

Walmart



Save money. Live better.

Sustainability Issue



*“Making the world
a better place,
one decision at a
time”*

Executive Summary

As Walmart prepares for a future of technology automation, it's more important than ever to consider our impact on the world around us. This report outlines some steps the corporation as a whole has been taking to prepare for the challenges ahead.

Sustainability

Without a sustainable process for manufacturing and source of natural material, Walmart will be unable to continue production in the future. More importantly, Walmart focuses on creating a future that will benefit our children and theirs.

Technology

The quick advancement of technology puts great

pressure on companies to develop the best hardware to meet demand. Walmart is starting new initiatives aimed at recycling material from previous generation devices to reduce impact.

Ecology

Animals that live in environments that also produce high quantities of resources for human consumption are at great risk for exploitation and harm.

Human Impact

It's an undebatable fact that humans have had a very detrimental effect on the environment and ecology of the planet throughout our existence. Walmart plans to be part of the change for years to come.

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Walmart Cares



Minimizing our impact on the environment

Waste and product materials can sometimes contain unwanted elements.

These products can ruin the reuse potential of the materials. As products are redesigned, some of the materials may be eliminated through smarter design.

However, it will not always be possible to “design out” problematic materials. For example, zinc is often used to coat steel to prevent corrosion.

It can interfere with the good properties of new steel forged from melted steel rendering them useless.

Steel mills therefore limit the permissible content of zinc in the scrap they buy to less than a threshold concentration of zinc.

Manufacturing processes mix materials that are further mixed during waste disposal increasing overall cost and reducing recycling.



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By focusing on sustainability and the environment, Walmart is able to help preserve nature for future generations

There are costs involved in collecting, sorting, and transporting used-up products, scrap, and waste.

Such separation requires information, effort, and energy. These costs must be compared with the costs of new materials.

Even when the operating costs of recycling are attractive, capital costs pose expensive barriers for companies to overcome.

Disposal costs bring up the question of how companies should take account of indirect costs such as the effect of wastes on the environment.

“Walmart is focusing on the good of the planet in the long term”



Walmart employees are careful to keep produce fresh and reduce waste. The extras are often donated to local food banks.

Heavy capital investment in existing systems may prevent a company from securing an easy source of new investment to start over.

This obstacle may introduce time lag, delaying the decision to recycle until it is suitable to make a capital investment

Some companies that face competitive forces of ever-shorter product lifespans, have introduced “design for the environment” techniques as a major impetus for reengineering their products and processes.

More and more, companies are focusing on the good of the planet in the long term.

Sustainability



Designing a product as a temporary provider of a service, to be used later in the creation of another product, is a novel idea in modern manufacturing and raises a new set of issues.

A product is generally sold with the assumption that a consumer or sequence of consumers will use it until it cannot be used anymore with no thought to recycling or future.

Similarly, its life cycle may also change. The manufacturer may increasingly want to choose materials and designs that take into account the product's eventual "de-manufacture" and reuse.

Industrial ecology views industry's impact on the environment in terms of a comprehensive system that uses and disposes of materials.



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571

million pounds of
donated food



2x

local produce

*since 2009



38%

decrease in plastic
bag use

Regulatory pressures and shifting public opinion have spurred the industrial and engineering community to initiate efforts aimed at closing the materials loop more effectively and improving energy-use efficiencies. Automobile manufacturers have designed cars for easy disassembly and recycling. Companies have begun to take back their own used components, such as toner cartridges.

Reduce, Reuse, Recycle, Refit



Minimizing our impact on the environment

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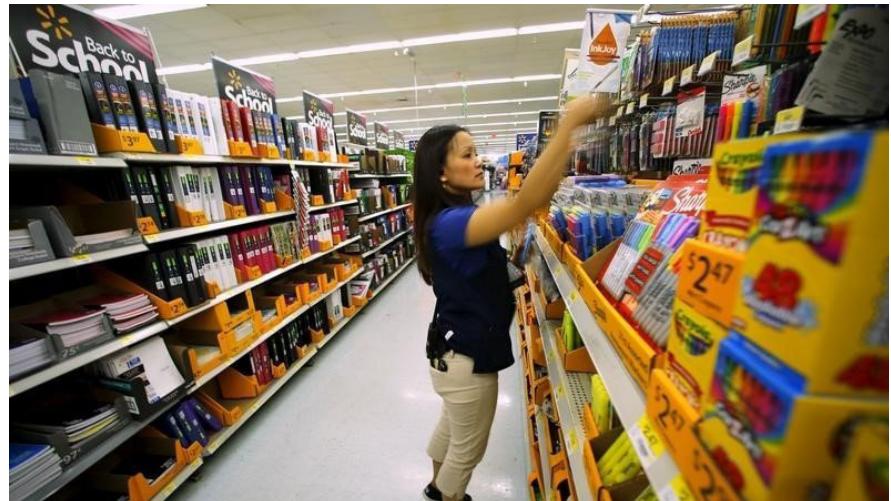
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Some companies that face competitive forces of ever-shorter product lifespans, have introduced “design for the environment” techniques as a major impetus for reengineering their products and processes.

There are numerous means of protecting the environment from industrial wastes.



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Packaging is redesigned to reduce the quantity of trash that ends up in landfills from Walmart goods.

The following example from a glassmaker is illustrative. Certain nonhazardous wastes from glassmaking would make good additions to concrete, improving its properties.

There are costs involved in collecting, sorting, and transporting used-up products, scrap, and waste.

Such separation requires information, effort, and energy. These costs must be compared with the costs of new materials.

Even when the operating costs of recycling are attractive, capital costs pose expensive barriers.

Disposal costs bring up the question of how companies should take account of indirect costs. What is good for the environment is not always good for the company in the short term, if not the long term.



Large amounts of trash will overflow existing landfills and force authorities to expand into areas of former beauty.



Healthy environment, healthy people

There are costs involved in collecting, sorting, and transporting used-up products, scrap, and waste.

Such separation requires information, money, effort, and energy which companies aren't always willing to part with.

Even when the operating costs of recycling are attractive, capital costs pose expensive barriers.



Starting from the farm, Walmart is dedicated to providing safe and environmentally save and responsible food.

“The best ingredients in an environment friendly way”



Foods that are both affordable and high quality are often hard to find. At Walmart we pride ourselves on being a great alternative for busy families.

Thus, the notion of “what is a product?” changes. Similarly, its life cycle may also change.

The manufacturer may increasingly want to choose materials and designs that take into account the product's eventual “de-manufacture” and reuse.



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Waste and product materials can sometimes contain unwanted elements that are hard to recycle.

These products can ruin the reuse potential of the materials. Some of the materials may be eliminated through smarter design.

Manufacturing processes mix materials that are further mixed during waste disposal increasing overall cost for the manufacturer.



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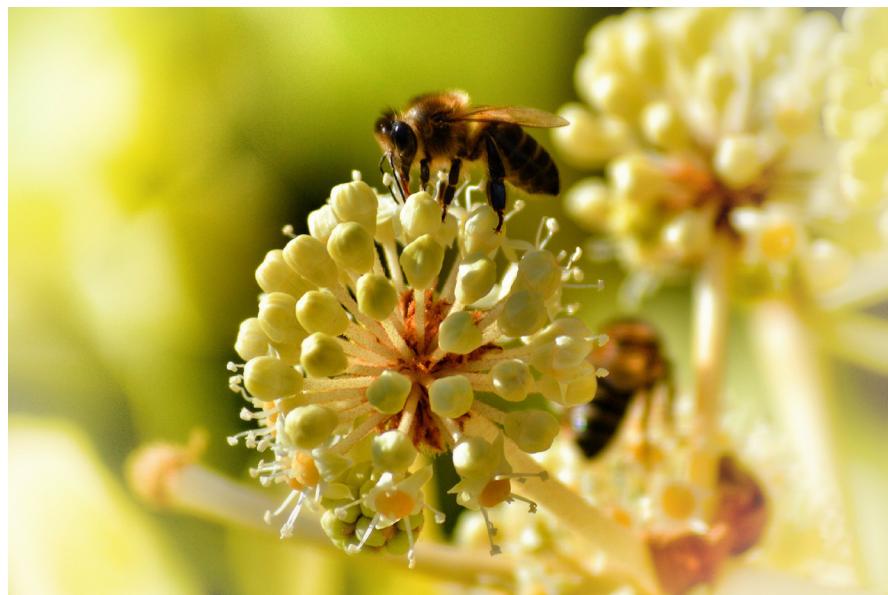


Towards A Better Future

Industrial ecology views industry's impact on the environment in terms of a comprehensive system that uses and disposes of materials whenever needed.

We can learn to close the materials loop more efficiently by thinking on a larger scale about the flow back into industry of materials that would otherwise be discarded.

There are numerous means of protecting the environment from industrial wastes. We can forgo the benefits of a potentially harmful material or we can seek to replace it with a more benign substitute equally usable.



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Together we can change the world