and Brand Reputation: Reputation

- Being a more sustainable company can also improve brand reputation.
- In the Accenture CEO survey, **72 percent of surveyed CEOs said that brand, trust and reputation** was a key factor motivating them to take action on sustainability.¹
- In a survey of trust, only about 54 percent of Americans said they trusted business to do what is right. **64 percent said that being a good corporate citizen is important to a company's reputation.**²
- Improving the sustainability of your product can also make it eligible for eco-labels that can **highlight its environmental performance to consumers.**³
- Improving brand reputation through sustainability can also bring increased customer loyalty as customers support the company's values and trust the company.⁴



Example

- Outdoor company Patagonia has built a successful brand based on its commitment to sustainability principles. Efforts include measuring and reducing product footprint through material substitution and redesign, textile recycling, using fair labor practices, and funding environmental causes.⁵

¹ Accenture and the United Nations Global Compact "A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010."

² Edelman "2010 Edelman Trust Barometer Executive Summary"

³ United Nations Environment Programme and Delft University of Technology "Design for Sustainability A Step-by-Step Approach."

⁴ "The Sustainability Advantage." Bob Willard.

⁵ "Environmentalism," Patagonia.



Financing – Access to Capital

- Findings from studies, such as the one by A.T. Kearney, imply that companies that are more sustainable may be seen as **more responsible, better managed, and less risky**, and thus, may have an easier time obtaining financing.¹
- Sustainable practices mitigate many kinds of risk – oil price, supply chain, regulatory, brand-related, and others – improving the chances of loan payback/ROI in the eyes of financiers. This can **improve a company's credit-worthiness** and lead to more favorable lending rates for a company.²
- Sustainability is a growing area of interest for the investor community, and it will likely have a greater effect on companies' sustainability efforts in the future.³



¹ A.T. Kearney, “Green Winners” 2009

² “Profiting from Cleaner Production: Towards Efficient Resource Management.” United Nations Environment Program Division of Technology, Industry and Economics.

³ Accenture and the United Nations Global Compact “A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010.”



Reducing Risk

Examples of How Sustainability Can Reduce Risk:¹

- Product **demand** is less likely to fall because people are less likely to find your products dangerous to health or the environment
- Products are less likely to face **bans or restrictions** due to environmental concerns
- Buildings and **assets** are less likely to fall in value because of contamination
- A company is less likely to face **finances or liabilities** for cleaning up polluted sites or being sued for pollution
- Improved **worker safety**
- Less burden from future **regulation**
- Less exposure to materials and energy **cost increases**



Example

- In 2001, Sony exports of PlayStation consoles to Europe were blocked because the product's cables contained unacceptable levels of cadmium. Replacing the cables led to delays over the Christmas sales season and cost the company more than \$130 million in sales. It also forced Sony to conduct an extensive review of its supply chain and create a new system for managing suppliers.²

¹ "The Sustainability Advantage." Bob Willard.

² "Riding the Green Wave," Daniel C. Esty. The Washington Post.



Employee Hiring and Retention

- Sustainability can help you to attract and retain the best workers.
- In a 2008 National Geographic survey, **more than 80 percent of U.S. workers** said that it was important to work for a company where the environment is a top priority. However, only 53 percent said they worked for organizations that already implement sustainability programs.¹
- In a similar survey, **81 percent of Americans** said they would “prefer to work for a company that has a good reputation for environmental responsibility.”²
- And if workers prefer to work for companies that are more sustainable and provide them with a sense of purpose, they are less likely to leave those companies.³
- So a commitment to sustainability can help **reduce turnover costs**, which include loss of productivity, recruiting, and training.³



¹ “Survey Finds U.S. Organizations Need to Think 'Green' to Attract Workers; New National Geographic Book 'True Green @ Work' Offers Tips on Greening the Workplace” Reuters.

² Tandberg. “Corporate Environmental Behavior and the Impact on Brand Values.”

³ “The Sustainability Advantage.” Bob Willard.



Employee Engagement

- Additionally, showing a commitment to sustainability and getting your employees involved in and educated about sustainability can help **inspire them to suggest new and creative solutions.**
- They can provide great insights on the production process and ideas for additional improvements.¹



Example

- 3M's Pollution Prevention Pays (3P) program saved the company more than \$1.4 billion dollars over its 30+ year history, while preventing more than 3 billion pounds of pollutants. Key to the program's success is the participation of the company's employees, who have voluntarily proposed and completed more than 8,100 3P projects.²

¹ "Employee Engagement: How a Greener Workforce Affects the Triple Bottom Line," ICF International.

² "3P - Pollution Prevention Pays" 3M



The Business Case Over Time

- The business case for your company's sustainability efforts will **evolve over time** as the company progresses on its sustainability path.
- Early in the journey, you may focus on making the case to implement specific projects.
- As your company embraces sustainability more thoroughly, the business case may support, projects with more intangible benefits, new product lines, or even a company transformation.¹



¹ MIT Sloan Management Review and The Boston Consulting Group, "Sustainability: The 'Embracers' Seize Advantage."



Summary and Conclusions

- Sustainable manufacturing practices have a number of potential business benefits:

Lower Resource and Production Costs

- Realize production efficiencies that allow you to use fewer materials, less energy and other inputs, while saving money

Lower Regulatory Compliance Costs

- By having a higher environmental performance, you minimize the impact of current and future regulation on your company

Improved Sales and Brand Recognition

- Differentiate your products/services by making them more environmentally responsible, fostering trust among customers and communities in the process

Greater Access to Financing and Capital

- Removing risks from your operations may result in greater, cheaper access to financing from banks and the broader investment community

Easier Employee Hiring and Retention

- Enhance your ability to recruit and keep sought-after individuals by establishing your company as one that “does well by doing good” for the environment

