

The background of the slide is a deep blue space scene. On the left, a large portion of the Earth is visible, showing continents and clouds. In the upper center, a bright sun or star is partially obscured by a red ring, creating a lens flare effect. The Northrop Grumman logo is positioned in the upper right quadrant.

***NORTHROP GRUMMAN***

DEFINING THE FUTURE

## **The Business Case for Green Supply Chain Management**

Ryder Green Supply Chain Forum

Florida International University

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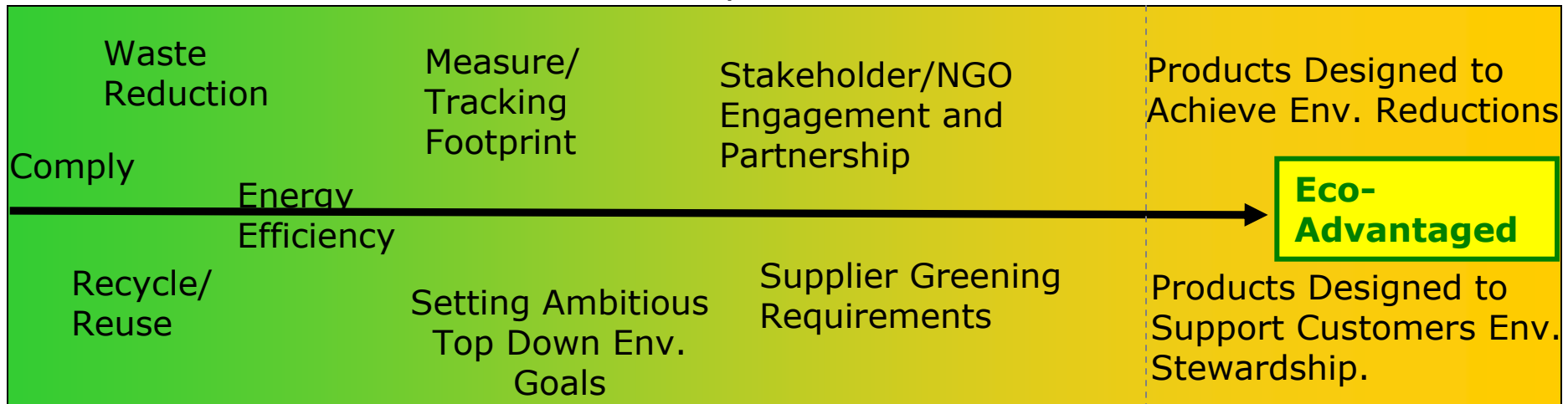
# Green Supply Chain Management

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We did not inherit this  
Earth from our parents,  
we have borrowed it  
from our Children!

# Characteristics of Leading-Edge Eco-Advantaged Companies

- Go beyond the basics of complying with the law, cutting waste and operating efficiently (*this is a minimum standard*)
- Collect environmental footprint data to track performance and establish metrics to gauge progress
- Build an environmental advantaged culture through ambitious goal-setting, incentives, training and tools to engage all employees in the vision
- Push suppliers to be better environmental stewards and even select on that basis
- Partner with NGOs and other stakeholders to learn about and find innovative solutions to environmental problems
- Design innovative products to help customers with their environmental problems or even create new Eco-defined market spaces



Source: Green to Gold by Esty and Winston

# The Business Case

- Three approaches to Integrating Green into our Supply Chain
  - 1. **Create Value**
    - Reducing/controlling costs measurable paybacks
  - 2. **Add Value**
    - Integrating opportunities into our offerings to our customers
  - 3. **“Do no Harm”**
    - Cost neutral changeouts with equal performance

# The Business Case

- **Creating Value:**
  - **Reducing and controlling costs while mitigating or avoiding investments**
  - **Three ways to approach**
    - **Change the Product**
    - **Change the Process**
    - **Change the Behavior**

- **Creating Value:**
  - **Change the Product**
    - **Our MRO supplier partners with a lighting manufacturer**
    - **They have performed joint lighting audits at many of our facilities**
    - **As a result, we have changed to more energy efficient bulbs, ballasts and fixtures on an as needed basis**
      - **Result is a a 4 mega watt reduction in energy use on an annual basis**
      - **(And we are not yet finished)**
      - **Payback for new bulbs and fixtures is one year or less.**
        - » **Savings in energy**
        - » **Savings in Labor (bulbs last longer)**
        - » **Savings in procurement process (buy less often)**

# The Business Case

- **Creating Value:**
  - **Change the Process**
    - **Historically, we have had one printer for every 2 to 3 people**
      - They could be **VERY** inexpensive
      - Never saw the cumulative costs of the toner cartridges, it disappeared in individual budgets
    - **We are transitioning to a “Managed Print” concept**
      - We do not own the machines, our supplier does
      - We pay for “Dots on Paper”
      - **THEY** pay for
        - » **Machines**
        - » **Services**
        - » **Supplies (Except paper)**

- **Creating Value:**
  - **Change the Process**
    - **The results:**
      - **Averaging one device for every 8 people**
      - **Cost per copy has dropped by at least 25%**
        - » **Set defaults to double sided copies**
        - » **Set defaults to grayscale (versus color)**
      - **Copy volume has dropped an average of 20%**
      - **Evaluated energy savings exceed 25% based on newer devices**
      - **Waste to landfill reduced by over 25%**
      - **“Soft costs” reduced for ordering, stocking hundreds and hundreds of toner cartridges**

# The Business Case

- **Creating Value:**
  - **Change the behavior**
    - **Typical cycle for office furniture:**
      - Buy it
      - Use it
      - Scrap it
    - **The new Paradigm**
      - We have negotiated with our furniture supplier to return 100% of all used furniture for them to recycle
      - They advertise “Cradle to Cradle” design
      - This leverages that concept
  - **Only 10% of all used Carpet gets recycled**
    - Our facilities people are putting language in the construction contracts to all removed carpet is to be recycled
      - » At least 2 of the major manufacturers have committed to recycling

# The Business Case

- **Adding Value:**
  - **Marketing to joint strengths**
    - **We do this both internally and externally**
  - **Externally**
    - **The Managed Print Concept has been very effective for us**
    - **We have marketed this jointly as an element of our service offerings to our customers**
    - **Has been VERY well received**
  - **Internally**
    - **We have proliferated the use of Green Seal Certified chemicals by having our supplier offer the same pricing we receive to some of our Supplier/Partners. Increases the volume, eventually reduces our cost.**

# The Business Case

- **“Do No Harm”**
  - **Cost Neutral opportunities**
    - **Janitorial Chemicals**
      - **We have re-negotiated our agreements for 2 Janitorial Service providers**
        - » **“All Chemicals used in the cleaning process must be Green Seal Certified”**
      - **Transition was cost neutral**
      - **2 identifiable benefits**
        - » **A. Use of non-toxic chemicals in office areas is shown to reduce absenteeism**
        - » **B. Making this type of change improves employee retention rates**
    - **Paper**
      - **High recycled content paper is becoming cost competitive**
      - **We are examining new “High yield” paper for use in office**
        - » **(50% less “tree waste” in manufacturing process)**

- **“Do No Harm”**
  - **Office Environment**
    - **NG has decreased the use of paper and creation of waste by transitioning to energy efficient processes including**
      - » **EFT - Electronic Funds Transfer**
      - » **E-Procurement - (electronic procurement) purchase and sale of supplies and services via intranet**
    - **New laptops include “sleep mode” by default to reduce idling and thus energy consumption**
  - **EPA Smartway**
    - Sponsored by EPA
    - Voluntary participation
    - Requires Transportation Companies to modernize fleet, cut emissions
    - As a Shipper, we gain certification by using SmartWay certified partners

# Achieved SmartWay Certification



The U.S. Environmental Protection Agency recognizes

## **Northrop Grumman Corporation**

for committing to improve the environmental performance  
of your freight operations as a

## **SmartWay Transport Partner**

July 28, 2008

A handwritten signature in black ink, reading "Mitchell Greenberg".

Mitchell Greenberg  
Manager, SmartWay Transport Partnership

# The Business Case

- **Summary:**
  - **Supply Chain is the Gate Keeper for much of this activity**
  - **The difficulties lie in sorting out the REAL opportunities from the "Greenwashing" offerings that are out there**
    - **Education is your best defense**
    - **Don't keep waiting for the solutions to drop in your lap**
    - **Sometimes you just need to "Do Something"**