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Sustainable Commerce: Local /State Government and Industry Using Existing Public and Private Legal Systems to Construct Globally-Competitive Green Economies

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**Sustainable Commerce:
Local /State Government and Industry
Using Existing Public and Private
Legal Systems to Construct
Globally-Competitive Green Economies**

Professor Appel and Dr. Irvin

Sustainable Commerce

Professor Appel:

- ❑ **Overarching Observations: Gov't, Industry, Law and the Legal Academy**
- ❑ **Economic Precedents for Sustainable Commerce Initiatives:**
 - Semiconductor Industry
 - Biotechnology Industry
- ❑ **Science/Policy Issues: Background to Global Climate Change**

Dr. Irvin:

- ❑ **Sustainable Commerce: Definitions/Drivers/Legal and Policy Foundations**
NOTE: Sustainable Commerce is bigger than just Green Economies
- ❑ **Case Study 1: Tradable Carbon Credits, Ringgold, Ga.**
- ❑ **Case Study 2: Process, Design, Manufacturing, Engineering Innovation**
- ❑ **Going Forward:**
Legal and Regulatory Tools to Interface Private and Public SC Initiatives Through Management Systems that Ensure SC Initiative Success

Overarching Observations (1)

#1: Sustainable Commerce is a Global Market Reality

Smart companies know this – even if (some) governments don't

#2: Industry, Business, State/Local Government Can Create Sustainable Commerce Initiatives NOW

Industry and government do not need to wait on federal initiatives to construct sustainable commerce initiatives

We'll show you some case studies of pretty small local government/industry who already have sustainable commerce successes under their belts – which they did on their own – and legal and regulatory community now needs to create incentives for more such success

Overarching Observations (2)

#3: Lawyers Will Define the Timetable for Success of Sustainable Commerce Initiatives Within Industry and Government at the Local/State Level

- Lawyers will lead creation of sustainable commerce initiatives for their government and industry clients.
- Unlike growth in the semiconductor industry in the 1980s, and growth in the biotechnology industry during the 1990s, sustainable commerce initiatives must be crafted to respond to rapid changes in the local, national, and global marketplace.
- Only lawyers have the skills to craft the new legal structures needed for industry and government partnerships to implement local/state sustainable commerce initiatives.
- If done the old way of the 1980s and 1990s – where lawyers by-and-large were technicians to semiconductor/biotechnology development - US sustainable commerce industries will take decades to develop instead of months or years.
- And the US will lose the opportunity to control significant portions of the global marketplace as we have with automobiles and other manufacturing industries.

Overarching Observations (3)

#4: Environmental/Natural Resources Law Professors Need to Start Teaming with Transactional Law Professors Creating New:

- Course Programs
- Clinical Opportunities

To lead sustainable development initiatives, lawyers must understand how to integrate a new combination of legal talents:

- Energy Law
- Municipal Corporations Law
- Intellectual Property Law
- Corporate Governance/Finance Law
- Constitutional Law

Much like in the 1980s where environmental law faculty actively collaborated with engineering/ecology faculty to work on hazardous waste-related issues, we will need to bring business school and manufacturing faculty into the picture to properly train our next generation of lawyers.

**Children Harvesting
Prunes in San Jose,
CA (circa 1930)**

**Bill Hewlett and Dave
Packard's Garage**

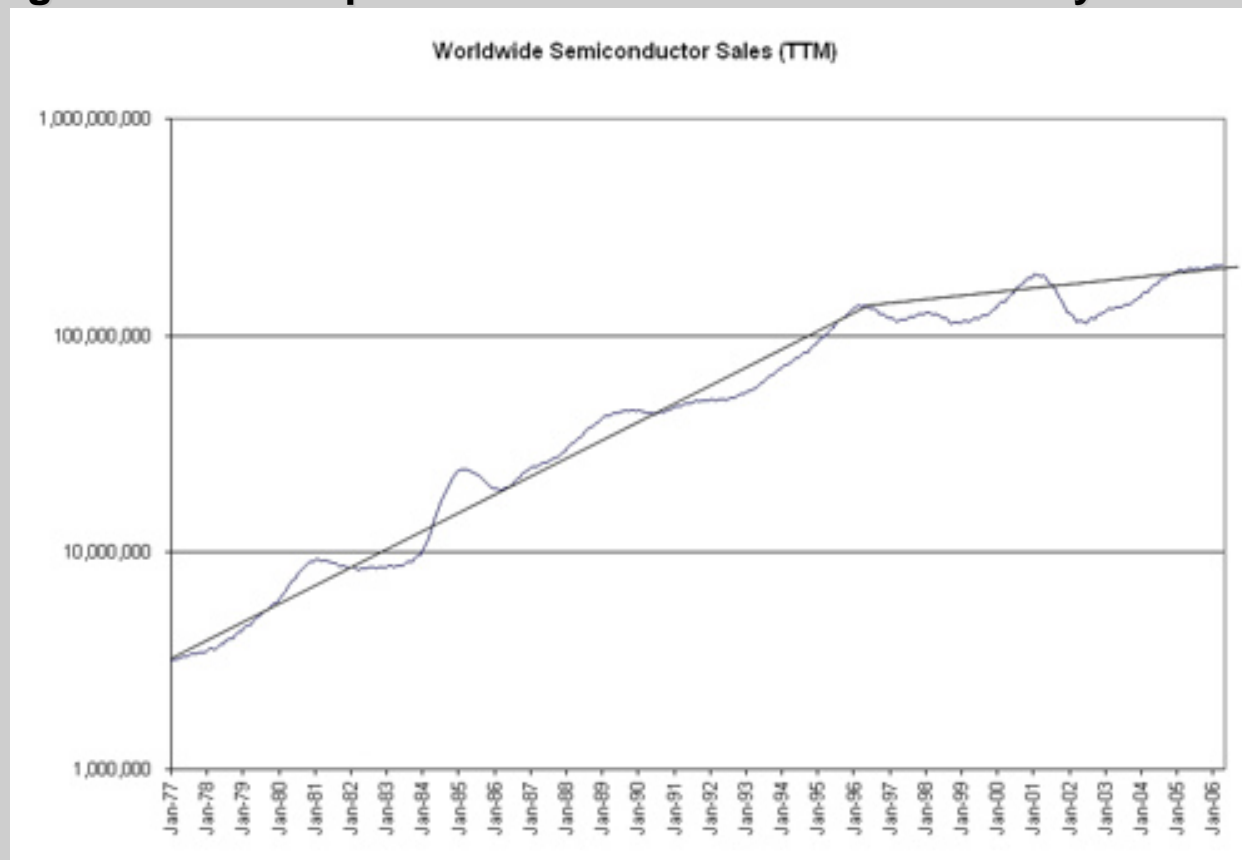


Sustainable Commerce

“Green Collar Economy”

Following in the Footsteps of the US Semiconductor Industry

Units

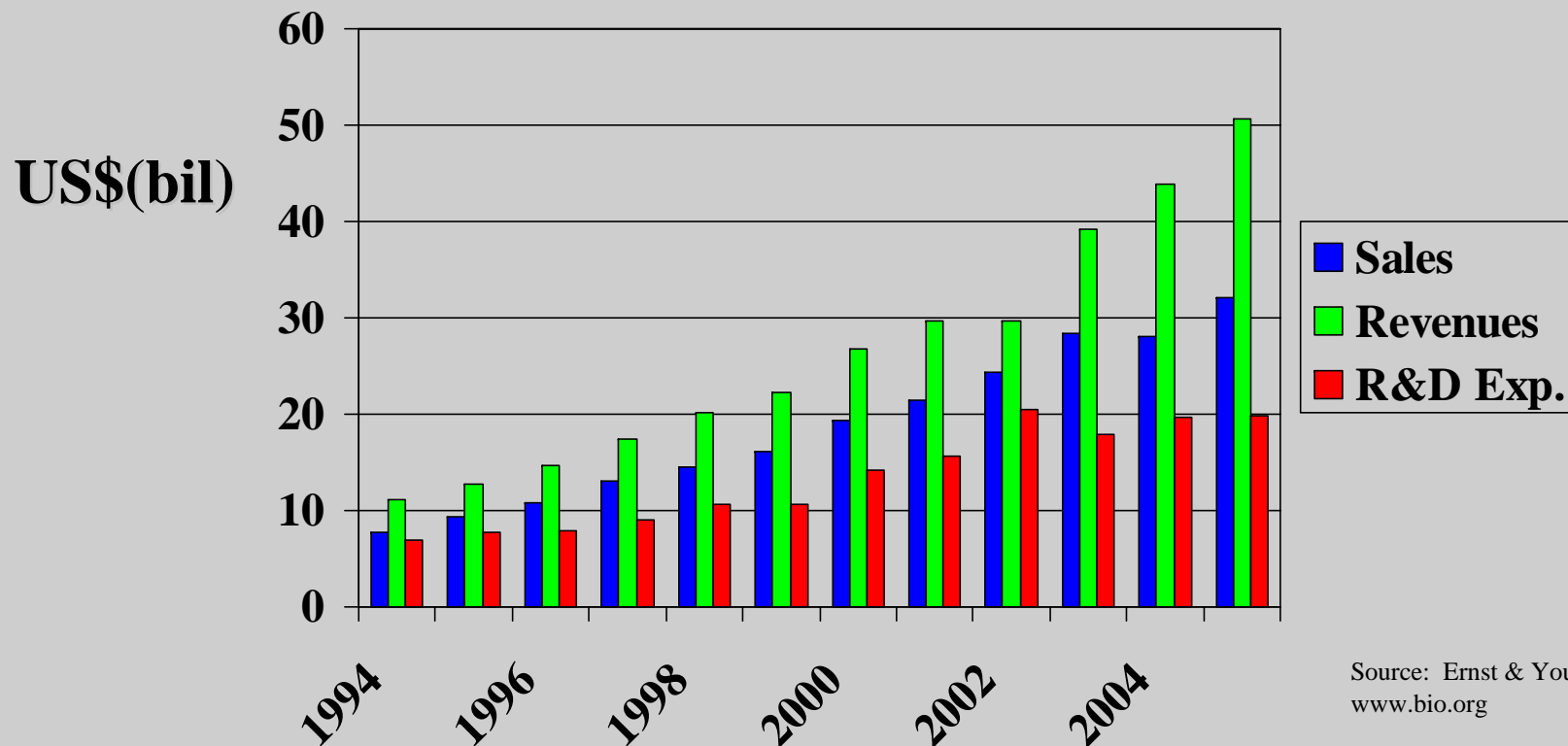


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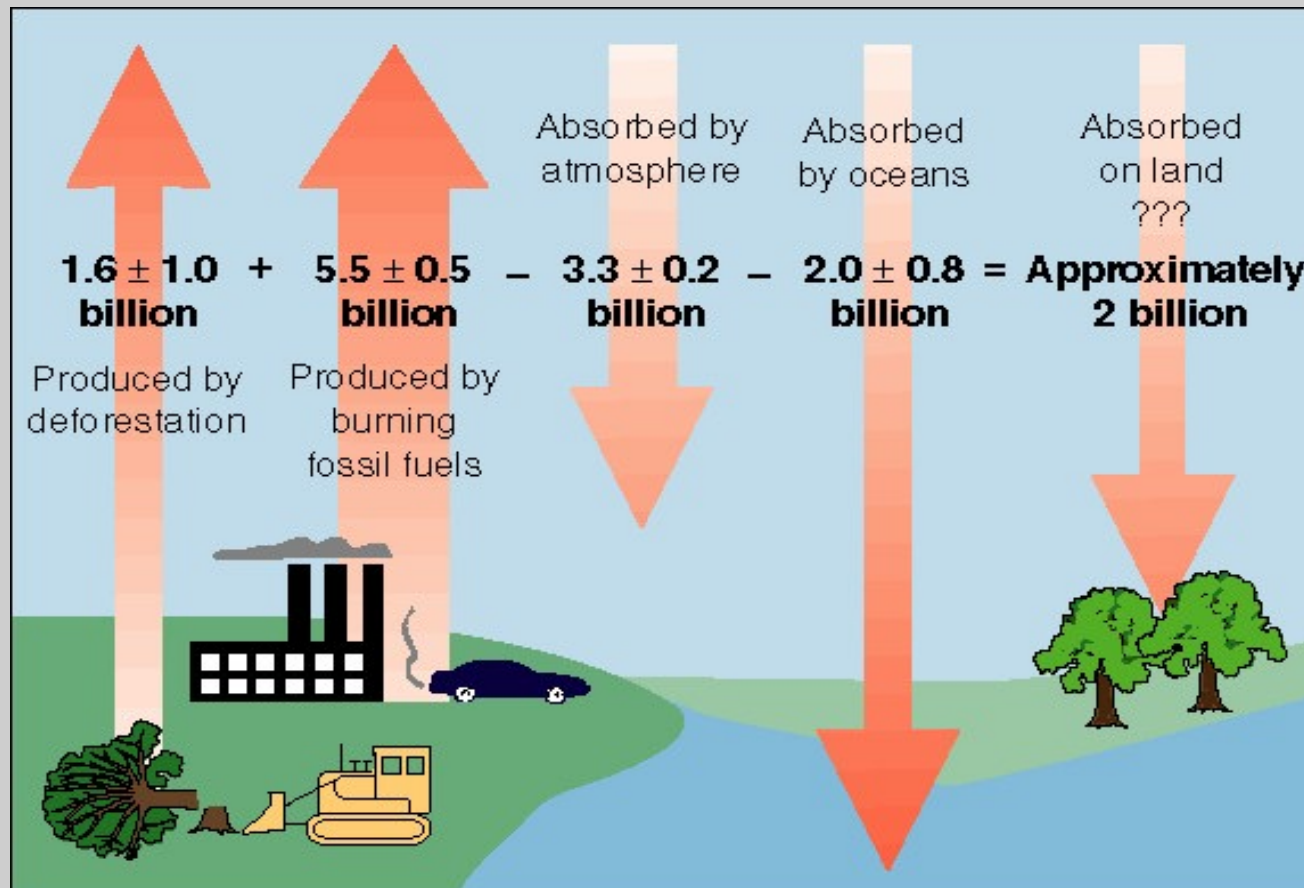
Sustainable Commerce

Following in the Path of Growth of the US Biotechnology Industry

Following in the Footsteps of the US Biotechnology Industry



Sustainable Commerce: The Science (1)



Sustainable Commerce: The Science (2) Two Scientific/Policy Camps

Camp #1: Global Warming AND Climate Change are Real

- Al Gore, European Union, Non-Governmental Orgs. Global Regulators
- About 50% scientific community
- Earth is warming at a rate of up to 1-2 °F each decade
- AND →→ Rate of warming is increasing

Camp #2: Climate Change is Real; Maybe Global Warming

- Lloyds of London, Insurance/Risk Mgt, Corporate Money People
- The other 50% of the scientific community
- Earth's annual AVERAGE temp isn't increasing all that much
- BUT annual RANGE OF TEMPERATURES increasing
- AND greater, unpredictable variations in global temperatures, storms, etc.

Under Either Scenario:

- Critical, Near-Term Economic Issues/Global Hazards Much the Same
- Legal Tools, Options, and Solutions to These Issues/Hazards Much the Same

Sustainable Commerce Initiatives

→ Concurrently Addressing Other Existing Legal and Policy Goals/Objectives

Intersection of Sustainable Commerce with Environmental Justice Concerns

“Where U.S. Energy Policy is concerned, African Americans are proverbial canaries in the mineshaft. We are on the frontline of the likely social, environmental, and economic upheaval resulting from climate change. As a consequence, energy policy and climate change are issues of fundamental importance to the African American community.”

African Americans & Climate Change: An Unequal Burden (2004). Congressional Black Caucus Fdn.

Unlike job demands in the semiconductor and biotechnology industries, sustainable commerce jobs require more blue collar and no collar workers at all skill and education levels and in all regions of the US – both urban and rural.

Sustainable Commerce: Definition/Drivers

Definition:

products and practices which

1. minimize environmental impacts and
2. optimize commercial value while
3. realizing public/private environmental and public health benchmarks.

NOTE: all three elements must be met without compromise.

Includes:

- Low-carbon industrial technology base (less CO₂ emissions)
- Lower energy consumption/unit of economic activity (energy efficiency)
- Non-fossil fuel/alternative energy (solar, wind, hydroelectric)
- Renewable, Sustainable carbon fuels (biofuels)
- Reduction/recapture of natural resources used in manufacturing (glass)
- Green building practices (e.g. LEED®)

AND.....

Systematic resolution of existing environmental/public health hazards while creating tens of thousands of jobs predominately in the blue collar and non-collar workforce as we shall see

Legal and Policy Foundations: Sustainable Commerce (SC) Initiatives by Local Governments and Industry (1)

Foundation #1: SC Initiatives That Foster Transition to a Low-Emissions Economy Create New Economic Opportunities Across a Wide Range of US:

- ❑ Industries, Services, Sectors of the Workforce
- ❑ Geographical Areas: **Range Fuels, Soperton, Ga**

Foundation #2: SC Initiatives Provide New Tools to Permanently Reduce Government and Business Costs Through:

- ❑ Energy and Natural Resource Savings, Operational Efficiencies
- ❑ Process/Product Innovation: **Murray Manufacturing, Lawrenceburg, TN**

Legal and Policy Foundations: Sustainable Commerce (SC) Initiatives by Local Governments and Industry (2)

Foundation #3: Financial Markets Are Creating **Securitized Instruments Generating **New Capital Sources** for SC Initiatives:**

- New Green Technology Startups
- Public Works Initiatives, LEED-Certified Facility Construction
- Environmental/Public Health Needs: **Chicago Climate Exchange (CCX)**

Foundation #4: SC Initiatives Are Creating New Regulatory Tools For Local/State Government to Modernize/Enhance/Innovate:

- Enhance Transportation Infrastructure, Government Services
- Enhance Energy Infrastructure: **Municipal Utilities & Solar Cells in CA**

Foundation #5: SC Initiatives Engender New Financial Resources and New Private-Public Partnerships to Address Legacy Problems

- Public Health/Environmental/Natural Resource/Infrastructure Needs
- Inactive/Abandoned Waste Sites: **Carbon Credit Sales for Landfill Closure, Ringgold, GA**

Legal Tools to Construct SC Initiatives:

Case Study 1: Tradable Carbon Credits, Ringgold, Ga. (1)

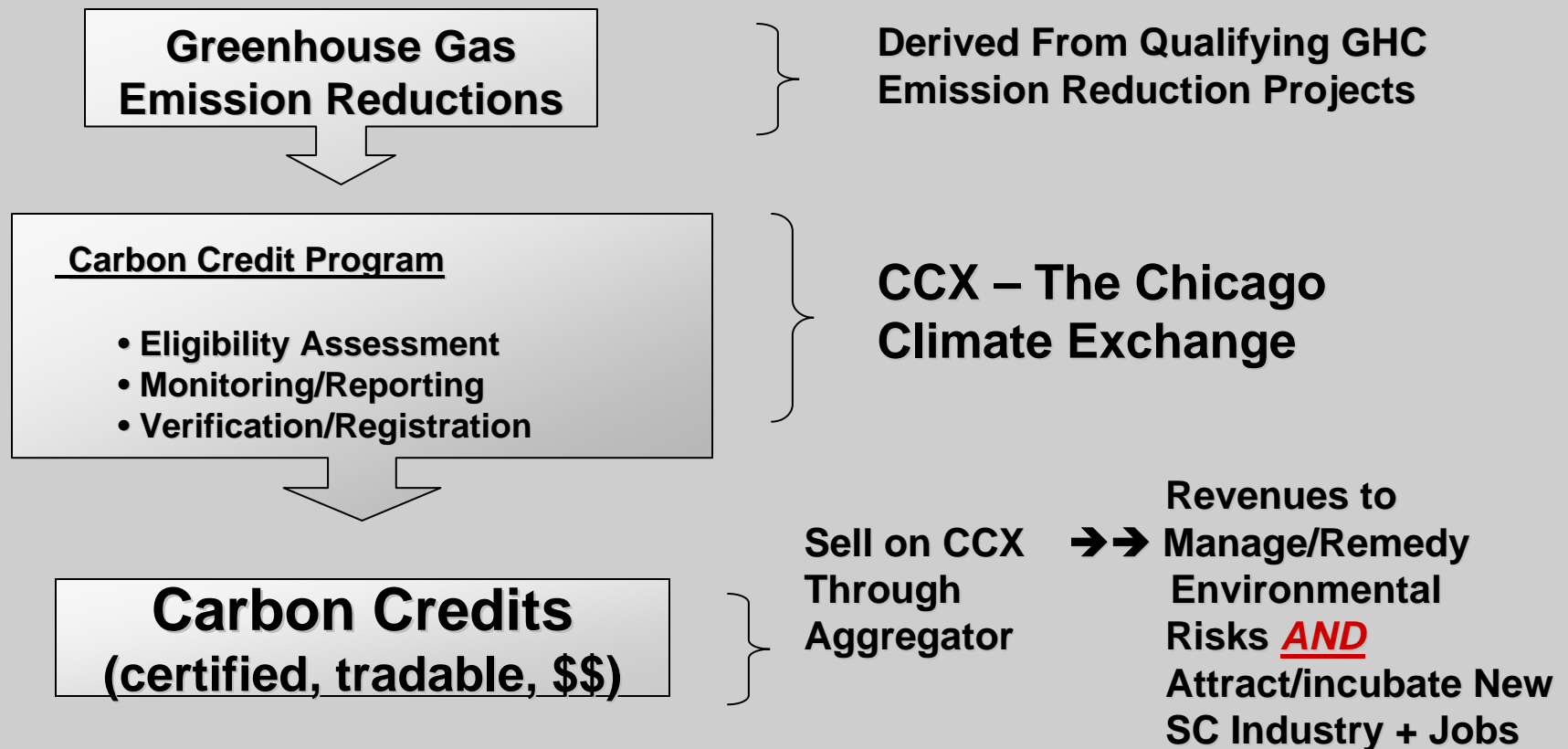
Ringgold/Catoosa County, GA:

- ❑ **Small town in NW Georgia (Cty population = 60,000)**
- ❑ **Owned inactive landfill: required to manage landfill methane (CH₄)**
- ❑ **Negotiated to sell credits on the CCX or EU ETS**
- ❑ **Benefits of This Private-Public Approach:**
 - **#1: Landfill has Methane Capture System**
 - **#2: City/County Can Net Tens of Thousands of Dollars Each Year**

Candidate Uses of New Revenues from Carbon Credits:

- **Legacy Environmental Needs (Inactive/Abandoned Waste Sites)**
- **Job-Training Programs to Attract New SC/Green Technology firms**
- **Recruit Companies Seeking Industrial Sites that are Carbon-Neutral**
- **Mass Transport Programs Reducing Air Pollution (ground-level ozone)**
- **Improved Commercial/Residential Energy Savings (solar cells for low income areas)**

Legal Tools to Construct SC Initiatives: Case Study 1: Tradable Carbon Credits, Ringgold, Ga. (2)



Sustainable Commerce – Driving Innovation Within Existing Industry and Government Sectors/Services

	Sectors/Services	Traditional	SC-Driven
Group ①	Construction/Civil Engineering	Waste site management, remediation	Renovation/redesign of existing industrial facilities
②	Process/Chemical/Mechanical Engineering	Waste stream generation, management, control, disposal; recycling services	Design/operation of low carbon technology equivalents for existing industrial manufacturing/process equipment
③	Mechanical/Design/Manufacturing Engineering	air/water handling systems; packaging and production design	Life-cycle analysis for product design/development/production
④	Engineering Management/Consulting Services	Process design, permitting, regulatory activities	Management of carbon offset/raw material programs; smart growth planning/implementation

Legal Tools to Construct SC Initiatives

Case Study 2:

Process, Design, Manufacturing Innovation (1)

B&Q: UK-based home improvement retailer

Since 1990, insists all world-wide suppliers/vendors:

- #1: itemize cradle-to-grave environmental impacts of products sold in B&Q stores
- #2: implement corporate policies and action plans to address these impacts
- #3: submit to internal/external/3rd party audits against B&Q's standards
- #4: detail all life-cycle environmental issues of products sold in B&Q stores

B&Q: “Sustainable Environment Principles”

for all approved vendors/suppliers include:

- yearly (increasing) targets for renewable energy usage
- remove listed toxic substances from all inputs
- yearly (increasing) targets for % by weight recycled components/parts

Legal Tools to Construct SC Initiatives

Case Study 2:

Process, Design, Manufacturing Innovation (2)

Murray, Lawrenceburg, TN:

- ❑ >1 million sq foot plant, large % of local workforce
- ❑ Major local employer since 1950s
- ❑ Manufacture outdoor power equipment (mowers, tractors)
- ❑ **Sought Qualification as B&Q Vendor**
- ❑ **If not: could loose key access to major EU markets and significant new sales**

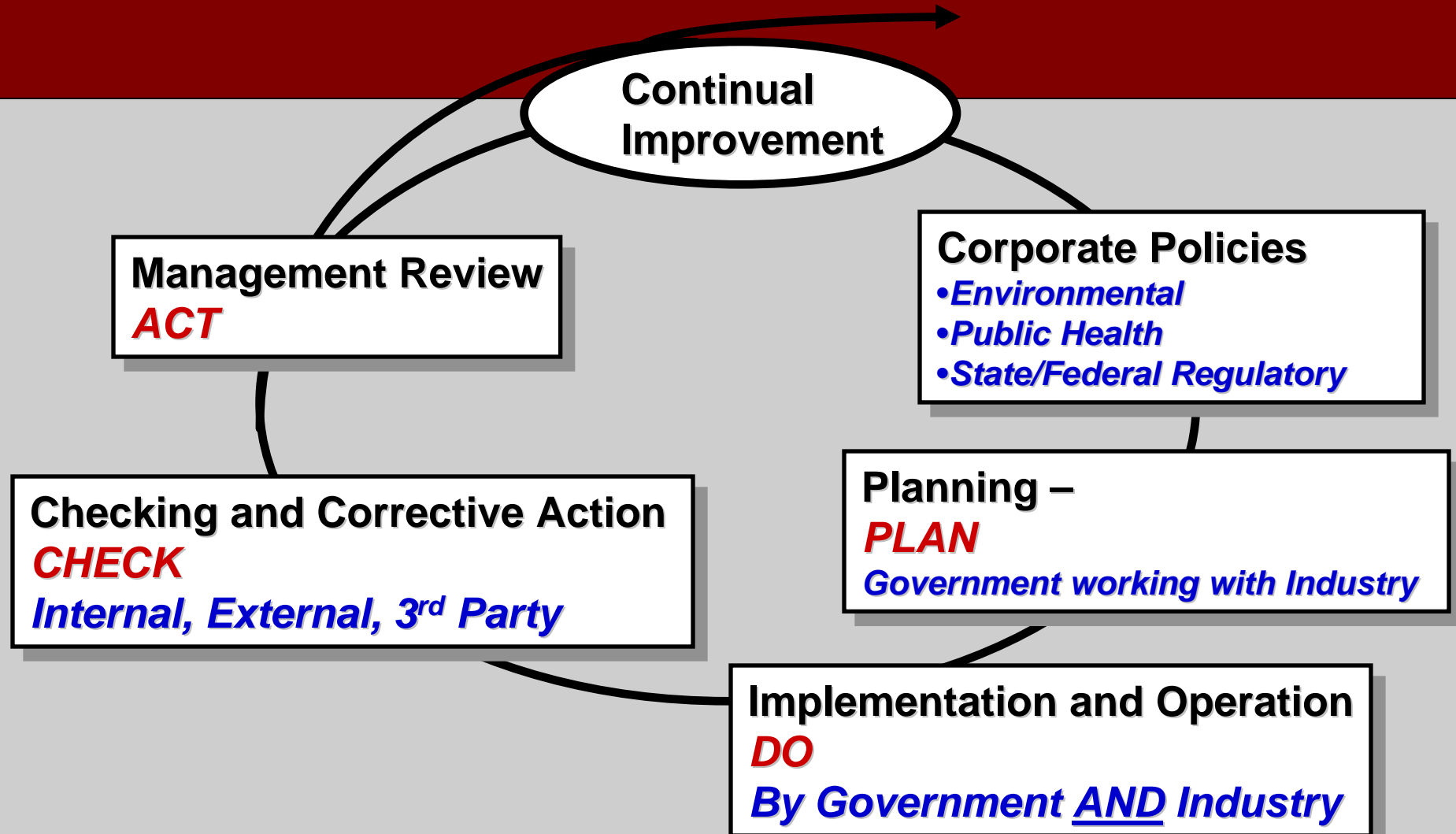
Created Integrated Quality and Environmental Management System

- ❑ #1: connected product design, procurement, environmental management departments
- ❑ #2: identified inputs - paints, parts, processes - needing to meet environmental metrics
- ❑ #3: scheduled twice - yearly audits of all manufacturing operations against metrics
- ❑ **#4: required environmental department review and approval for all pre-production product designs**
- ❑ #5: staff continually identified new options to reduce environmental impacts

OUTCOME: Met Requirements of B&Q – Approved Vendor/Supplier

Legal and Regulatory Interface with Management Systems (1)

Plan – Do – Check – Act



Legal and Regulatory Tools to Interface Private and Public SC Initiatives

Management Systems Ensure SC Initiative Success

#1: Require industry AND government to incorporate location-specific SC objectives into corporate management systems:

- ❑ Government: laws, regulations, permitting programs
- ❑ Industry: procedures/policies/practices
- ❑ **Example: new building programs be LEED® certified (with what elements?)**

#2: Require internal/external/3rd-party audits of industry AND government management systems be reported to agencies/boards for constant review of progress on SC metrics:

- ❑ Local/regional planning commissions
- ❑ Local/regional land use/zoning boards
- ❑ **Example: Your town/area receives notice a German company wants to build plant.**
- ❑ **You need to ask: what are needed public transportation, water, energy usage issues? How will this impact SC of existing industry and governmental goods/services?**