

# The Greening of Business

Supplement to Business Administration Course (BMGT-1301)



  
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INITIATIVE

Advancing Greener Careers and Campuses

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# Purpose

The purpose of this booklet is to provide additional information, cases, projects, and assignments that can be utilized to supplement the Business Administration course BMGT-1301. The emphasis of the material in this supplement is the responsibility of business to protect the environment. More often than not, organizations are beginning to recognize the positive impact that environmental business practices may have on their business outcomes. This supplement contains material for the subjects covered in a typical sixteen week course.

Content for the chapters will include the following elements.



Green Learning Objectives



Green Metrics / Tools



Greening of Business



Green Business Challenges / Successes



Green Case Studies, Assignments, & Projects



Green Careers

The Greenforce Initiative is a collaborative effort between the National Wildlife Foundation and Jobs for the Future to promote environmental careers and campuses. This supplement is provided through a grant from the Greenforce Initiative.



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# Chapter 1: Business Overview

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# Chapter 1: Learning Objectives

## **Green Learning Objectives**

- Define basic concepts of business, products, profits, and how this relates to the environment
- Explain why studying business is important, and the key responsibilities of business for the environment
- Identify the key business stakeholders and their concern for the environment
- Define the four types of economic systems and how they value business' responsibility for the environment



# Chapter 1: Business Overview

While there is no dispute that the primary goal of business is to earn a profit, the added question most stakeholders ask is what additional responsibility does business have to society and the environment?

Those businesses that have embraced sustainability believe that it is the responsibility of business to select projects, make decisions, and implement improvements that impact not only their profit, but also the community in which they operate and the environment.

The World Commission on Environment and Development (WCED) has defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (1987, p. 8)”

Businesses that care about sustainability, their communities, and the environment have demonstrated their commitment by openly reporting not only their profits in their annual report, but also disclose their social and environmental performance in sustainability reports.



# Chapter 1: Business Overview



## Green Metrics / Tools

Examples of reports and tools available to the general public with regard to business sustainability disclosure include:

- GRI Report – provides voluntary global guidelines for sustainability reporting
- ISO 26000 – voluntary international standard for guidance in sustainability
- Dow Jones Sustainability Index – global index that tracks the financial performance of sustainability driven businesses
- Sustainability Rankings – rankings of entities based on their environmental, social, and/or overall sustainability performance
  - City Rankings
  - Country Rankings
  - Global Rankings (Forbes Global 100)
  - Business Rankings (CRO's Best Corporate Citizens)



# Chapter 1: Business Overview



## **Green Business Challenges / Successes**

Businesses have a responsibility to various stakeholders. Some stakeholders are internal to the business (employees and shareholders), while other stakeholders are external to the business (customers, community, legal and regulatory entities, society at large, suppliers, consumers), and any other person with concerns about the success and outcomes of a business.

While some businesses have created their business model around preserving the environment such as Terracycle, who offer an organic plant food that comes from worm waste and is packaged in recycled soda bottles. Other more established firms such as Dell are working on redesign of computers to reduce energy consumption. This commitment which comes in many organizational forms will be discussed often in the upcoming chapters.

The challenge faced by many organizations with regard to their environmental claims is that of “greenwashing.” Greenwashing is where a business makes claims that they are “green” but they are really not.





# Chapter 1: Business Overview

An economic system defines how a country or society regulates business and utilizes its resources to produce goods and services. There are four basic economic systems: communism, socialism, capitalism, and mixed economies. When comparing these systems relative to impact on the environment, we would expect to see the following.

## Communism

- Described as a society where the people of a nation own all of the natural resources; most businesses are owned and operated by the government

## Socialism

- Described as a society where the government owns and operates basic industries (postal, telephone, utilities); Individuals and small businesses provide the other goods and services as dictated by demand

## Capitalism

- Described as a society where individuals own and operate the majority of businesses; competition, supply, and demand determine the goods and services that are produced

## Mixed

- Most nations are not pure forms of communism, socialism, or capitalism – most favor one of the three, but operate as mixed economies



# Chapter 1: Business Overview

Reviewing countries based on their sustainability ranking suggests that socialist countries (primary control over key industries) are having the greatest success addressing environmental concerns (burden of disease, air and water quality, ecosystem, biodiversity, etc.) primarily because they control the industries that are most likely to pollute and impact the environment.

The ranking of most sustainable countries identified four socialist countries in the top five. Iceland, Switzerland, Sweden, and Norway are ranked 1, 2, 4, and 5. They are recognized because they excel in a variety of environmental areas. For Iceland, two governmental bodies drive the successful environmental performance.

	Iceland	Switzerland	Costa Rica	Sweden	Norway	Mauritius	France	Austria	Cuba	Colombia
Total Score*	93.5	89.1	86.4	86.0	81.1	80.6	78.2	78.1	78.1	76.8
Environmental Health	95	92	82	93	91	84	91	89	84	75
Env. Burden of Disease	91	89	78	87	83	70	83	87	74	63
Air (humans)	97	91	78	97	97	97	97	84	97	90
Water (humans)	100	100	96	100	100	97	100	100	91	82
EcoSystem Vitality	92	86	91	79	72	78	66	67	72	79
Air (ecosystem)	38	48	60	59	58	44	42	40	41	48
Water (ecosystem)	96	93	74	96	98	74	80	98	74	69
Biodiversity	69	100	73	61	47	45	67	100	50	83
Forestry	100	100	100	100	100	86	100	100	100	97
Fisheries	66	0	99	67	72	100	88	0	94	89
Agriculture	65	70	91	88	70	93	84	85	83	76
Climate Change	90	74	79	70	66	73	56	50	67	71

Source: <http://carbonpig.com/article/10-most-sustainable-countries-world>



# Chapter 1: Business Overview



## Green Cases, Assignments, & Projects

### Web Assignments:

1. Search the internet for the term “greenwashing.” Identify at least 3 companies that have been accused of “greenwashing” and explain what each of them said they were doing versus what they were actually doing in regard to protecting the environment.
2. Go to the website for General Electric ([www.gereports.com/tag/ecomagination](http://www.gereports.com/tag/ecomagination)) and read one of the Ecomagination articles in the report. Summarize the article and discuss how it relates to the success of GE’s business.
3. Go to [www.carbonfootprint.com/calculator.aspx](http://www.carbonfootprint.com/calculator.aspx) and calculate your carbon footprints. Over the course of the semester make recommended changes and recalculate at the end of the semester to check for improvements

### Team Project:

1. In your teams pick a business or product that all team members know or utilize (Walmart, HEB, Dell, etc.). Discuss what that company or product does to protect the environment. Discuss whether the company’s effort or product’s impact on the environment makes you more or less loyal to their business and/or products.



# Chapter 1: Business Overview



## Green Careers

With many businesses embracing environmental sustainability there is also an increasing number of environmental career opportunities. The Green Economy has created occupations that are 1 - new occupations that previously did not exist (Chief Sustainability Officer), 2 - existing occupations that have different work or work requirements (Solar Engineer), and 3 - increasing demand for workers within existing occupations (Electrician). There are a wide range of career websites that emphasize and promote green job opportunities.

[www.greencareersguide.com](http://www.greencareersguide.com)

[www.greenjobs.com](http://www.greenjobs.com)

[www.greenjobs.net](http://www.greenjobs.net)

[www.greatgreencareers.com](http://www.greatgreencareers.com)

[www.greenjobsready.com](http://www.greenjobsready.com)

[www.jobs.greenbiz.com](http://www.jobs.greenbiz.com)

[www.ecoemploy.com](http://www.ecoemploy.com)

[www.greenforall.org/green-collar-jobs](http://www.greenforall.org/green-collar-jobs)

[www.onetonline.org](http://www.onetonline.org)



# Chapter 1: References

## Websites

GRI Report

<http://www.globalreporting.org>

ISO 26000

[http://www.iso.org/iso/social\\_responsibility](http://www.iso.org/iso/social_responsibility)

Dow Jones Sustainability Index

<http://www.sustainability-index.com>

Sustainability Rankings

- City Rankings (SustainLane)  
<http://www.sustainlane.com/us-city-rankings/>
- Country Rankings  
<http://carbonpig.com/article/10-most-sustainable-countries-world>
- Global Rankings (Forbes Global 100)  
<http://www.forbes.com/2010/01/26/most-sustainable-companies-leadership-citizenship-100.html>
- Business Rankings (CRO's Best Corporate Citizens)  
<http://www.thecro.com/content/100-best-corporate-citizens>

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Brundtland United Nations Commission (1987). *Our Common Future*. New York: Oxford University Press.

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# Chapter 2: Ethics & Sustainability

Supplement to Business Administration Course (BMGT-1301)



# Chapter 2: Learning Objectives

## **Green Learning Objectives**

- Explain difference between ethics, social responsibility, and sustainability
- Understand the elements that make up sustainability
- Describe how ethics, social responsibility, and sustainability are measured
- Summarize the responsibilities of business to their key stakeholders



# Chapter 2: Ethics & Sustainability

**Ethics** – principles and standards that are acceptable (right or wrong) within a business environment

**Social Responsibility** – obligation of a business to maximize positive business aspects while minimizing negative impacts on society

**Sustainability** – ensuring short term and long term viability of a business by maximizing profits while minimizing impact on society and the environment

**Corporate Citizenship** – the degree to which businesses meet legal, ethical, economic and voluntary (social, environmental) responsibilities

While each of these is a distinctly different element, sustainability encompasses social, environmental, and economic impact and importance. Corporate citizenship combines ethics and sustainability with an organization's legal responsibilities.

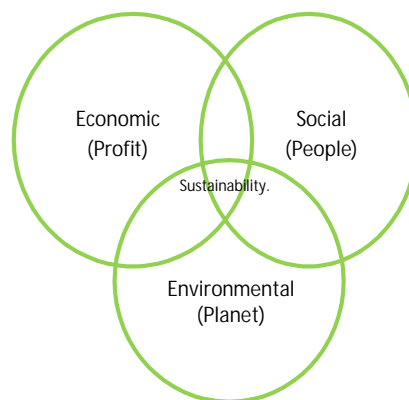




# Chapter 2: Ethics & Sustainability

Sustainability is the outcome of Sustainable Development. Sustainable Development has been defined by the World Commission on Environment and Development (WCED) as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (1987, p. 8).”

This definition of sustainability suggests that there is an element of sustainability that is short term (economic performance) and long term (social, environmental, and economic performance). Sustainability is considered to exist within organizations when social, environmental, and economic aspects are equally balanced. Organizations that are committed to sustainability have begun to measure what’s called the Triple Bottom Line (TBL) and disclose their actions in annual sustainability reports.



# Chapter 2: Ethics & Sustainability



## Green Metrics / Tools

Examples of metrics available to assess ethics, social responsibility, and sustainability:



### Measures of Ethics

- **Ethics Quick Test** (Texas Instruments)
  - Is action legal?
  - Does it comply with our values?
  - If you do it, will you feel bad?
  - How will it look in the newspaper?
  - If you it's wrong, don't do it!
  - If you're not sure, ask.
  - Keep asking until you get an answer



### Measures of Social Responsibility

- **Kinder, Lydenberg, Domini Research & Analytics (KLD)** – use a combination of resources including financial statements, articles, academic journals, and government reports
- **Domini 400 Social Index (DSI 400)** – equivalent index to the S&P 500, but for socially responsible firms



### Measures of Sustainability

- **Triple Bottom Line (3BL)** – when organizations focus on maximizing returns across all three dimensions of sustainability (John Elkington, 1987)
- **Global Reporting Initiative (GRI)** – uses the ecological footprint analysis as one means of developing and disseminating globally acceptable Sustainability Guidelines



# Chapter 2: Ethics & Sustainability



## **Green Business Challenges / Successes**

There are many examples of current headlines around the U.S that deal with ethics, social responsibility, or sustainability. Here are a few examples:

*Sears ad unclear, but not unethical*  
Portland (OR) Orgegonian (1/7/2012)

*Breyer wades into Supreme Court ethics debate*  
Associated Press (1/7/2012)

*Questions about Organic Produce and Sustainability*  
NY Times (12/30/2011)

*Bard gets \$575,000 grant for Sustainability education*  
Poughkeepsie (NY) Journal 1/5/2012

*Conservationists oppose police shooting range in environmentally sensitive area*  
Chicago (IL) Tribune 1/4/2012

*In the biz: New firm Filta Environmental Kitchen Solutions cooks up green kitchens*  
Sarasota Springs (NY) Saratogian (1/1/2012)

Source: [www.1stheadlines.com](http://www.1stheadlines.com)



# Chapter 2: Ethics & Sustainability

Businesses have a responsibility to various stakeholders. Some stakeholders are internal to the business (employees and shareholders), while other stakeholders are external to the business (customers, community, legal and regulatory entities, society at large, suppliers, consumers). Stakeholders are any person or entity with concerns about the success and outcomes of a business.

Key areas of concern for each stakeholder group are:

	<b>Concerns of Stakeholder Group</b>	<b>Business' Expectation of Stakeholders (environmental)</b>
Employees	Fairness, Trust, Honesty, Integrity, Respect, Developmental Opportunities	Provide ideas and suggestions the support environmental innovation (products, processes, solutions)
Shareholders	Profit, Dividends, Return on Investments, Long Term Results	Continue to invest in the business even when decisions impact environment over profits
Customers	Service, Price, Selection, Quality	Provide feedback and suggestions on how the organization can be more environmentally sound
Legal Entities	Follow the laws	Develop laws that are not prohibitive to business profits and performance
Regulatory Entities	Respond to regulatory concerns	Work in partnership with organization to develop environmental solutions
Society / Community	Give back to the community (time, resources, money)	Work in partnership with the organization to develop solutions that don't negatively impact the environment
Suppliers	Partnership,	Work in partnership with the organization to ensure that supplier is meeting environmental regulations
Consumers	Quality products, truth in advertising	Provide feedback and suggestions on how the organization can be more environmentally sound



# Chapter 2: Ethics & Sustainability



## Green Cases, Assignments, & Projects

### Case Study: Kiva ([www.kiva.org](http://www.kiva.org))

Kiva is a non-profit organization that is focused on connecting entrepreneurs in developing countries with lenders in order to alleviate poverty. Kiva was founded in 2005 and to date has given \$274 million in loans, from 672,385 lenders, with a repayment rate of 98.91%. The loans offered have an average loan size of \$386.10, and 80.5% of the loans have been given to female entrepreneurs (as of Jan 5, 2012).

Kiva works with Field Partners (microfinance organizations) who vet, administer, and disburse each loan. The lender receives regular progress updates through e-mail. As the borrower repays the loan, the money is deposited into the Kiva Credit account of the lender. The lender then has the option to fund another loan, donate it to Kiva, or withdraw it.

Kiva rates the social performance of its Field Partners with performance badges that denote whether the partner has: 1 – anti-poverty focus, 2 – vulnerable group focus, 3 – client voice, 4 – family and community empowerment, 5 – entrepreneurial support, 6 – facilitation of savings, and 7 – innovation.

1. Conduct research online and determine what if any type of ethical issues Kiva has had to deal with?
2. Go to the Kiva website and find a Field Partner with at least 5 performance badges. Research that Field Partner and discuss why you believe this partner has received such good ratings for each of the 5 badges.
3. Which of the 3 dimensions of sustainability is Kiva most focused on? Discuss any supporting evidence.



# Chapter 2: Ethics & Sustainability



## Green Careers

The recent recession has affected the economy of the U.S. in many ways. Unemployment and job growth have been one of the areas hardest hit. While many cities are experiencing job loss there are several U.S. cities that are experience growth in green jobs. The top ten cities for green jobs based on research by the Brookings Institute. The Brookings Institute defines green (clean) economy jobs as those that “directly” produce goods and services with an environmental benefit. The top cites for green job growth and the segments experiencing growth in those cities are identified below:

Rank	City / Metropolitan Area	% Green Job Growth (2003-2010)	Largest Segment	Fastest Growing Segment
10	Albuquerque, NM	7.8%	Conservation (17.6%)	Solar Thermal (23.3%)
9	Toledo, OH	8.1%	Regulation & Compliance (50.7%)	Regulation & Compliance (50.7%)
8	Tulsa, OK	8.3%	Appliances (47.2%)	Appliances (47.2%)
7	McAllen – Edinburg – Mission, TX	8.5%	Public Mass Transit (60%)	Public Mass Transit (60%)
6	Ogden – Clearfield, UT	8.6%	Conservation (24%)	Organic Food & Farming (26.6%)
5	Albany – Schnectady – Troy, NY	8.8%	Wind (150.9%)	Wind (150.9%)
4	Little Rock – North Little Rock – Conway, AR	10.5%	Green Consumer Products (25.4%)	Green Consumer Products (25.4%)
3	Des Moines – West Des Moines, IA	11.4%	Conservation (45.1%)	Conservation (45.1%)
2	Raleigh – Cary, NC	13.7%	Public Mass Transit (24.5%)	Smart Grid (79.7%)
1	Knoxville, TN	14.6%	Professional Energy Services (95.4%)	Professional Energy Services (95.4%)



# Chapter 2: Ethics & Sustainability



## Green Metrics / Tools

### Ethics Measures

- Ethics Quick Test ([www.ti.com](http://www.ti.com))
- Santa Clara Alternative (Berman & Hanson) ([www.scu.edu/ethics/practicing/focusareas/business/risk.html](http://www.scu.edu/ethics/practicing/focusareas/business/risk.html))
- Organization for Economic Co-operation and Development ([www.oecd.org/dataoecd/5/51/44884389.pdf](http://www.oecd.org/dataoecd/5/51/44884389.pdf))

### Social Responsibility Measures

- 9 sites that measure companies Social Responsibility ([www.mashable.com/2011/10/25/measure-social-good-business/](http://www.mashable.com/2011/10/25/measure-social-good-business/))
- 4 examples of corporate social responsibility ([www.socialbrite.org/2010/04/22/4-examples-of-corporate-social-responsibility-done-right/](http://www.socialbrite.org/2010/04/22/4-examples-of-corporate-social-responsibility-done-right/))

### Environmental (Green) Guidelines and Measures

- **Green Guide** – guidelines for the use of marketing claims made by businesses to protect the consumer (U.S. Federal Trade Commission) ([http://www.ftc.gov/bcp/edu/microsites/energy/about\\_guides.shtml](http://www.ftc.gov/bcp/edu/microsites/energy/about_guides.shtml))
- **TerraChoice** – analyze businesses for “greenwashing” and publish annual report of results (<http://sinsofgreenwashing.org/findings/greenwashing-report-2010/>)



# Chapter 2: References

## References

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Muro, M, Rothwell, J., & Saha, D. (2011). *Sizing the Clean Economy: A National and Regional Green Jobs Assessment*: Brookings Institute. ([http://www.brookings.edu/metro/Clean\\_Economy/metro\\_profiles.aspx](http://www.brookings.edu/metro/Clean_Economy/metro_profiles.aspx))

OECD Council (2010). *Good Practice Guidance on Internal Controls, Ethics, and Compliance*. Adopted 18 February, 2010.





# Chapter 3: Economics

Supplement to Business Administration Course (BMGT-1301)



# Chapter 3: Learning Objectives

## **Green Learning Objectives**

- Understand the definition of a green economy
- Describe how the green economy impacts the overall economy
- Identify and describe how the green economy impacts the four stages of the business cycle
- Distinguish between microeconomics and macroeconomics and how each are impacted by the green economy
- Analyze the impact of fiscal and monetary policy on the green economy



# Chapter 3: Economics

## Measuring the Economy's Performance

**Economics** – the study of the choices individuals, businesses, and governments make in allocating resources (natural, human, capital)

**Microeconomics** – study of the smaller economic units (individual, consumer, family, and individual businesses) and issues

**Macroeconomics** – study of the larger economic units (countries), issues (employment, GDP, taxation, etc.) and how they impact the world economy

**Gross Domestic Product (GDP)** – the measure of a country's productivity is measured by its GDP (the sum of all goods and services produced in a given period). GDP is measured per capita or the sum of all goods and services produced divided by the number of citizens

**Green Economy** – economy that results in “improved human well being and social equity while significantly reducing environmental risks and ecological scarcities” (UNEP, 2010)



# Chapter 3: Economics

## Green Economy

### A Green Economy is based on six (6) primary sectors:

1. Renewable energy
2. Green buildings
3. Clean transportation
4. Water management
5. Waste management
6. Land management

### Characteristics of a Green Economy

1. Growth in Income and Green Employment
2. Reduction in Carbon Emissions and Pollution
3. Enhanced Energy (solar, wind, nuclear)
4. Socially Inclusive
5. Resource Efficient
6. Poverty Reduction
7. Sustainable Urban Planning
8. Biodiversity Loss Prevention
9. Ecosystem Services
10. Public and Private Investments in Growth
11. Environmental Regulations, Standards, and Targets



# Chapter 3: Economics

## Managing the Economy's Performance

**Fiscal Policy** – decisions made by the government with regard to revenue (taxes) and spending that influence economic activities (driven by President and Congress).

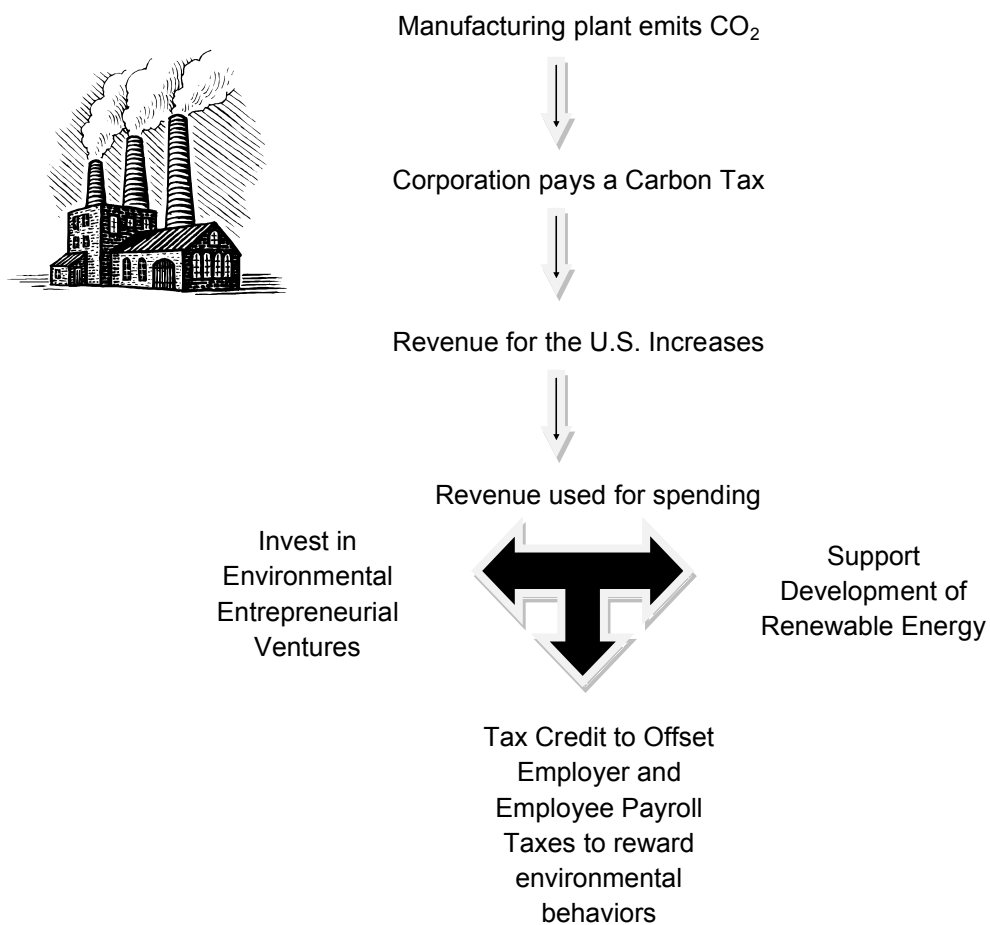
**Monetary Policy** – government actions that increase or decrease the money supply, change banking requirements, and/or change interest rates to increase the willingness of bankers to make loans (works through the Federal Reserve System).

The recent recession has led to increased emphasis on environmental projects and environmental sustainability. Green economic projects have been at the forefront of governmental fiscal and monetary policy. In many of the debates the discussion center around whether a cap-and-trade system or a flat tax are more effective in reducing emissions. While a flat tax (i.e. carbon tax or Pivogian tax) is implemented in various other countries, in the U.S. a cap-and-trade system is in effect. Both have impact on both fiscal and monetary policy.



# Chapter 3: Economics

To better understand how a carbon tax impacts both fiscal and monetary policy that could result in environmental improvements.

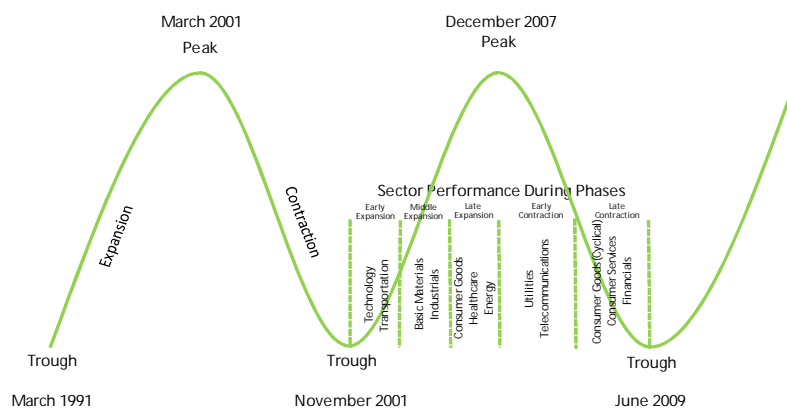


# Chapter 3: Economics

## Four Phases of the Business Cycle

The business cycle consists of four phases that repeat themselves over time.

The four phases are: Expansion, Peak, Contraction, and Trough.



The National Bureau of Economic Research (NBER) an independent think tank determines the cycle dates of the peaks and troughs of the business cycles.

These dates are determined by indicators such as: Employment, Personal Income, Interest Rates, Commodity Prices, Industrial Production, and Sales in Key Sectors (autos, housing, etc.)

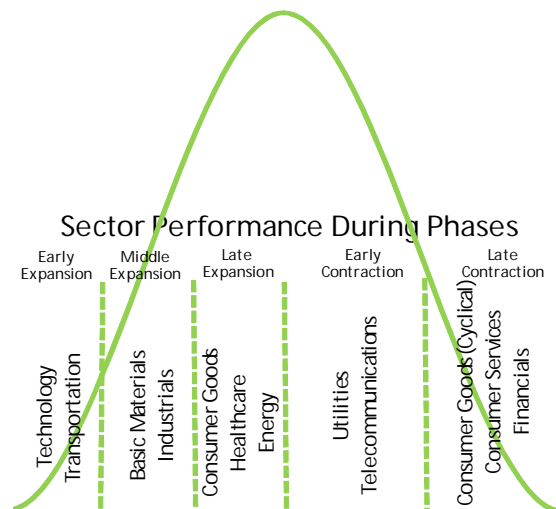
The dates of the most recent cycles per NBER ([www.nber.org](http://www.nber.org)) are shown of the graph above.



# Chapter 3: Economics

## Four Phases of the Business Cycle

Within a full business cycle (phase) there are various stages of expansion and contraction. During expansion technology, basic materials, non-cyclical consumer goods and other sectors experience growth. During contraction sectors such as utilities and cyclical consumer goods experience growth. A segment of a cycle is shown below depicting these various stages of sector performance.



During each of the phases it is believed that different business sectors experience greater performance as shown. How does each cycle impact businesses and the environment?





# Chapter 3: Economics



## **Green Business Challenges / Successes**

As the U.S. exited the recession of 2009 the administration and Congress made many decisions to aid in the recovery of the economy. The American Recovery & Reinvestment Act of 2009 included more than \$70 billion in spending and tax credits for clean energy and transportation programs. Several of these decisions led to funding for businesses that were focused on improving the environment.

One of the successes has impacted McAllen, Texas and four other cities in Texas. Each of these cities received funding from the Tiger III Grant in support of environmentally friendly transportation projects. The McAllen project involves the conversion of three diesel buses to fully electric buses that can be recharged at specific stops along the route. This results improved environmental impact due to vehicles being electric, extension of bus life, and overall efficiency of the bus.



# Chapter 3: Economics



## Green Cases, Assignments, & Projects

### Questions for Discussion

1. Which type of economics (macro or micro) is considered more critical in deterring or avoiding patterns of growth that may damage the environment?
2. Research online and identify the pros and cons of a Carbon Tax. Research and be able to explain the cap-and-trade program in the U.S.
3. Using the sector performance across the four cycles (phases) of business to discuss in which of the cycles the environment would be affected most.
4. Another way to look at how environmental policy affects the economy is by the amount of money that the government invests in “green” or “clean” projects. Research and identify three (3) examples of the government investing in green projects.
5. Research the success or failure of green businesses that were started with investment from the government to spur growth in the economy.



# Chapter 3: Economics



## Green Careers

There are many sub elements of economics. One of these is the field of environmental economics. Environmental economics involves the study of how environmental policy impacts the economy.

Environmental Economists design and recommend new environmental policy, and analyze the benefits and impact of existing environmental policy on the economy.

If this is a career that you're interested below is some career information on the position of Environmental Economist.



# Chapter 3: Economics

## Environmental Economist

### Position Tasks

- Assess the costs and benefits of various activities, policies, or regulations that affect the environment or natural resource stocks.
- Conduct research on economic and environmental topics, such as alternative fuel use, public and private land use, soil conservation, air and water pollution control, and endangered species protection.
- Conduct research to study the relationships among environmental problems and patterns of economic production and consumption.
- Develop economic models, forecasts, or scenarios to predict future economic and environmental outcomes.
- Develop programs or policy recommendations to promote sustainability and sustainable development.

### Position Tools & Technology

**Analytical or scientific software** — Econometric Software LIMDEP; General algebraic modeling system GAMS; Global Insight AREMOS; Quantitative Micro Software EViews

**Data base user interface and query software** — Microsoft Access; MySQL software

**Development environment software** — C; Formula translation/translator FORTRAN; Microsoft Visual Basic

### Wages & Employment Trends

National Median wages (2010) \$43.00 hourly, \$89,450 annual

Employment (2008) 15,000 employees

- Projected Growth (2008 – 2018) Slower than average (3% to 6%)

Projected Job Openings (2008 – 2018) 5,000

Industries (2008) [Government](#) and Professional, Scientific, and Technical Services

Source: [www.onetonline.org](http://www.onetonline.org)



# Chapter 3: References

## Websites

American Recovery & Reinvestment Act of 2009

([http://online.wsj.com/public/resources/documents/STIMULUS\\_FINAL\\_0217.html](http://online.wsj.com/public/resources/documents/STIMULUS_FINAL_0217.html))

TIGER III Award Recipients

([http://www.dot.gov/tiger/docs/FY2011\\_TIGER.pdf](http://www.dot.gov/tiger/docs/FY2011_TIGER.pdf))

O\*Net (Career Exploration and Analysis)

(<http://onetonline.org>)

## References

Ferrell, O. C., Hirt, G. A., & Ferrell, L. (2011). Business a Changing World. McGraw-Hill: New York, N.Y.

Kelly, M. & McGowen, J. (2012). BUSN4. South-Western, Cengage Learning: Mason, OH

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# Chapter 4: Global Business

Supplement to Business Administration Course (BMGT-1301)



# Chapter 4: Learning Objectives

## **Green Learning Objectives**

- Describe aspects of trading as it relates to the environment
- Distinguish between a global business strategy and other strategies with regard to the environment



# Chapter 4: Global Business

As the internet becomes a larger part of how businesses market and generate revenue, businesses small and large are becoming more global. The challenge that many businesses face is how to manage their business in a borderless world.

An even greater challenge involves how businesses manage environmental requirements and regulations that may differ country to country and which is the best strategic approach.





# Chapter 4: Global Business

## Strategic Approaches

There are two primary strategies that businesses utilize while making global business decisions.

**Multinational Strategy** (customization) – where a company treats each nation in which they operate in a different way (Vegetarian dishes in McDonald's in India, Spicy dishes (with JalepeNo) in McDonald's in South Texas)

**Global Strategy** (standardization) – where a company sells the same product in the same way throughout the world (Starbucks, Coca-cola)

With regard to environmental strategies organizations utilize both multinational and global strategies for implementing environmental programs and following regulations. Those businesses that care for the environment and want to implement the best practice across the board will standardize environmental practices that meet or exceed the regulations of each of the countries in which they operate. Other companies find it best to implement environmental programs and practices that meet (customization) the specific requirements of the countries in which they operate.



# Chapter 4: Global Business

A notable aspect of standardization on environmental practices is the Kyoto Protocol. While this treaty is not driven by businesses, the governments in all countries in the world have signed onto the Kyoto Treaty except for the United States. Canada as a prior member submitted notice of their withdrawal from the treaty in 2011.

The treaty is focused on reducing the impact of global warming through the control, monitoring, and reduction of emissions. The Kyoto Protocol was adopted on December 11, 1997 and enforced beginning February 16, 2006 ([www.unfccc.int/kyoto\\_protocol/background/items/2879.php](http://www.unfccc.int/kyoto_protocol/background/items/2879.php)).

The key element of the treaty is an average reduction of Greenhouse Gas (GHG) emissions by 5% compared to 1990 levels over a period from 2008-2012. There are three ways that these countries are able to meet these targets:

1. Emissions Trading
2. Clean Development Mechanism
3. Joint Implementation



# Chapter 4: Global Business

## Emissions Trading

Emissions trading is an approach to pollution reduction that provides incentives for countries, states, and businesses to reduce emissions (i.e., carbon, methane, nitrous oxide, hydrofluorocarbons).

The emission trading system consists of the following:

1. A cap (or target) on emissions is set (typically by a governmental body, or group such as in the case of the Kyoto Protocol).
2. The cap is sold to businesses in the form of emission credits (equivalent to their amount of emissions, not to exceed the cap)
3. In order to acquire additional credits a business must buy them from someone who did not utilize their credits

Once the credits are transferred then a trade has occurred (seller rewarded for reduction in emissions, buyer paying a price for additional emissions)

While the U.S. is not a member of the Kyoto Protocol there are cap-and-trade programs that exist. One such program that has seen success is the acid rain program.



# Chapter 4: Global Business

## Top Ten CO<sub>2</sub> Country Emissions in 2010

Country	Million Tons	% Change from 2009
World	33,158	5.8%
China	8,333	10.4%
United States	6,145	4.1%
European Union	4,143	2.2%
India	1,708	9.2%
Russian Federation	1,700	6.1%
Japan	1,308	6.8%
Germany	828	3.7%
South Korea	716	8.5%
Canada	605	2.6%
Saudi Arabia	563	7.0%

Source: (<http://www.reuters.com/article/2011/12/01/us-climate-emissions-idUSTRE7B02E420111201>)



# Chapter 4: Global Business



## Green Business Challenges / Successes

Protecting the environment is not limited to a particular city, state, or country. All countries have concern about how business impacts the environment. As such each country typically will address the environmental challenges that are unique to their situation, key natural resources, and ability to impact change. Below are examples of how different countries are dealing with environmental issues in their country.

-  Woodlot Management in Tanzania
-  Waste Management in the Republic of Korea
-  Organic Agriculture in Cuba
-  Ecosystem Restoration in Rwanda
-  Renewable Energy in China
-  Feed-in Tariffs in Kenya
-  Sustainable Urban Planning in Brazil

Source: UNEP, 2010



# Chapter 4: Global Business



## Green Cases, Assignments, & Projects

### Assignment 1:

Identify a company that you and your team members frequent (i.e., Target, Walmart, HEB). Identify all of the countries that the company has locations. Select three countries and identify one environmental activity that each of these countries is focused on improving. Provide evidence.

### Assignment 2:

Using the table in this chapter of the Top Ten Countries' CO<sub>2</sub> emissions create a graph of the information in the table. Provide a minimum of five conclusions that can be made from this information.

### Assignment 3:

Select one of the countries in the listing above of environmental projects, conduct research, and provide details of the environmental project from one of the listings above.

### Assignment 4:

Select one of the global environmental positions and research the responsibilities of the position, educational requirements, and the company's commitment to the environment.



# Chapter 4: Global Business



## Green Careers

Because of the nature of business becoming more global, there are a variety of positions that were once relegated to one site. Now, many of these positions have become positions where the manager is responsible for the functional activity of their departments worldwide. Below are examples of some of the possible positions available at a global, environmental level.

### **Global Environmental Manager**

Celanese – Dallas, OR

### **Global Environmental Health and Safety (EHS) Manager**

Chemicals Company – Omaha, NE

### **Global Supply Chain Leaders, Environmental Services**

GE – Kansas City, MO

### **Global Environmental Health & Safety Director**

Perrigo – Allegan, MI

### **Global Consultant – Hydrocarbon Supply Chain Optimization**

Shell - Texas

Source: (<http://jobs.businessweek.com/a/all-jobs/list/q-global+environmental+company>)



# Chapter 4: References

## References

Ferrell, O. C., Hirt, G. A., & Ferrell, L. (2011). *Business a Changing World*. McGraw-Hill: New York, N.Y.

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# Chapter 5: Business Ownership

Supplement to Business Administration Course (BMGT-1301)



# Chapter 5: Learning Objectives

## **Green Learning Objectives**

- Understand a new form of business ownership focused on social and environmental responsibility
- Understand how other forms of business relationships are tied to environmental business concerns



# Chapter 5: Business Ownership

There are four primary forms of business ownership. Each form has its advantages and disadvantages based on the ease of formation, structure of taxation, retention of profits, availability of resources, etc.:

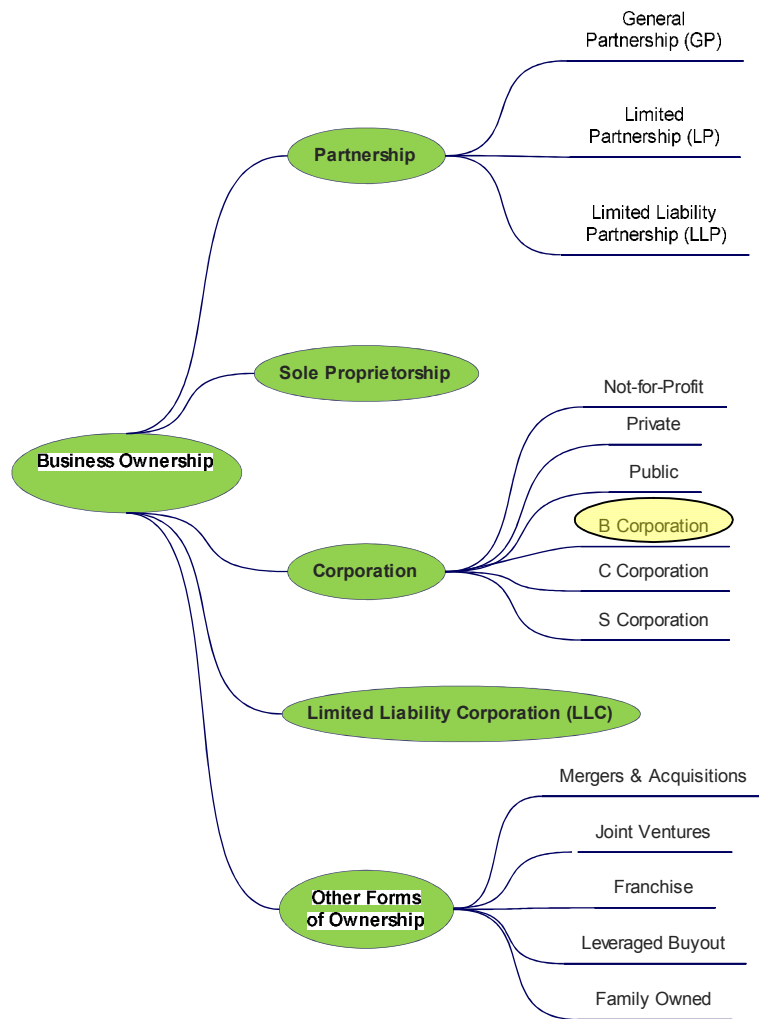
1. Sole Proprietorship
2. Partnership
3. Corporation
4. Limited Liability Corporation (LLC)

In April 2010, the state of Maryland became the first state to allow the formation of a new type of business called a Benefit Corporation (B Corporation). This type of corporation is similar to a C Corporation, with the additional requirement that the company's bylaws have specific social or environmental goals that they are held accountable for by law. These corporations came as a result of companies looking for an alternative to the for-profit structures. The movement started as firms seeking certification as B Corporations by B Lab. This type of corporation will be discussed in more detail below.



# Chapter 5: Business Ownership

There are many forms of ownership that potential business owners can select from. See mind map below for the various options and how the B Corporation fits into the big picture.



# Chapter 5: Business Ownership

## Benefit Corporations

Interest in B Corporations began as a group of 81 companies in 2007 becoming certified by B Lab as B Corporations. This has since evolved to a formal, legal, ownership structure. Maryland became the first state to pass the B Corporation Legislation in April 2010.

## Maryland Benefit Corporation

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**Status:** Passed April 2010

**Sponsors:** [Sen. Jamie Raskin](#), [Sen. Brian Frosh](#), [Rep. Brian Feldman](#)

**Legislation:** [SB690/HB1009](#)

**Key Supporters:** Jim Epstein, Michael Shuman

**Quotes/Testimony:** Sen. Jamie Raskin, Rep. Brian Feldman, [Michael Shuman](#)

**Helpful Documents:** [How to Become and Operate as a Benefit Corporation](#); [MD Lawyers Familiar with Benefit Corporation](#)



# Chapter 5: Business Ownership

Currently there are 517 *certified* B Corporations that generate \$2.9 Billion in revenue, across 60 industries, with \$2 million in annual savings.

Other states including Maryland that have passed B Corporation legislation are Vermont: *Clean Yield*, California: *Patagonia*, Virginia: *Rivanna Natural Designs*, New Jersey, and Hawaii.

Other states that have legislation pending are North Carolina, Pennsylvania, Michigan, and Washington, D.C.

Core Principles of the B Corporation are:

1. A corporate purpose to create a positive impact on society and the environment
2. Changes duty of owners to consider non-financial interests (social and environmental) when making decisions
3. Report on overall social and environmental performance using a recognized third party standard



## Green Cases, Assignments, & Projects

Case Study – Patagonia (<http://www.patagonia.com/us/home>)



# Chapter 5: References

## Websites

[www.bcorporation.net/publicpolicy](http://www.bcorporation.net/publicpolicy)

[www.bcorporation.net/](http://www.bcorporation.net/)

<http://www.inc.com/guides/201106/how-to-become-a-benefit-corporation.html>

<http://benefitcorp.net/>

## References

Ferrell, O. C., Hirt, G. A., & Ferrell, L. (2011). Business a Changing World. McGraw-Hill: New York, N.Y.

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Kurtz, D. L. & Boone, L. E. (2011). Contemporary Business. John Wiley & Sons, Inc.: Hoboken, N.J.



# Chapter 6: Entrepreneurship





# Chapter 6: Learning Objectives

## **Green Learning Objectives**

- Knowledge of different types of Environmental Entrepreneurs
- Knowledge of “green” entrepreneurial opportunities



# Chapter 6: Entrepreneurship

An entrepreneur is a person who takes on the full risks (personal, financial, etc.) associated with the set up and implementation of a new business idea.

There are various types of entrepreneurs:

- **Classic entrepreneur** – *identifies business opportunities for which they allocate resources and attempt to make profitable.*
- **Serial entrepreneur** – *individuals that repeatedly start a business, run it, and then they start another business.*
- **Lifestyle entrepreneur** – *individuals who start businesses in order to have the flexibility to live the way in which they choose (i.e., fishing once a week, 3 day work week, start the day at 10:00 am, etc.).*
- **Social entrepreneur** – *individuals that recognize a societal or other problem for which they develop a business.*
- **Environmental entrepreneur** - *individuals that recognize a environmental or other problem for which they develop a business, also called ecopreneur, green entrepreneur, eco-entrepreneur, enviopreneur (PERC).*



# Chapter 6: Entrepreneurship

The social and environmental entrepreneurs are seen as being innovative, and they typically start their business for a higher purpose other than achieving a profit. However there are examples of companies such as Ben & Jerry's, and Patagonia that are profit based but emphasize environmental and societal action in addition to achieving a profit.

Environmental businesses can be classified into four segments (Linnen, 2002):

1. Nature oriented businesses (eco-tourism, habitat preservation, etc.)
2. Producers of environmental technology (to reduce environmental impact on water, air, and soil)
3. Providers of environmental management services (use environmental excellence as a source of competitive advantage)
4. Producers of environmentally friendly products and processes (provide better performing products over the life of the product or process)

Drivers of eco-businesses across these four segments are geographical influence (local, regional, international, global), reason for market emergence (market or regulation), and degree of enforcement (high or low).



# Chapter 6: Entrepreneurship

## **Nature oriented businesses**

- Flower grower that shifts from traditional soil to a rock wool medium that reduces water usage
- Nature oriented tourism

## **Producers of environmental technology**

- Alternative energy technologies (solar, wind, etc.)
- G.E.'s Ecomagination

## **Providers of environmental management services**

- LEED Certification
- Waste management and recycling
- Environmental Compliance (3<sup>rd</sup> Party assessment)

## **Producers of environmentally friendly products and processes**

- Hitachi six screw washing machine – improves ease of production by using 33% less time to assemble
- Toyota hybrid vehicles
- Product Life cycle assessment



# Chapter 6: Entrepreneurship



## Green Cases, Assignments, & Projects

1. What characteristics of success of an environmental entrepreneur differ from that of a traditional entrepreneur?
2. What skills are similar / different between an environmental entrepreneur and a traditional entrepreneur?
3. If you decided to become an environmental entrepreneur, what type of business would you be most likely to start?
4. What type of franchise opportunities exist for the environmental entrepreneur?
5. What role does innovation play in the success of an environmental entrepreneur?
6. What type of environmental entrepreneurial opportunity do you believe also makes the most profit and why?
7. What percentage of time should employees be allowed to spend developing environmental ideas within an organization (intrapreneur)?



# Chapter 6: Entrepreneurship



## Environmental Entrepreneurial Careers

Many educational institutions have embraced the importance of educating students about the importance of social and environmental responsibility of organizations. As the green economy is promoted and evolved there are many entrepreneurial opportunities in various areas of emphasis.

Wind Entrepreneurship

Solar Entrepreneurship

Environmental Science Entrepreneurship

Carbon/CO<sub>2</sub> Emissions Entrepreneurship

Conservation / Sustainability Entrepreneurship

Geothermal Power Entrepreneurship

Mass Transit Entrepreneurship

Organic Farming Entrepreneurship

Natural Building Entrepreneurship

Green Engineering Entrepreneurship

Source: (<http://greencareersguide.com/Environmental-Science-Business-Entrepreneurship>)



# Chapter 6: References

## References

Ferrell, O. C., Hirt, G. A., & Ferrell, L. (2011). *Business a Changing World*. McGraw-Hill: New York, N.Y.

Kelly, M. & McGowen, J. (2012). *BUSN4*. South-Western, Cengage Learning: Mason, OH

Kurtz, D. L. & Boone, L. E. (2011). *Contemporary Business*. John Wiley & Sons, Inc.: Hoboken, N.J.

Linnanen, L. (2002). *An insider's experiences with environmental entrepreneurship*. Greenleaf Publishing: <http://www.greenleaf-publishing.com>.



# Chapter 7: Management & Leadership

Supplement to Business Administration Course (BMGT-1301)





# Chapter 7: Learning Objectives

## **Green Learning Objectives**

- Understand the five functions of management as they relate to the environment
- Understand the impact of an environmental focus on organizational structures
- Understand the impact of an environmental focus on various levels of planning



# Chapter 7: Management & Leadership

There are five recognized functions of management:

1. **Planning** – establishing organizational goals and objectives
2. **Organizing** – establishing the structure to support achievement of the goals and objectives of the organization
3. **Staffing** - hiring the necessary resources to fill positions within the organizational structure needed to meet organizational goals and objectives
4. **Leading** – influencing and motivating the human resources to achieve stated organizational goals and objectives
5. **Controlling** – occurs within each of the other functions, involves comparing actual performance to planned performance



# Chapter 7: Management & Leadership

Example of activities at each of the five functions of management include:

## Planning

- Establishing environmental goals and objectives
  - Reduce CO<sub>2</sub> emissions by 20%
  - Reduce waste water by 10%
  - Develop 5 new environmentally friendly versions of existing products
  - Improve efficiency of processes to use less electricity and other resources

## Organizing

- Establishing organizational structure with environmentally based positions
  - Chief Sustainability Officer
  - Environmental Engineer
  - Environmental Continuous Improvement Specialist
  - Environmental Manager
  - Environmental Scientist



# Chapter 7: Management & Leadership

## Staffing

- Recruiting, Selecting, Hiring, Training, and Development of Environmental Resources
  - Developing a pool of resources to support environmental initiatives
  - Developing assessments to select resources that value the environment
  - Offering training and developmental opportunities around aspects associated with the environment
  - Developing structure with promotional path for environmental employees

## Leading

- Influencing and motivating others to achieve the goals and objectives of the organization
  - Establishing vision and mission statements around protecting the environment
  - Communicating performance to environmental goals and objectives
  - Establishing an organizational culture that promotes integrating care and concern for the environment in organizational decisions and actions



# Chapter 7: Management & Leadership

## Controlling

- Measuring actual performance to planned performance and making the necessary adjustments as needed
  - Achieved 15% reduction in CO<sub>2</sub> emissions
  - Invested \$1.5 million in the development of more environmentally sound products
  - Reduced waste in the process by 25%

The planning function within organizations exists at various levels of management. Each level contributes to the development of an environmental culture.

Level	Plan	Example
Top	Strategic	Reduce the level of CO <sub>2</sub> emissions by 25%
Middle	Tactical	Evaluate the level of CO <sub>2</sub> emissions of each piece of equipment in the plant
1 <sup>st</sup> Level	Operational	Monitor emissions output of each machine on a daily basis



# Chapter 7: Management & Leadership

Management within organizations also involves the creation of organizational structures that best support the goals and objectives of the organization. There are five types of departmentalization of organizations.

1. Product
2. Process
3. Functional
4. Geographic
5. Customer / Market

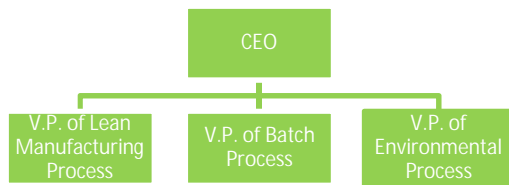
Each of these types of departmentalization structures can be adjusted to accommodate an environmental approach.

## Product



# Chapter 7: Management & Leadership

## Process

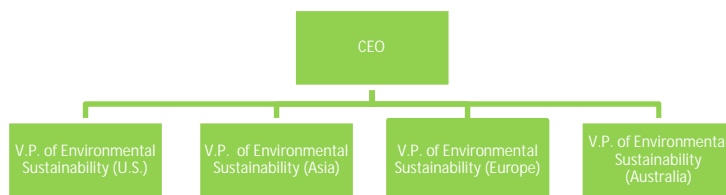


## Functional

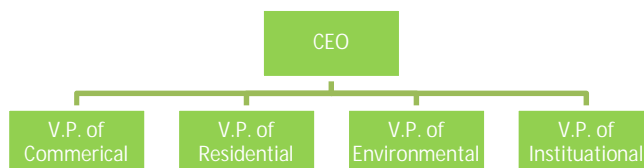


# Chapter 7: Management & Leadership

## Geographic



## Market / Customer





# Chapter 7: Management & Leadership

There are various theories and styles of leadership. Research suggests that firms that make the choice to be sustainable do so for one of several reasons. They have to (involuntary: legislated, competition, NGOs) or they want to (voluntary: environmentally responsible).

Research suggests that leaders of environmentally based organizations have the following characteristics (Egri & Herman, 2000):

## **Values**

- More eco-centric
- More open to change
- More self-transcendent

## **Personality**

- Need for achievement
- Need for affiliation
- Need for power
- Emotional maturity
- Self-confidence

## **Leadership Skills**

- Interpersonal
- Conceptual
- Technical
- Political



# Chapter 7: Management & Leadership



## Green Cases, Assignments, & Projects

Discuss and match the vision/mission statements to the appropriate company

Vision / Mission Statement	Company
1. "Our Company's foundation is built on our Values, which distinguish us and guide our actions. We conduct our business in a socially responsible and ethical manner. We respect the law, support universal human rights, protect the environment, and benefit the communities where we work."	<b>A. Chevron</b>
2. "Committed to a role of environmental leadership in all facets of our business. We will fulfill this mission by a commitment to: <ul style="list-style-type: none"> <li>· Understanding of environmental issues and sharing information with our partners (employees).</li> <li>· Developing innovative and flexible solutions to bring about change.</li> <li>· Striving to buy, sell and use environmentally friendly products.</li> <li>· Recognizing that fiscal responsibility is essential to our environmental future.</li> <li>· Instilling environmental responsibility as a corporate value.</li> <li>· Measuring and monitoring our progress for each project.</li> <li>· Encouraging all partners to share in our mission"</li> </ul>	<b>B. Starbucks</b>
3. "To provide our customers with the highest quality imaging products, world-class service and recycling programs that help protect the environment. "	<b>C. Clover Technologies Group</b>
4. "We are committed to the safety and development of our people and the communities and societies in which we operate. We aim for no accidents, no harm to people and no damage to the environment."	<b>D. British Petroleum</b>
5. "Soul reflects our commitment to corporate responsibility. It's a holistic approach to business that recognizes the close connection between our financial success and our desire to make a positive impact on our associates, communities, and the planet by joining together the following areas: diversity, the environment, our community, and ethics."	<b>E. Staples</b>
6. "LG Electronics' Promise3 represents the promises made to the people, the Earth, and LG Electronics itself: a society in which LG Electronics' employees, stakeholders, and the entire population can live happily; the Earth which we help make a cleaner, safer place for generations to come by carrying out various environmental activities; and LG Electronics as one of the top international players thanks to its innovative spirit. LG Electronics aims at to realize these three dreams."	<b>F. LG Electronics</b>
7. "Our commitment to sustainability extends through all phases of our product's life cycle, from design and manufacturing to support and end of life. Our considerations focus on reducing resource consumption in our development process and reducing resource and related emissions consumption by our products."	<b>G. Cisco</b>



# Chapter 7: Management & Leadership



## Green Rankings

### 2011 Top U.S. Environmental Organizations

(Newsweek ranking that measures an organization's environmental impact, environmental management, and its disclosure)

Ranking	Company	Environmental Score
1	IBM	82.5
2	Hewlett Packard	75.8
3	Sprint Nextel	75.6
4	Baxter	74.9
5	Dell	74.7
6	Johnson & Johnson	74.6
7	Accenture	74.0
8	Office Depot	73.6
9	CA Technologies	72.6
10	NVIDIA	71.9
11	Agilent Technologies	71.7
12	Hartford Financial Services Group	71.6
13	EMC	71.5
14	Adobe Systems	71.4
15	Intel	70.9
16	Cognizant Technologies	70.7
17	Staples	70.7
18	Motorola Solutions	70.7
19	Best Buy	70.2
20	Allergen	70.1

Source: (<http://www.thedailybeast.com/newsweek/features/green-rankings/2011/us.html>)



# Chapter 7: Management & Leadership

Organizations demonstrate their commitment to the environment even further by developing detailed environmental policy statements such as that by BDO.

## BDO Environmental Policy Statement

### Our commitments

To address the above areas BDO has adopted the following commitments:

Measurement	Collect and analyse data on significant environmental impacts outlined above
Management	Develop our environmental management systems to ISO14001 standards, gain certification and thereafter maintain our certification through continual improvement
Targets	Set and regularly review commitments to ensure continual improvement in our environmental performance
Communication	Engage staff to promote good environmental awareness and behaviour, communicate environmental policy and our wider approach internally and externally
Energy use	Regularly evaluate current and future energy use to identify potential firm wide reductions
Procurement	Include environmental criteria when choosing services and goods to purchase
Compliance	Comply with all relevant existing environmental legislation, regulations and corporate codes of conduct.

Source: [http://static.bdo.uk.com/assets/documents/2010/05/BDO\\_LL\\_P\\_-\\_Environmental\\_policy.pdf](http://static.bdo.uk.com/assets/documents/2010/05/BDO_LL_P_-_Environmental_policy.pdf)



# Chapter 7: Management & Leadership

## World Vision UK Environmental Policy Statement

We will develop an Environmental Management System. This will enable us to manage our in-house environmental aspects more effectively, on a 'day-to-day' basis and on an 'on-going' basis, thereby complimenting our commitment to continual improvement in all our business activities. As part of the EMS, we will:

- periodically schedule and carry out environmental management audits and reviews designed to measure our progress and to remain compliant with current and emerging Statutes.
- review, where appropriate refine and report on the targets that we have set at least annually.
- continue to improve in the reduction and monitoring of the production of waste, the reduction of pollution and emissions compliance with environmental legislation and environmental codes of practice.
- provide clear guidance, relevant learning opportunities and appropriate challenge and support to employees to help make this happen, such that they are able to perform their duties in a way that does not compromise our environmental policy and objectives.

This policy will be communicated to everyone working for or on behalf of World Vision UK.

Source: <http://www.worldvision.org.uk/about-us/internal-environment-policy-statement/>



# Chapter 7: References

## Websites

[www.missionstatements.com](http://www.missionstatements.com)

[www.company-statements-slogans.info/list-of-companies-a/index.htm](http://www.company-statements-slogans.info/list-of-companies-a/index.htm)

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# Chapter 8: Human Resource Management

Supplement to Business Administration Course (BMGT-1301)



# Chapter 8: Learning Objectives

## **Green Learning Objectives**

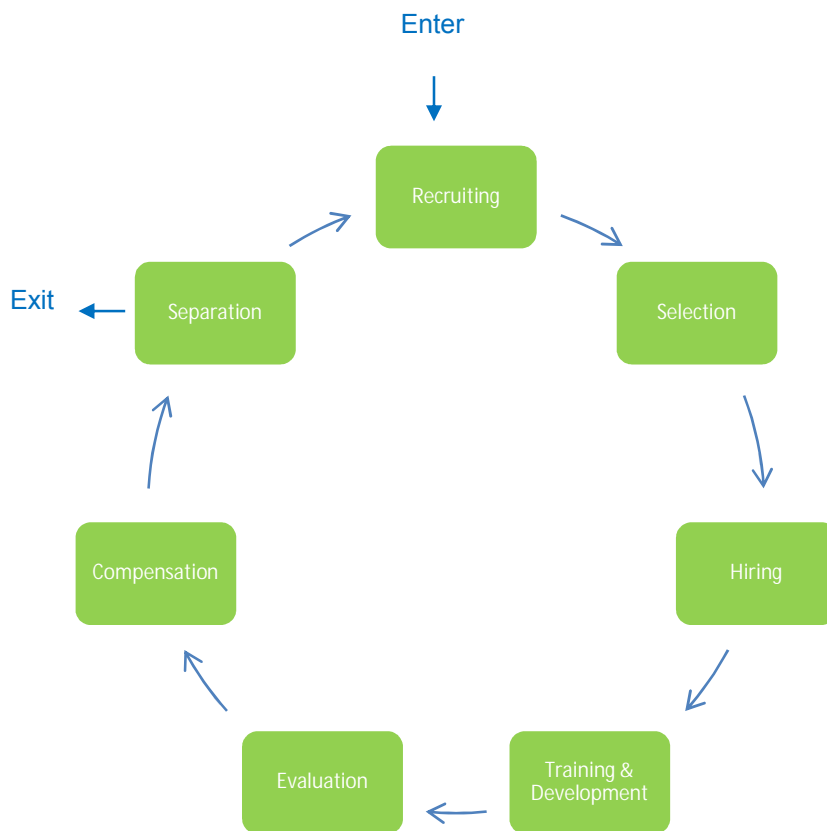
- Understand how the Human Resource Management cycle is impacted by an environmental organizational focus





# Chapter 8: Human Resource Management

The Human Resource Management (HRM) function involves a cycle of activities that move human resources into, within, and out of the organization.



# Chapter 8: Human Resource Management

Each of the elements of the HRM cycle as they relate to the environment is reviewed.

Seventh Generation is an organization that was founded on protection of the environment. For every product that they make they commit that it will leave little or no impact on the environment.

**Recruiting**

**Selection**

**Hiring**

**Training & Development**

**Evaluation**

**Compensation**

**Separation**

[Next Generation Videos](#)



# Chapter 8: Human Resource Management

## **Recruiting**

- Create positions that are focused on environmental aspects within the organization
- Develop job descriptions based on sustainability (Chief Sustainability Officer, Director of Sustainability, Environmental Manager)

## **Selection & Hiring**

- Select candidates that have an interest in sustainability
- Assess the level of commitment that a potential candidate has toward sustainability

## **Training & Development**

- Provide Environmental Sustainability training
- Conduct workshops on developing environmentally sound products and processes
- Allow employees to participate in volunteer activities on company time that impacts the environment



# Chapter 8: Human Resource Management

## **Evaluation**

- Include actions within the formal Performance Management system that address reducing impact on the environment

## **Compensation**

- Offer incentives, bonuses, etc. based on environmental performance
- Offer ownership in the organization to employees



# Chapter 8: Human Resource Management



## Green Cases, Assignments, & Projects



Source: EPI Indicator Framework <http://epi.yale.edu/sites/default/files/downloads/2012-epi-full-report.pdf>

Utilizing the 2012 Environmental Performance Indicator (EPI) Framework provided above

The Index is made up of two primary categories:

1. Environmental Health (30%)
2. Ecosystem Vitality (70%)



# Chapter 8: Human Resource Management

Environmental Health consists of three categories:

1. Environmental Health (15%)
2. Air (7.5%)
3. Water (7.5%)

Ecosystem Vitality consists of seven categories:

1. Air (8.75%)
2. Water Resources (8.75%)
3. Biodiversity & Habitat (17.5%)
4. Agriculture (5.83%)
5. Forests (5.83%)
6. Fisheries (5.83%)
7. Climate Change & Energy (17.5%)

## **Activity:**

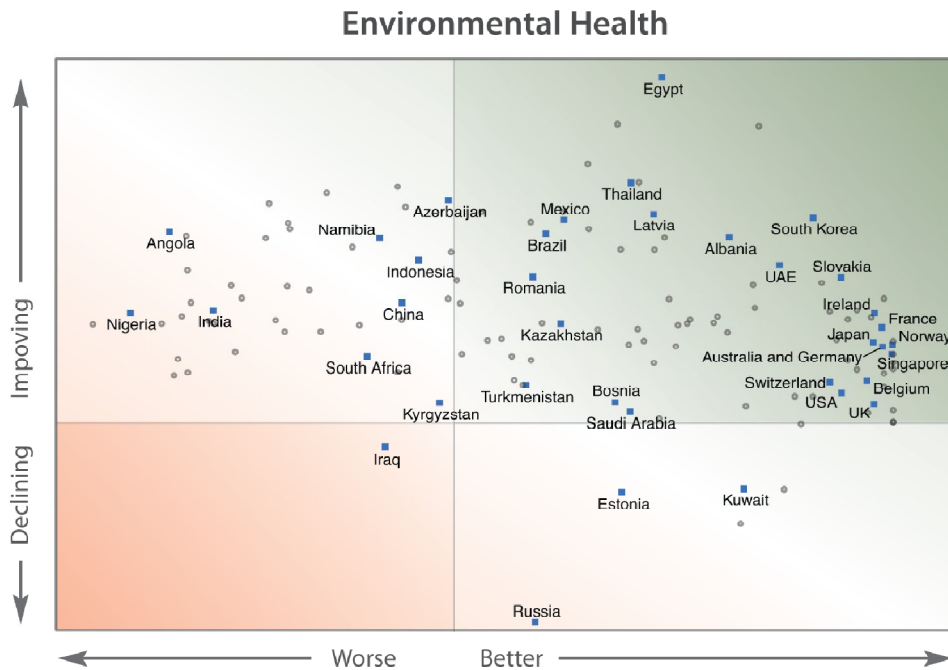
Using the above elements from the EPI Framework develop a Performance Evaluation Plan for one of your employees based on these environmental elements.



# Chapter 8: Human Resource Management



## EPI Country Rankings



Source: <http://epi.yale.edu/sites/default/files/downloads/2012-epi-full-report.pdf>

### Discussion:

If you are a business person in which country would you want to open your next business operations? Why?



# Chapter 8: References

## Websites

[www.seventhgeneration.com](http://www.seventhgeneration.com)

[www.company-statements-slogans.info/list-of-companies-a/index.htm](http://www.company-statements-slogans.info/list-of-companies-a/index.htm)

[www.epi.yale.edu/sites/default/files/downloads/2012-epi-full-report.pdf](http://www.epi.yale.edu/sites/default/files/downloads/2012-epi-full-report.pdf)

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# Chapter 9: Operations Management

Supplement to Business Administration Course (BMGT-1301)



# Chapter 9: Learning Objectives

## **Green Learning Objectives**

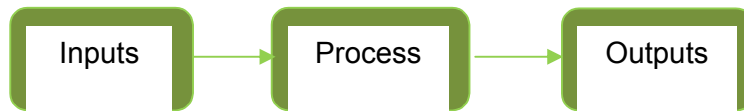
- Understand the role of business in developing green operations
- Knowledge of the importance of green design
- Examples of green products and processes



# Chapter 9: Operations Management

Operations Management is the management of the resources (material, human, buildings, equipment, etc.) used in the transformation of inputs into outputs.

Operations are designated as either manufacturing or service operations. The U.S. is considered a service economy because over 80% of the goods produced in the U.S. are by service businesses. Services play a major role in the U.S. economy.



Customer order Coffee beans Coffee filters Coffee maker Cream Sugar Cups	→	Combine Ingredients	→	Cup of Coffee	Service
Flat Tire	→	Repair Tire Replace Tire	→	New Tire	Service
Leather cover Bladder Lace	→	Assemble Components	→	New Football	Mfg.
Plastic Mold Injection Molding Machine	→	Process Components	→	Molded Plastic Component	Mfg.



# Chapter 9: Operations Management

- Location Decision
- Process Selection
- Facility Layout
- Cost Control
- Technology
- Production Planning
  - Selection of Suppliers
  - Inventory Control
  - Production Systems
    - Lean Manufacturing
  - Quality Control
    - Six Sigma
  - Environmental Control
    - ISO 14001



# Chapter 9: Operations Management

## Location Decision

Location decisions involve selecting the where one plans to open and operate their business. As businesses grow, most organizations make this decision based on serving a particular population. However when making this decision with regards to the environment other elements need to be considered.

- How does the location decision impact transportation costs (impact on CO<sub>2</sub> emissions)?
- How does the location decision support employee actions that impact the environment: carpooling, riding bike to work, public transportation (impact on CO<sub>2</sub> emissions, employee health)?
- How does the location decision impact physical factors such as water and energy access?
- How does the location decision impact human factors (provide jobs, improve the local community)?
- Does the government in the area offer green incentives?

**Example:** Volkswagen decides to build a facility in Chattanooga, TN to serve its clients in the U.S. and ultimately to reduce transportation costs from Germany.



# Chapter 9: Operations Management

## Process Selection

Giving consideration to the process requires evaluation of the inputs and the primary outputs. The inputs into the process have to be produced (manufactured) and delivered (transported in). The process itself also generates waste and may require some transportation. The outputs must be transported to the customer and ultimately disposed of at end-of-life.

The process choice impacts the environment significantly because of the type of products inputted into the transformation process, all of the waste resulting from the process, and how the final product is transported and dealt with once it becomes waste also.

**Example:** Goodyear Tire has made the processing choice of collaborating with another manufacturer to produce tires with synthetic rubber made with sugar instead of using Isoprene based synthetic rubber which is bad for the environment.

## Facility Layout

Facility layout involves deciding where to place resources to support the production of a product or service. There are a variety of possible layouts.

- Process layout
- Product layout
- Customer-oriented layout
- Fixed position layout



# Chapter 9: Operations Management

A process layout involves grouping machines and equipment based on the functions that they provide. A product layout involves grouping machines and equipment based on the product to be produced. A customer layout involves grouping machines and equipment based on products produced for a specific customer. There is also the fixed position layout which involves placing the product in one spot and moving the machines, workers, etc. to the product.

Each of these layouts could have a different impact on the environment. The selection of the layout can impact how waste is created and managed. Waste management is a major concern for operations personnel that must control the level of waste and costs.

**Example:** Two companies produce the same product, but decide to use different facility layouts. One uses a product layout while the other uses a process layout. If both companies use a similar supplier and have an environmental issue with this supplier the following would result:

**Process Layout** – Only the process that uses this supplier’s component is impacted (easier to identify and fix)

**Product Layout** – All the product lines that use this component throughout the plant are impacted (more involved issue to identify and fix)



# Chapter 9: Operations Management

## Cost Control

Controlling costs is one of the primary functions of an Operations Manager. There are many ways in which organizations use their environmental initiatives to reduce and/or control costs.

- **Walmart** – increasing the efficiency of its truck fleet by 38%, changing its lighting and other electrical items for increased efficiency (reducing costs through more efficient operations)
- **New Belgium Brewing** – first brewery to adopt 100% wind powered electricity (reduce cost through use of more efficient energy source)
- **Fairmont Minerals** – switched from trucks to a conveyor system to move sandstone (reduced operating costs by \$400,000)
- **AAMCO Transmissions** – recycles cleaning solvents and uses waste transmission fluid to heat stores (\$40,000 - \$50,000 in energy, waste removal, and cleaning operating costs)





# Chapter 9: Operations Management

## **Technology**

Technology is defined as a practical application of knowledge or a manner in which an organization may accomplish tasks using technical processes, methods, or knowledge.

## **Green Technology**

Green Technology consists of processes, methods, materials, and techniques used for everything from generating innovative new forms of energy to the development of green products and processes.

Some Green Technology subject areas are:

**Green Energy** – developing new and innovative forms of alternative fuels and making energy more efficient

**Green Building** – building structures and incorporating materials that are more energy efficient and less damaging to the environment

LEED Certification in a way in which organizations and individuals can ensure that their building and/or homes are energy efficient.

**Green Purchasing** – developing, selecting, and purchasing from suppliers that utilize processes and develop products that have minimal impact on the environment, generate less waste, or are more energy efficient.



# Chapter 9: Operations Management

**Green Chemistry** – developing and implementing chemical products and processes that eliminate hazardous chemicals

**Green Nanotechnology** – utilizing green chemistry and green engineering principles to develop materials at the nano (one billionth of a meter) scale

**Green Design** – developing and implementing green products and processes that are energy efficient, minimize waste, and have minimal impact on the environment in the future



# Chapter 9: Operations Management



## Green Metrics / Tools

Tools and techniques used for Green Design include:

- **Life Cycle Assessment (LCA)** – measure environmental effect of a product or process from the supplier to the manufacturer
- **Material Flow and Cycles** – evaluation of whether process is closed loop (end-of-life product used for same function) or open loop (end-of-life product used for different function)
- **Value Stream Mapping (VSM)** – map of the current state of a product/process (information, inventory, and process flow), team evaluation and brainstorming of improvements, and lastly development of a future state map
- **Social Responsibility Failure Mode and Effects Analysis (SRFMEA)** – assessment of risk associated with a product or service related to its environmental impact
- **Design for Environment (DfE)** – consumer labeling initiative sponsored by the Environmental Protection Agency (EPA) that denotes products that have met the criteria of being designed for the environment.



# Chapter 9: Operations Management

Planning for production also requires elements that may have a direct and significant impact on the environment.

**Selection of suppliers** impacts manufacturers when they have been held responsible for a supplier using a hazardous material such as paint with high levels of lead (red Thomas the Train). Organization can take various steps to ensure that their suppliers are environmentally friendly.

- Conduct supplier assessments to ensure that they are not utilizing, generating, or polluting with hazardous materials
- Conduct supplier assessments to ensure that they are utilizing energy efficient approaches to their business practices
- Include environmental clauses into the purchasing contracts
- Require supplier to conform to some international standard such as ISO 14001



# Chapter 9: Operations Management

**Inventory control** consists of managing inventory at various stages in the production and/or service process. There is incoming inventory that is managed. There is in house inventory that must be stored, managed, and controlled for shortages, damage, theft, etc. Then there is the final goods inventory that must be maintained in good condition for transportation to the customer.

How this material is transported, disposed of, processed at end-of-life all significantly impact the environment.

**Production Systems** such as Lean Manufacturing allow organizations to identify, eliminate, and manage waste more efficiently. Lean Manufacturing is a concept that was developed by the Toyota and was a key component of the Toyota Production System (TPS).

*Lean Manufacturing* involves conducting short, quick workshops that identify and eliminate waste. This is one mechanism for identifying where production systems generate that may impact the environment. Once this waste is identified various other TPS technique can be utilized to reduce and/or eliminate the impact of the waste to the environment.

**Quality Control** involves managing aspects of quality that are important to the customer (delivery performance, color, size, dimensions, fit, etc.). One new concept that has resulted in the identification of opportunities to improve the environment and environmental efficiencies is Six Sigma.

*Six Sigma* is a concept developed by Motorola to identify and reduce variation in processes. This organizational initiative identifies projects that reduce variation, which ultimately reduces costs within operations. These improvements drive innovation within organizations and result in increased organization efficiencies.



# Chapter 9: Operations Management

**Environmental Control** involves implementing proactive programs, projects, and initiatives that directly impact the environment. A key initiative utilized within organization to assess their environmental controls is ISO 14001.

**ISO 14001** is an international standard that was developed and implemented within the automotive industry. Many of the Big 3 automotive firms required that their suppliers be ISO 14001 certified by a certain date. If an organization did not have this certification, they were unable to bid on future business. This certification is assessed by a 3<sup>rd</sup> party that evaluates the organization on a variety of environmental components.

An organization that has an Environmental Management System to control their operations has the following characteristics:

- Identifies and controls the environmental impact of the organizations activities, products, and services
- Continually improves the organizations environmental performance
- Consists of a systematic approach to setting environmental goals and objectives, achieving these goals and objectives, and demonstrating that they have been achieved



# Chapter 9: Operations Management



## Green Cases, Assignments, & Projects

1. **Go to the EPA website for Design for the Environment** ( [www.epa.gov/dfe/](http://www.epa.gov/dfe/) ) and locate 5 products that you use that have the DfE label. Identify the name of the product, the manufacturer, and how long the company has been an EPA Design for the Environment Partner.
2. Watch one of the DfE videos and summarize what the video covered relative to Green Operations
3. Search the internet for company examples of each of the elements discussed in the Production Planning Section and how these concepts tie to protection of the environment (Selection of Suppliers, Inventory Control, Production Systems, Quality Control, and Environmental Control)



# Chapter 9: References

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# Chapter 10: Marketing

Supplement to Business Administration Course (BMGT-1301)



# Chapter 10: Learning Objectives

## **Green Learning Objectives**

- Understand the role that Marketing plays in the promotion of environmental elements within organizations
- Understand how environmental concerns impact each of the 4Ps of the Marketing Mix



# Chapter 10: Marketing

How an organization markets its product can directly impact the level of sales recognized by the organization. Positive image, price, product offerings, etc. help to sell products and services. Marketing ultimately is about creating the opportunity for an exchange (provide product or service in exchange for money).

Organizations are beginning to embrace “green” marketing because an organization that is viewed as concerned about the environment can market this image, market green products, green processes, and green practices.

Academic research has found that “green” marketing to potential employees is also prevalent, because surveys have found candidates choose the environmentally conscious organization over one that has not marketed their organization as “green.” The impact of “green” marketing on the 4Ps of Marketing will be reviewed.



# Chapter 10: Marketing

## The 4Ps of Marketing are:

1. Product
2. Promotion
3. Price
4. Place (Distribution)

## Product

Product aspects and how they are marketed allow organizations to emphasize the “green” elements associated with the product. These claims lead to certain consumers dedication and commitment to purchasing a particular product because it does provide some benefit to the environment (processes with less energy, biodegradable, made with recycled content, etc.)

Organizations are ranked globally on their level of greenness. Interbrand provides a global ranking of “green” brands. The Top 10 organizations of 2011 are below.

## Top Ten “Greenest” Global Brands in 2011 (Interbrand)

1. Toyota
2. 3M
3. Siemens
4. Johnson & Johnson
5. Hewlett-Packard
6. Volkswagen
7. Honda
8. Dell
9. Cisco
10. Panasonic

**Source:** Interbrand [www.interbrand.com/en/best-global-brands/Best-Global-Green-Brands/2011-Report/BestGlobalGreenBrandsTable-2011.aspx](http://www.interbrand.com/en/best-global-brands/Best-Global-Green-Brands/2011-Report/BestGlobalGreenBrandsTable-2011.aspx)



# Chapter 10: Marketing

## Promotion

Promotion is a proactive approach by organizations to persuade the consumer to enter into a transaction. Examples of promotions are advertisements, personal selling, publicity, website, social media, etc. All aspects of promotion can be utilized to promote the fact that an organization has “green” products, processes, and/or practices.

A new phenomena termed “greenwashing” has resulted from the marketing of environmental aspects of organization products and services. Greenwashing occurs when an organization claims that their product or service is “green” and in fact they have misrepresented the environmental benefits of their products or services. Here is a company claiming to be green, however they place their marketing on one of least gas efficient vehicles that one can buy.



Source: <http://webecoist.momtastic.com/2009/12/14/greenwashing-so-absurd-its-almost-funny/Price>



# Chapter 10: Marketing

Price is the value that organizations place on their products and services such that the customer becomes willing to enter into a transaction. Price also needs to be set at a level that requires the organization to cover costs and make some level of profits. The way in which a customer values the product and their ability to pay for a product or service determines what the customer is willing to pay. Why would someone buy a \$5.00 cup of coffee over a \$1.00 coffee? Why would someone buy a \$5.00 pen made from a recycled plastic bottle over a \$1.00 pen that serves the same purpose?

Green Marketers are finding that there is a segment of consumers that are willing to pay more for a product that is classified as a “green” product. Whereas low priced products may generate more sales, higher priced products may generate more margin. Organizations with “green” products and services rely on the fact that consumers are willing to purchase “green” products and services at a higher price.



# Chapter 10: Marketing

## Place (Distribution)

Distribution involves making decisions about where the product will be sold, how much inventory to carry, and how the product or service will be delivered to the customer. A large portion of the distribution decision made by organizations is which channel of distribution to utilize. Based on the distribution channel selected the environment is impacted to varying degrees.

- Direct Distribution (Producer to Consumer)
- Retail Distribution (Producer to Retailer to Consumer)
- Wholesale Distribution (Producer to Wholesaler to Retailer to Consumer)
- Full Channel Distribution (Producer to Agent to Wholesaler to Retailer to Consumer)

Each of these approaches as you can see would result in different costs and environmental impacts due to differences in inventory control, warehousing, and outbound transportation required for each channel.

There are six basic forms of transportation that also impact the environment to varying degrees.

1. Air
2. Rail
3. Trucks
4. Ships and Barges
5. Pipelines
6. Digital Networks



# Chapter 10: Marketing



## Green Cases, Assignments, & Projects

1. Go to Interbrand's website and review why some of these organization were designated as the "greenest" brands. Discuss whether you agree with this distinction or not.
2. Search the internet for other visual examples of marketing campaigns that could be considered "greenwashing." Make a collage of all of the advertisements that you find.
3. On your next trip to the store find five products that also have an environmentally friendly alternative. Note the products, manufacturer, and price. Be prepared to discuss why you believe someone would buy the environmentally conscious product over the other product.
4. Using the list of products below, map out which channel of distribution is utilized for this type of product. Map out as well, whether this is the best channel if the distribution strategy required minimizing the impact to the environment.
5. Go to the following website ([www.wmin.ac.uk/marketingresearch/Marketing/greenmix.htm](http://www.wmin.ac.uk/marketingresearch/Marketing/greenmix.htm)) and using one of the products from Question #4 answer the questions in the Green Marketing Mix Checklist.





# Chapter 10: References

## Websites

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# Chapter 11: Accounting & Financial Management

Supplement to Business Administration Course (BMGT-1301)



# Chapter 11: Learning Objectives

## **Green Learning Objectives**

- Identify elements of accounting that can be utilized to account for “green” products, “green” processes, and/or “green” practices within organizations
- Understand how an environmental initiative or organizational approach impacts the financial management of the organization



# Chapter 11: Accounting & Financial Management

**Accounting** is the function within organizations responsible for planning, identifying, measuring, and reporting financial information within and external to the organization.

**Financial Management** is when an organization plans for the financial needs of an organization, managing the allocation and spending of funds.

Accounting and Financial Management for the environment can readily be found within organizations. Many organizations have taken proactive steps to be environmentally transparent. By law, public organizations must report their financial outcomes via an annual report. While organizations are required to be financially transparent, there is not yet a formal environmental specific GAAP issued to account for and/or report the financial impact of environmental initiatives.



# Chapter 11: Accounting & Financial Management

**Environmental Accounting** consists of two primary areas:

1. Accounting for physical units
2. Accounting for monetary value

Accounting for physical units involves tracking the units for instance, CO<sub>2</sub> reduction, increased energy efficiency, reduction in waste water, etc.

Accounting for monetary value involves tracking the monetary value of an environmental cost.

**Financial Management** consists of actions that involve the management of:

1. *Source of funds* (sales, investment income, credit, leases, equity, loans, commercial paper, bonds, etc.)
2. *Budgets* (strategic, tactical, operational)
3. *Use of funds* (payroll, investments, materials, equipment, acquisitions, etc.)

When considering an environmental focus and financial management there are many areas that are impacted.

- Working with financial institutions that are environmentally oriented
- Budgeting for environmental projects
- Investing in stocks of organizations that are environmentally oriented



# Chapter 11: Accounting & Financial Management



## Green Cases, Assignments, & Projects

1. Locate the article on Green Accounting at AT&T found at <http://www.epa.gov/oppt/library/pubs/archive/acct-archive/pubs/greenac.pdf>

Read one of the four sections, summarize and be ready to discuss.

- a. Why did AT&T decide to address Green Accounting?
  - b. How did AT&T initiate its Green Accounting project?
  - c. How did AT&T's Green Accounting team gather information?
  - d. What has AT&T learned?
2. Using the list of Top Green Stocks do additional research on each. Select which one of the five you would pick and explain why from both an environmental and financial perspective.
    - a. ABB
    - b. Waste Management
    - c. Potlatch Corporation
    - d. Waterperformance Renewable Energy
    - e. New Flyer Industries

Source: <http://www.forbes.com/sites/tomkonrad/2012/05/22/ten-green-stocks-i-told-my-sister-to-buy/>

3. Locate the article by Watson, Klingenburg, Polito, & Geurts (2004) on the reference list, and complete the following:
  - a. Provide a summary of the article
  - b. Discuss how the article ties an environmental aspect to financial performance
  - c. What conclusions would you make based on this article about the importance of financial management for the environment



# Chapter 11: References

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