

# *3 R's of Sustainability*

**REDUCE**  
**REUSE**  
**RECYCLE**

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Participant's Guide

# 3R's of Sustainability: Reduce, Reuse, Recycle

*Participant's Guide: 3-Hour Program*

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# Introduction

Reduce, Reuse, Recycle! The 3 R's of Environmental Sustainability Implementation program is the starting point for every organization that seeks to reap the financial, social, and economic benefits associated with developing and adopting environmentally friendly policies and practices.

Sustainability is a means by which to meet present and future needs while making responsible decisions and putting forth a conscious effort to preserve biodiversity and natural ecosystems.

Not only does adopting sustainable practices have positive implications for current and future generations, but it gives your organization a competitive advantage over competitors who fail to rise to the challenge and meet the ever changing demands of the customer. Sustainability management is a tool that can help organizations to gain these competitive advantages, resulting in higher cost savings, more efficient practices, and higher realized returns.

The Reduce, Reuse, Recycle! DVD multi-media educational program will equip managers, supervisors, and staff with the necessary knowledge, ideas, and tools to identify areas within the organization's operations that can be enhanced through sustainable practices. Upon completion of this program you will be prepared to execute a plan, deliver significant results, and stand out!

You will have the unique opportunity to witness and study what other nations and organizations are doing to reduce costs, increase profits, and positively impact society and the environment, by means of their sustainable practices. We outline a step-by-step process that will help you achieve the results you set forth for your organization.

Implementing sustainable environmental policies and practices takes time, knowledge dedication, research, passion, commitment and good leadership. Only the best will succeed and therefore stand out, so remember you are the best and now hold the necessary tools to succeed!

We look forward to hearing how this program has helped your organization implement sustainable practices and benefit from environmentally friendly operations. Send us an email!

## Learning Objectives

At the close of this program, participants will be able to:

- Discuss the need for different levels of environmental regulations
- Identify key issues of conforming to environmental standards
- Discuss the need for adopting sustainable measures in organizations
- Understand the implication of environmental legislation and accountability of organizations
- Realize the implications of cost saving and profitability associated with implementation of sustainable practices
- Discuss starting points for reduction, reusing, and recycling implementation
- Form teams to brainstorm potential sustainable implementations

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## **Session I Guidelines:**

**In order to present materials in a manner that is relevant please adhere to the following guidelines:**

- Ask questions at any point in time
- Actively participate and pay attention during the program
- Listen to others opinions on subject content
- Offer examples if course materials are relevant
- Be excited about the course and have fun with the materials

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# Session I Course Notes

## International Standards

<p>International Standards</p>	<p>Many of the regulations imposed upon the United States come as a product of various _____, primarily:</p> <ul style="list-style-type: none"> <li>• Kyoto Protocol</li> <li>• “Carbon Market”</li> <li>• ISO 14001</li> <li>• Copenhagen Accord</li> </ul>
<p>Kyoto Protocol</p> <p>Goals of the Kyoto Protocol</p> <p>Methods of Reduction</p>	<p>1997- Kyoto, _____, was a major attempt to draft a _____ for air quality cleanup that would maintain the climate</p> <ul style="list-style-type: none"> <li>• 5% reduction of greenhouse gas emissions against _____ levels (United Nations [UN], 1997))</li> <li>• Specific requirements for individual countries</li> <li>• Involves a system of reporting and tracking reduction successes and failures</li> <li>• Missed targets result in making up the difference, plus an additional 30% reduction (UN, 1997)</li> <li>• United States signed, yet did not ratify</li> </ul> <ul style="list-style-type: none"> <li>• Emission Trading “Carbon Market”</li> <li>• _____ (JI): earning credits “from an emission-reduction or emission removal project in another Annex B Party” (UN, 1997)</li> <li>• _____ (CDM): allows developed countries to “implement an emission-reduction project in developing countries” (UN, 1997)</li> </ul> <p>*See Kyoto PDF referenced on page 20 for more information</p>
<p>“Carbon Market”</p>	<ul style="list-style-type: none"> <li>• Each country is allotted a specific number of _____ units</li> <li>• Countries with excess units can sell to countries that have exceeded their allowed limits (UN, 1997)</li> <li>• Creates a _____ and _____ to reduce emissions</li> <li>• Other credits can be earned and sold from JI and CDM</li> </ul>

## Session I Course Notes

### International Standards

<p>International Organization for Standards (ISO)</p> <p>ISO 14001</p>	<p>A non-governmental organization that is responsible for development and creation of standards on the international level (ISO).</p> <p>ISO 14401 is part of a set of standards that focuses on the implementation of _____ (EMS) into corporations operating scheme (International Organization for Standards, 2004). The overall concept of the standard is to begin by planning an EMS system in the workplace by setting _____ and aiming to meet specific requirements and eventually <u>implementing</u> the processes.</p>
<p>Copenhagen Accord</p> <p>Goals of the Copenhagen Accord</p>	<p>Held in December of 2009, in Copenhagen, _____. A major follow up to the _____.</p> <ul style="list-style-type: none"> <li>• Aims to establish goals to reduce emissions to a specific rate by 2020 (Copenhagen)</li> <li>• Established Copenhagen Green Climate Fund (Copenhagen)             <ul style="list-style-type: none"> <li>○ Goal of committing \$100 billion from the _____ by 2020</li> <li>○ Fund will help _____ countries meeting environmental needs</li> </ul> </li> <li>• United States agrees to _____ of the accord</li> <li>• Still doubts in effectiveness of the accord             <ul style="list-style-type: none"> <li>○ Issues with China and India</li> <li>○ Per capita vs. per country</li> </ul> </li> </ul> <p>*See Copenhagen PDF referenced on page 20 for more information</p>



## Session I Course Notes

### National and State Standards

National and State Standards	Growing concerns on the international level have increased <u>visibility</u> and push for environmental regulation in the United States.
SEC	<p>As of the spring of 2010, the United States Security Exchange Commission (SEC) has set into place new reporting requirements associated with _____.</p> <p>The SEC will require companies to follow environmental reporting procedures. Methods of reporting such as conducting a sustainability audit as outlined in the Global Reporting Initiative which will help companies to assess their progress and give consumers, members of supply _____, the government, and international community more visibility on the operations of specific companies. (Security Exchange Commission, 2010)</p>
GRI	<p>The Global _____ Initiative (GRI) is a set of reporting standards that provide corporations ways “to measure and report their economic, environmental, and social performance” (Global Reporting Initiative, 2010).</p> <p>*See SEC and GRI PDFs referenced on page 20 for more information</p>

### Litigation

Litigation	Shifts toward a more sustainable operating environment call for organizations to be _____ for their actions. Increased regulations will increase environmental litigation. Several companies who, in recent years, have caused environmental degradation have been served with lawsuits. Companies must realize the inability to _____ with those new regulations and requirements could result in large fines and monetary losses.
Examples:	<p>Exxon Mobil</p> <ul style="list-style-type: none"> <li>• Contamination of groundwater</li> <li>• \$_____ million to the city of New York (Navarro, 2009)</li> </ul> <p>BP and the Gulf</p> <ul style="list-style-type: none"> <li>• Gulf Coast disaster</li> <li>• \$_____ billion set aside for legal claims (Feely &amp; Fisk, 2010)</li> </ul>

## Session I Course Notes

### Market Forces

<p>Market Forces</p>         <p>Example:</p>	<p>There is a _____ for sustainability. Companies are using sustainability to gain a position over competitors. The other companies must respond to order to continue to _____. To be on top, companies must find ways to implement these practices. Many companies these days are advertising either “going green” or “green practices” in operations.</p> <p>Walmart has taken several proactive steps to sustainability management (Walmart, 2010)</p> <ul style="list-style-type: none"><li>• Sustainable supply chain</li><li>• Long term sustainability goals</li><li>• Use of _____ resources</li><li>• Use of Global Reporting Initiative</li></ul> <p>*See Walmart PDF referenced on page 20 for more information</p>
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### Discussion

<p>Discussion</p>	<ol style="list-style-type: none"><li>1. Why is sustainability important?</li><li>2. What can organizations in the United States learn from various international standards?</li><li>3. What do new national standards mean for businesses in the United States?</li><li>4. How will litigation of environmental issues affect businesses?</li><li>5. What are the links between sustainability and competition?</li><li>6. What can organizations learn from looking at organizations such as Walmart as it enacts more sustainable practices?</li><li>7. What are some ways your organization emphasizes sustainable practices</li></ol>
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## Session I References:

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- Walmart (2010). Walmart Sustainability Report 2010.. Retrieved from: [http://walmartstores.com/sites/sustainabilityreport/2010/environment\\_overview.asp](http://walmartstores.com/sites/sustainabilityreport/2010/environment_overview.asp)

## **Session II Objectives:**

This section of the course will last approximately 75 minutes broken up between a PowerPoint® presentation, videos, and breakout sessions related to the section. This section is designed to create awareness of the 3Rs of Sustainability and how their implementation can help companies move toward sustainable practices, realize cost savings, and potentially operate more efficiently.

### **At the end of Session II participants should be able to:**

- Understand the 3Rs of Sustainability Concept
- Understand how concepts of sustainability relate to business operations
- Identify where the most cost savings can be realized utilizing 3R methodologies
- Identify simple starting points for Sustainability measures
- Understand the nine basic steps to implementing a waste reduction and recycling program
- Brainstorm methods in which current company can achieve cost savings through 3R implementation

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## Session II Course Notes

### Lesson I: Before You Start

Pre-Requisite Knowledge	Before getting started on a successful Reduction and Waste Management Program, it is essential to have a solid understanding of the Waste Management Hierarchy.
The Hierarchy	<ol style="list-style-type: none"><li>1. Reduction<ul style="list-style-type: none"><li>• Purchasing and using only what is _____.</li></ul></li><li>2. Reuse<ul style="list-style-type: none"><li>• Find an alternative use _____ materials.</li></ul></li><li>3. Recycling<ul style="list-style-type: none"><li>• Unused materials are _____ into _____ products.</li></ul></li><li>4. Avoidance<ul style="list-style-type: none"><li>• Avoid obtaining _____ materials through precise calculation and assessment of _____.</li></ul></li><li>5. Recovery<ul style="list-style-type: none"><li>• Extracting materials or energy from _____ to be used or processed.</li></ul></li><li>6. _____<ul style="list-style-type: none"><li>• Subjected waste to processes that alter its character to minimize environmental impact.</li></ul></li><li>7. Disposal<ul style="list-style-type: none"><li>Apply _____ to the natural environment.</li></ul></li></ol>

## Session II Course Notes

### Sustainability and Business Operations

The Benefits	<p>_____ Environmental Policies afford an organization many benefits in nearly every aspect of operations. The realized _____ are financial, economical, societal, and environmental impacting efficiency and creating a _____ advantage.</p> <p>Some of the benefits are the following:</p> <ol style="list-style-type: none"><li>1. Discounts</li><li>2. Lower _____ Consumption</li><li>3. Resource Conservation</li><li>4. Low Product _____</li><li>5. Improved/Competitive Prices</li><li>6. Improved _____</li><li>7. Job Creation</li><li>8. Entrepreneurial _____</li><li>9. Economic Stewardship</li><li>10. Decreased Emissions and _____</li><li>11. Improved ____ and _____ Quality</li><li>12. Improved Reputation</li><li>13. Competitive Advantage</li></ol>
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## Session II Course Notes

### Lesson II: Case Study

Automobile Industry	<p>The auto industry is considered to be one of the major contributors to environmental pollution such as local air pollution, greenhouse gas emissions, road congestion, noise etc. The environmental impacts of the industry are spread throughout the entire product lifecycle, however, through green management innovation, companies are finding ways to clear up their balance sheet and the environment surrounding them.</p>
Subaru	<p>Subaru spent years studying, reviewing and redesigning processes to green their plant and have taken extreme measures to eliminate waste. Their efforts have led to significant savings, unmatched innovation, and increased cost and production efficiency. Through their efforts Subaru has managed to:</p> <ol style="list-style-type: none"><li>1. Decrease _____ waste 99%</li><li>2. Achieve a _____ reduction in electricity consumption on a per-car basis since 2000.</li><li>3. Become the first automotive assembly plant to be “_____” in 2004.</li><li>4. _____ 99.9% of all waste that leaves that plant.</li><li>5. Have a supplier base consisting of 81% _____ certified.</li><li>6. _____ the amount waste per vehicle 46%.</li></ol>

## Session II Course Notes

### How to Reduce

Reduction	Reduction is the most cost efficient way to begin implementing the three Rs. Denise Coogan, Manager of Safety & Environmental Compliance at Subaru of Indiana (2010) suggests that if you can reduce “you’ll save the most money. If you’re not paying to have it delivered, you’re not paying to have it handled while it’s here, and you’re not paying to have it taken away. Therefore, reduction is the best way to go.”
<i>Reduction Video</i>	<i>As you watch the Subaru Video on Reduction, pay close attention to even the minutest of details to determine the many efforts made to reduce product use and need.</i>
<b>Discussion Questions</b>	<b>What are some ways the company reduces? What types of Materials were reduced? Cite specific examples. Why is Reduce the best starting point for organizations?</b>

### How to Reuse

Reuse	The step following reduction, focuses on finding an _____ use for materials that would otherwise be considered waste and ultimately _____ of. Essentially the goal is to _____ waste completely.
<i>Reuse Video</i>	<i>As you watch the Subaru Video on Reuse, pay close attention to even the minutest of details to determine the many efforts made to reuse products and materials, even those some might consider insignificant.</i>
<b>Discussion Questions</b>	<b>What are some ways the company reuses materials? Which materials are reused? How can companies find ways to reuse materials?</b>



## Session II Course Notes

### How to Recycle

<p>Recycle</p>	<p>The final step in the _____ hierarchy emphasizes on properly _____ and distributing those materials that _____ be reduced or reused, to the appropriate facilities so the items can be applied to the _____ or production of _____ products and goods.</p>
<p><i>Recycle Video</i></p>	<p><i>As you watch the Subaru Video on Recycle, pay close attention to even the minutest of details to determine the many efforts made to recycle nearly everything that was not reduced or reused.</i></p>
<p><b>Discussion Questions</b></p>	<p><b>What are some of the materials the company recycles?</b>  <b>Did you notice any additional materials they might be able to recycle that are currently disposed of as waste?</b>  <b>What difficulties are associated with beginning a recycling program?</b></p>
<p>Steps to a Recycle Program</p>	<ul style="list-style-type: none"> <li>• Determine what items will be recycled</li> <li>• Locate _____ for the recyclable materials</li> <li>• Design a collection and _____ system for the materials</li> <li>• Introduce the new system to employees and develop _____ to encourage their participation.</li> <li>• Develop recycling _____ for the organization that are tangible and measure these goals.</li> </ul>

## Session II Course Notes

### Lessons Learned

Review	There is much to be said about the incredible accomplishments of Subaru; they have taught the automobile industry and all others many valuable lessons from which all can benefit greatly.
Lessons	<ol style="list-style-type: none"><li>1. Profits come from increasing _____ and reducing _____ - but they don't necessarily come right way.</li><li>2. Management's _____ is crucial in setting _____ and getting departments to cooperate.</li><li>3. The _____ lines must be engaged.</li><li>4. _____ initiatives achieve lots more when companies _____ their suppliers.</li><li>5. _____ wastes are potential products.</li><li>6. Green _____ creates competitive advantage.</li></ol>

## Session II Course Notes

### Creating and Implementing a Program

Getting Started	It can be challenging to develop and implement environmental policies and sustainable practices. Using the following steps and concepts utilized in this course, organizations can begin their journeys toward sustainability. Once an organization has made the decision to create, adopt and implement a company environmental policy aimed at reducing their negative environmental impact, it must develop and implement a comprehensive waste reduction and recycling program.
9 Basic Steps	<p>There are nine basic steps to follow when planning and implementing the program:</p> <ol style="list-style-type: none"><li>1. _____ the support of _____ Level Management</li><li>2. Organize a _____ Team</li><li>3. Conduct a _____ Assessment</li><li>4. Establish Waste Reduction _____</li><li>5. Secure _____ Markets</li><li>6. Set up a Collection and Storage System</li><li>7. Purchase Recycled Goods</li><li>8. _____ Staff and Promote the Program</li><li>9. Measure and Evaluate Procedures and _____</li></ol>

## Session II References:

- Coogan, D. (2010). MacLean, Bruce. (Director). (2010). *Reduce* [Video Clip]. United States: McGraw-Hill.
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## Resources Information/links to PDF/Websites

**Copenhagen Accord**, 11a01.pdf from:

[http://unfccc.int/documentation/documents/advanced\\_search/items/3594.php?rec=j&prire=600005735#beg](http://unfccc.int/documentation/documents/advanced_search/items/3594.php?rec=j&prire=600005735#beg)

**GRI**, G3\_GuidelinesENU.zip from:

<http://www.globalreporting.org/ReportingFramework/ReportingFrameworkDownloads/>

**Kyoto Protocol**, kpeng.pdf from: [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php)

**SEC Commission Guidance Regarding Disclosure Related to Climate Change**, 33-9106fr.pdf from: <http://www.sec.gov/rules/interp/2010/33-9106fr.pdf>

**Walmart**, WMT2010GlobalSustainabilityReport.pdf from:

<http://walmartstores.com/sustainability/7951.aspx>

**ISO 14000** (no pdf) website only: [http://www.iso.org/iso/iso\\_14000\\_essentials](http://www.iso.org/iso/iso_14000_essentials)

**BP** (no pdf) from Bloomberg.com: <http://www.bloomberg.com/news/2010-08-10/bp-gulf-oil-spill-lawsuits-to-be-consolidated-in-new-orleans-federal-court.html>

**Exxon Mobil** (no pdf) from The New York Times:

<http://www.nytimes.com/2009/10/20/science/earth/20exxon.html>

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