

Using Sustainability Frameworks to Improve the Triple Bottom Line

4th SOL Research Greenhouse, Boston

14 January 2004

by Katherine Holt, Ph.D.

This presentation includes some slides with green borders that were loaned by Bob Willard (author of *The Sustainability Advantage*). It also includes some ZERI text and illustrations that are being used with permission from Gunter Pauli (ZERI founder).

Proposed outcomes

- Learn more about **triple bottom line** mental models and research
- Examine principles and strategies associated with several **sustainability frameworks**
- Identify opportunities to rethink organizational systems and improve the triple bottom line
- Practice 1-2-3 person research discussion

Agenda

- 1st person research introductions
- 3BL mental models & research: CERES, Social Investment Forum, Innovest, Future 500 CAP Gap Audit, The Sustainability Advantage, Four Profit's 4BL
- Sustainability frameworks: Natural Capitalism, The Natural Step, ZERI
- Rethinking organizational systems and improving the triple bottom line
- Potential research collaborations

1st Person Research: Attention (Bill Torbert)



- Intending
- Thinking/feeling
- Sensing/behaving
- Effecting/perceiving

1st person check-in

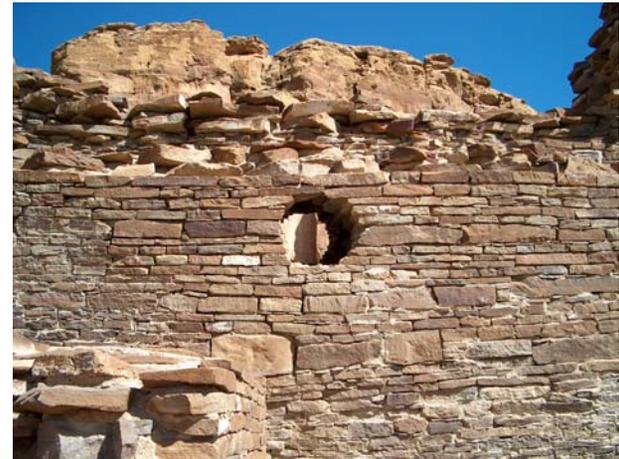


- Why did you choose this session?
- What do you want to learn?
- What can you contribute?

Who has experience with:

- CSR/SRI research
- Sustainability Advantage (Bob Willard)
- Future 500 CAP Gap Audit (Bill Shireman)
- Natural Capitalism (Paul Hawken, Amory Lovins & Hunter Lovins)
- The Natural Step (Karl-Henrik Robèrt)
- ZERI (Gunter Pauli)

My 1st person research began at Chaco Canyon, learning about 7th generation



... experiencing Colorado epiphany



... connecting with SOL



... being certified through ZERI



... facing globalization at Bioneers



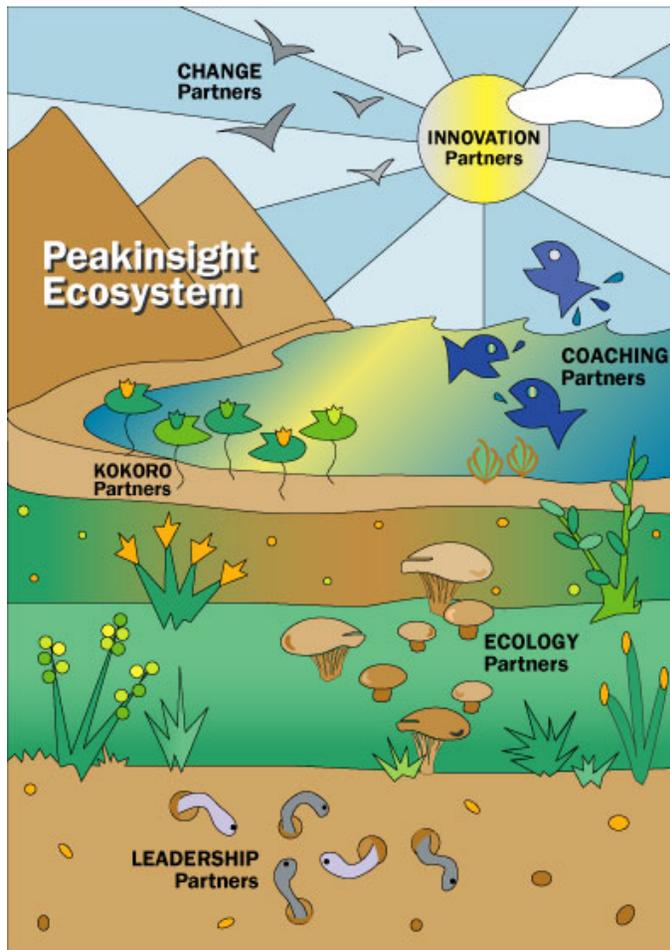
... attending New Visions Dialogue



... being inspired & challenged at Sustainable Resources



... now walking the talk



Peakinsight LLC
Mission: Fostering catalytic connections between people, organizations, and the environment to impact how business will operate profitably and evolve sustainably in the future.

...and organizing a conference

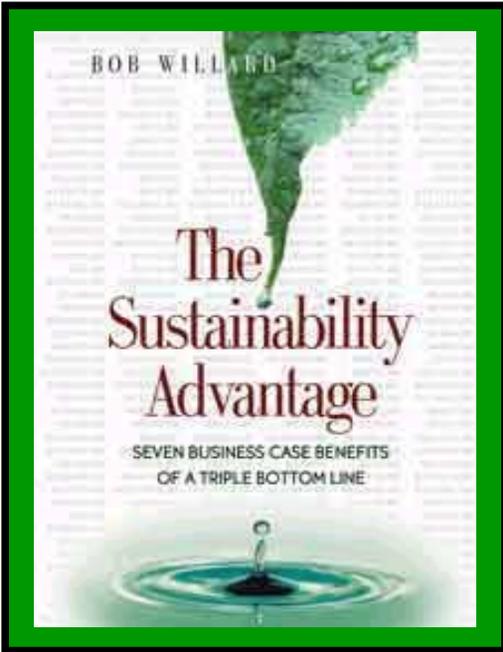
People Changing Their World: NPO & Conference on
Leadership for Sustainability



STRATER HOTEL
HISTORIC DOWNTOWN DURANGO

October 29-30, 2004





The next 7 slides came from a presentation by Bob Willard on the Business Case for Sustainable Development

Bob Willard
www.sustainabilityadvantage.com

Terminology

“Sustainable Development (SD)”

3Es

Economy / Profits
Sustainable business

- Profits
- Taxes, R&D
- Jobs
- Expenditures
- Training
- Fair trade
- Core values

“Triple Bottom Line (TBL)”

Environment / Planet
Eco-Efficiency

- Manufacturing efficiencies
- Operations efficiencies
- Product efficiencies
- Smart design
- Cradle-to-cradle, take-back
- Beyond compliance
- Restorative to nature

“Sustainability”

“Corporate Social Responsibility (CSR)”

3Ps

Equity / People
Ethical business

Internal employees

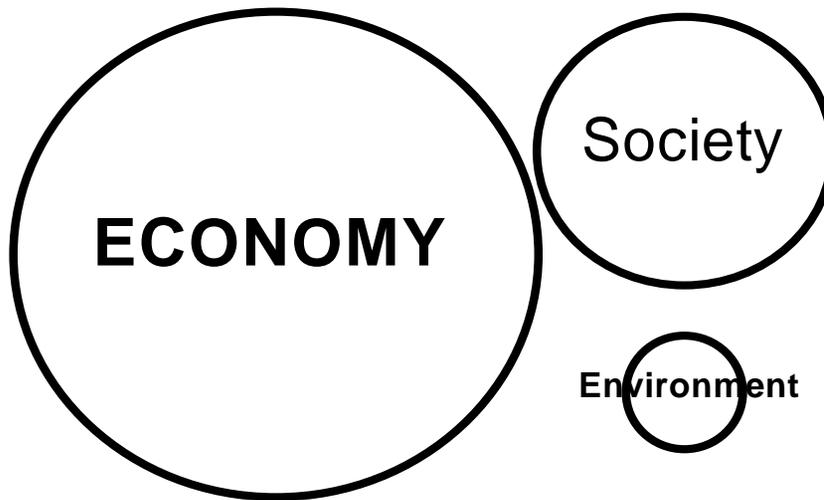
- Human rights
- Health & Safety
- Empowerment
- Respect, Caring

Local community

Rest of the world

Mental Models

Typical business view



Sustainable view



Business Priorities

Productivity

Profit

Share Price

Growth

Leadership

Managing Risks

Speed to Market

Expense Savings

Brand Image

**Complying with
New Regulations**

**Attracting &
Retaining
Customers**

**Competitive
Advantage**

**Responding to Emerging
Market Forces**

Revenue

Governance

New Markets

**Attracting &
Retaining
Top Talent**

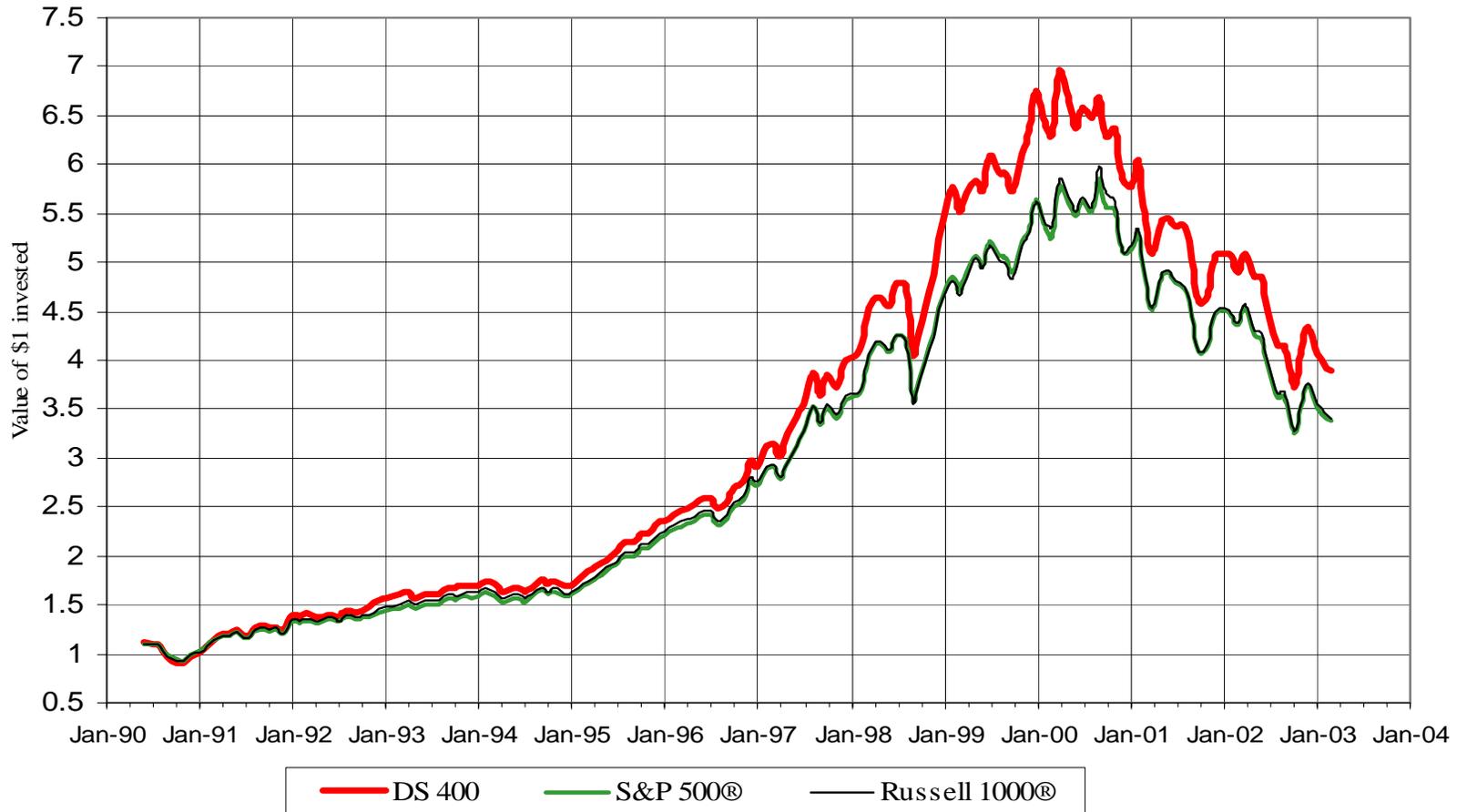
Motivation

Innovation

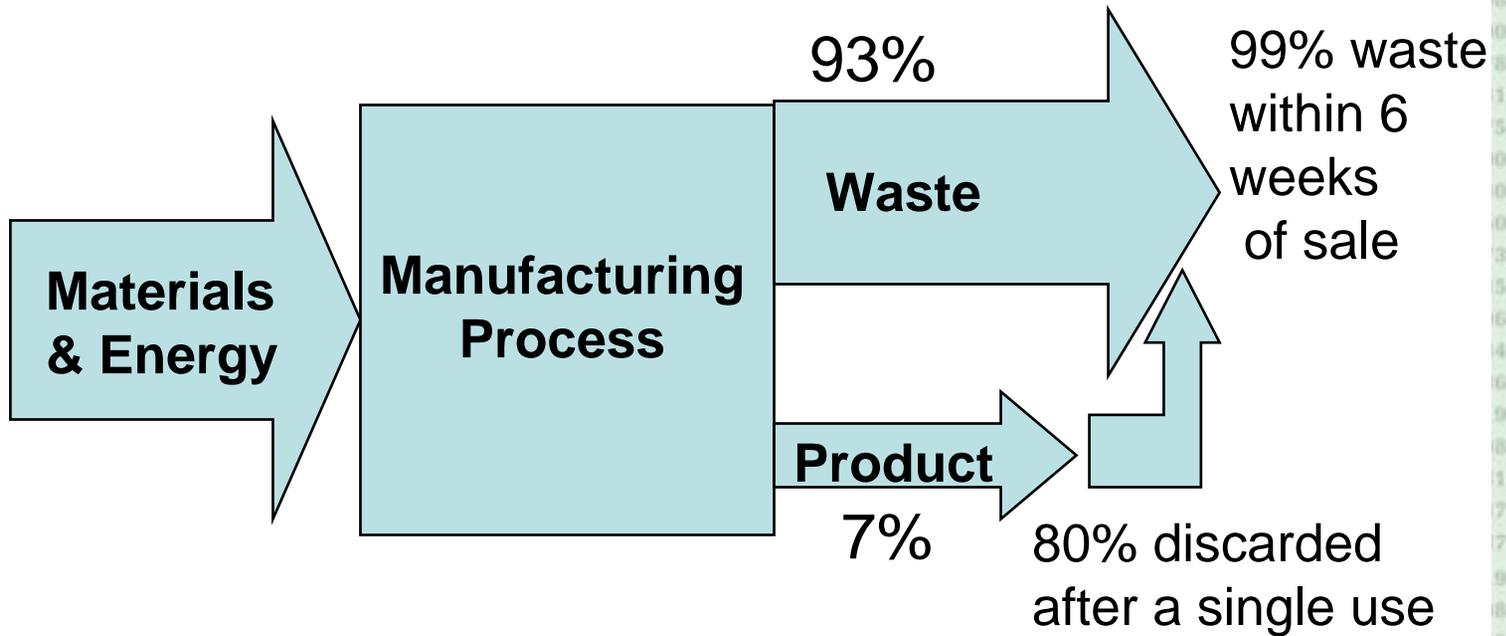
Market Share



Dow Jones Sustainability Index

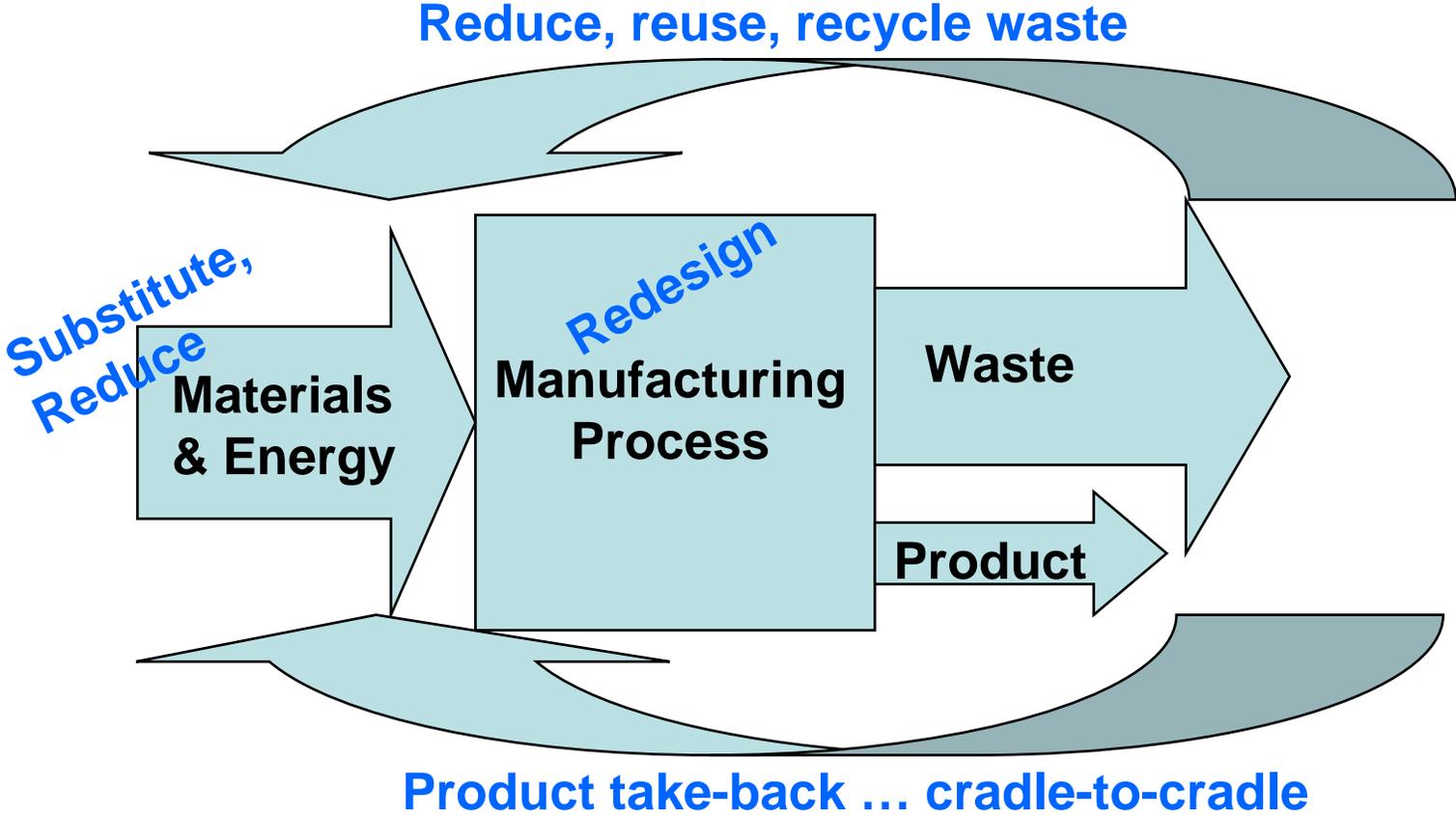


U.S. Waste Story

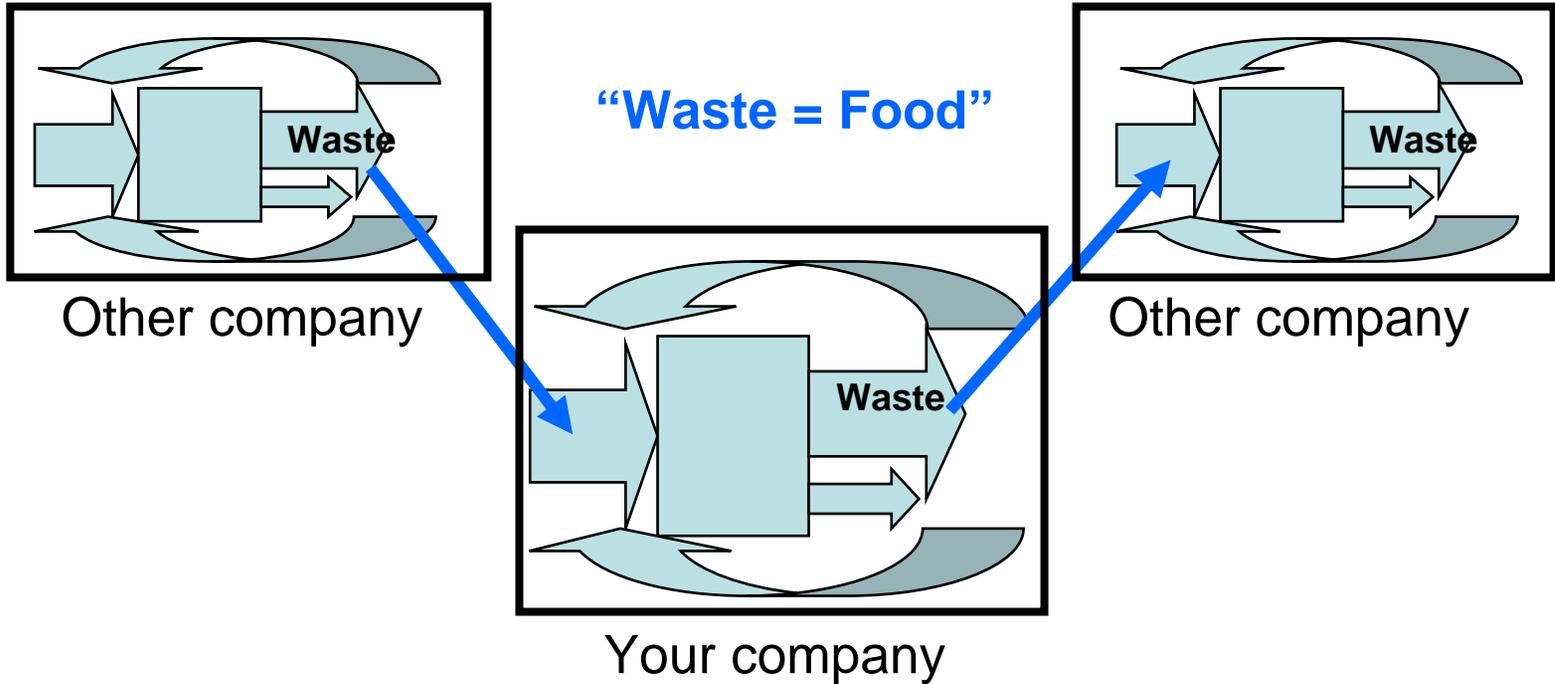


Based on diagrams and data used by Susan Burns and Gil Friend, environmental consultants, in their breakout sessions at The Natural Step 5-day Advanced Training conference in Chicago, May 6-10, 1998.

Eco-efficiency



Industrial Ecology



Based on concepts outlined in *In Earth's Company* (Carl Frankel, Gabriola Island, B.C., New Society Publishers, 1998, and in *An Introduction to Eco-Industrial Networking and the Canadian Eco-Industrial Network* (Canadian Eco-Industrial Network, self-published, 2001)

Burning platform: **Aspiration** or **fear**



Common definition for sustainable development

Development that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”

As defined in ***Our Common Future*** by World Commission on Environment and Development (Brundtland Report), 1987

Alternative definition #1

“Creating corporations and institutions in alignment with nature so all life can flourish for all time.”

Sara Schley & Joe Laur
Seed Systems

Alternative definition #2

“Sustainability is the possibility that human and other forms of life will flourish on the Earth forever.”

John Ehrenfeld, International
Society for Industrial Ecology

Eco-Efficiency as business contribution to sustainability...

- ...“achieved by the delivery of competitively priced goods and services that **satisfy human needs and bring quality of life**, while progressively **reducing ecological impacts and resource intensity throughout the life cycle**, to a level at least in line with the Earth’s estimated carrying capacity.”
- “The main goal of eco-efficiency is to **grow economies qualitatively, not quantitatively** – to provide more service, function, and value.”

World Business Council for Sustainable Development (WBCSD), 2001

CERES Principles

1. Protection of the biosphere
2. Sustainable use of natural resources
3. Reduction and disposal of wastes
4. Energy conservation
5. Risk reduction
6. Safe products and services
7. Environmental restoration
8. Informing the public
9. Management commitment
10. Audits and reports

70+ companies endorse CERES: greening and/or green-washing

- Ben & Jerry's
- Body Shop
- Earth Friendly Products
- Interface
- Natural Logic
- Nike
- William McDonough
- Trillium Asset Management
- American Airlines
- Bank of America
- Bethlehem Steel
- Coca-Cola
- Ford Motor
- General Motors
- ITT Industries
- Northeast Utilities
- Sunoco

3 stages of socially responsible investment (Social Investment Forum, 2001 Report)

- **Screening:** including or excluding securities from investment portfolios or mutual funds based on social and/or environmental criteria
- **Shareholder Advocacy:** dialoguing with companies on issues of concern and filing/voting proxy resolutions on social issues
- **Community investing:** financing that generates resources and opportunities for economically disadvantaged people in underserved urban and rural communities

Social Investment Forum, 2001 Report

- \$2.3T invested in SRI (2001)
- Assets in SRI portfolios rose by 35% (1999-2001)
- Growth rate for SRI assets was 1.5x others
- 181 mutual funds now incorporate social screening
- Tobacco, weapons, alcohol, environment, human rights, employment/equality, gambling are most widely used screens
- \$900B assets leveraged through shareholder advocacy
- Community investing grew 41% (1999-2001)

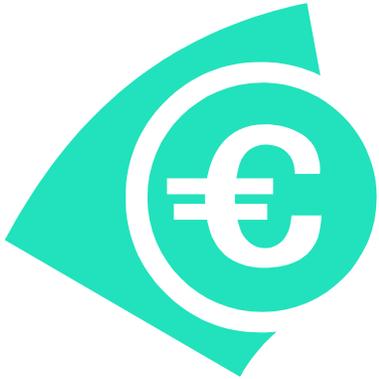
Social Investment Forum, 2001 Report

“These trends show that socially responsible investing continued to grow in a down market, providing competitive performance for investors, encouraging corporate responsibility, and meeting needs in economically distressed communities.”

EcoValue'21® analyzes 60+ variables using 20+ sources (Innovest **risk assessment**)

- Historical contingent liabilities (e.g., hazardous waste sites)
- Operating risk exposure (e.g., toxic emissions, product risk liabilities)
- Eco-efficiency and sustainability risk (e.g., energy and raw materials intensity and efficiency)
- Managerial risk efficiency capacity (e.g., strategic corporate governance capability)
- Strategic profit opportunities (ability to profit from environmentally-driven industry and market trends)

Innovest findings

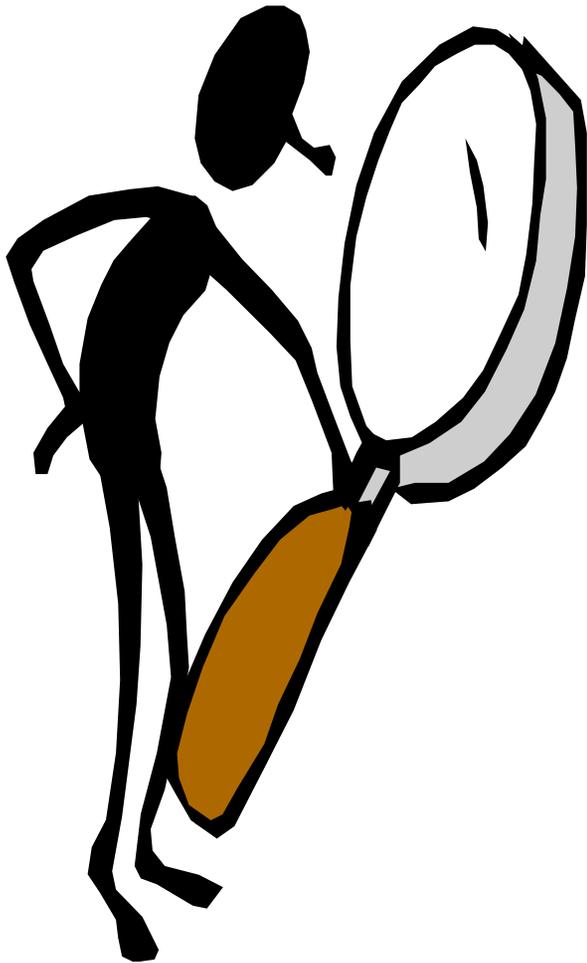


- Companies with above average EcoValue'21® ratings achieve a greater return than lower rated companies
- Environmental performance regarded as proxy for management quality

Mega-trends increasing financial importance of SRI factors (Innovest '03)

- **Changing demographics** for consumers and investors
- **Tightening regulatory requirements** for stronger performance and disclosure on SRI issues
- **Growing pressure from NGOs**
- **Investors with fiduciary responsibility** to address social and environmental performance
- **Globalization of competition**, bringing increased environmental and social risk
- **Growing shareholder activism** on environmental and social issues

Future 500 CAP Gap Audit



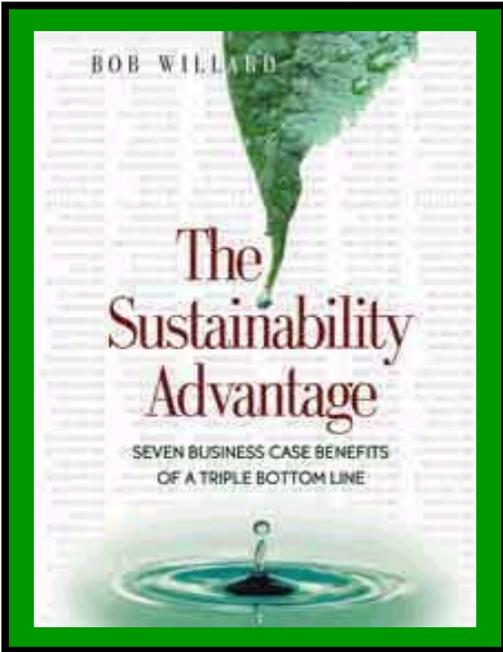
- **Corporate Accountability Practices**
- Process for **management inquiry**
- 195 questions
- 17 standards of ethics, accountability, responsibility, and sustainability
- 5 stakeholder categories (shareholder, workplace, community, marketplace, environment)
- Ranks company (A to F)
- Correlates to 20 **business benefits**

Consolidates 17 major standards

1. [Global Reporting Initiative](#)
2. Dow Jones Sustainability Index
3. FTSE4Good
4. Domini Social Index
5. Calvert SRI criteria
6. Cauz Roundtable
7. Center for Corporate Citizenship
8. [CERES](#)
9. New York Stock Exchange
10. Goldman Sachs
11. Baldrige Quality Award
12. Smart Growth Network
13. Social Accountability 8000
14. Sullivan Principles
15. Int'l Chamber of Commerce BCSD
16. Int'l Chambe of Commerce Corp. Governance
17. UN Global Compact

ALSO PROVIDES REFERENCE TO:

- AccountAbility 1000
- Business in the Community
- Interfaith Center on Corporate Responsibility
- OECD Corporate Governance
- Innovest



The next 6 slides came from a presentation by **Bob Willard on The Business Case for Sustainable Development, including a slide from his Excel program for SD, Inc.**

Bob Willard
www.sustainabilityadvantage.com



Benefits to “SD Inc.”

Potential profit increase: 38%

- + Energized employees**
 - + Improved corporate image**
 - + Competitive advantage**
 - + Positioned for the future**
- 



The Catch

1. Show senior leadership

- Include SD in vision / mission / strategies
- Avoid “green-washing” hype
- Visibly support SD: speeches, questions, actions

2. Educate the whole company

- Visibly sponsor and support the sessions

3. Establish an “SD Profit Center”

- Led by a top person
 - Reinforces that it is business strategy vs. a compliance or philanthropy issue
- 

7 Benefit Areas

1. Easier hiring of best talent (reduced recruiting costs)
2. Higher retention of top talent (reduced attrition costs)
3. Increased employee productivity
4. Reduced expenses in manufacturing
5. Reduced expenses at commercial sites (energy, water, consumables)
6. Increased revenue / market share
7. Reduced risk, easier financing

**Usual
focus**

REDUCED RISK

Simple, Macro-level Calculation

Total revenue today		\$44,000,000
		,000
Selling, general, and administrative (SG&A) expenses		\$6,600,000
		000
<i>(Assumption: SG&A percent of total revenue)</i>	15%	
Part of SG&A expenses associated with risk		\$330,000
		0
<i>(Assumption: Percent of risk-related SG&A expenses)</i>	5%	
Expense reductions from REDUCED RISKS		\$16,500,000
<i>(Assumption: Percent of risk-related SG&A expenses saved)</i>	5%	
<i>Benefit expressed as a percent of overall revenue</i>		0.04%

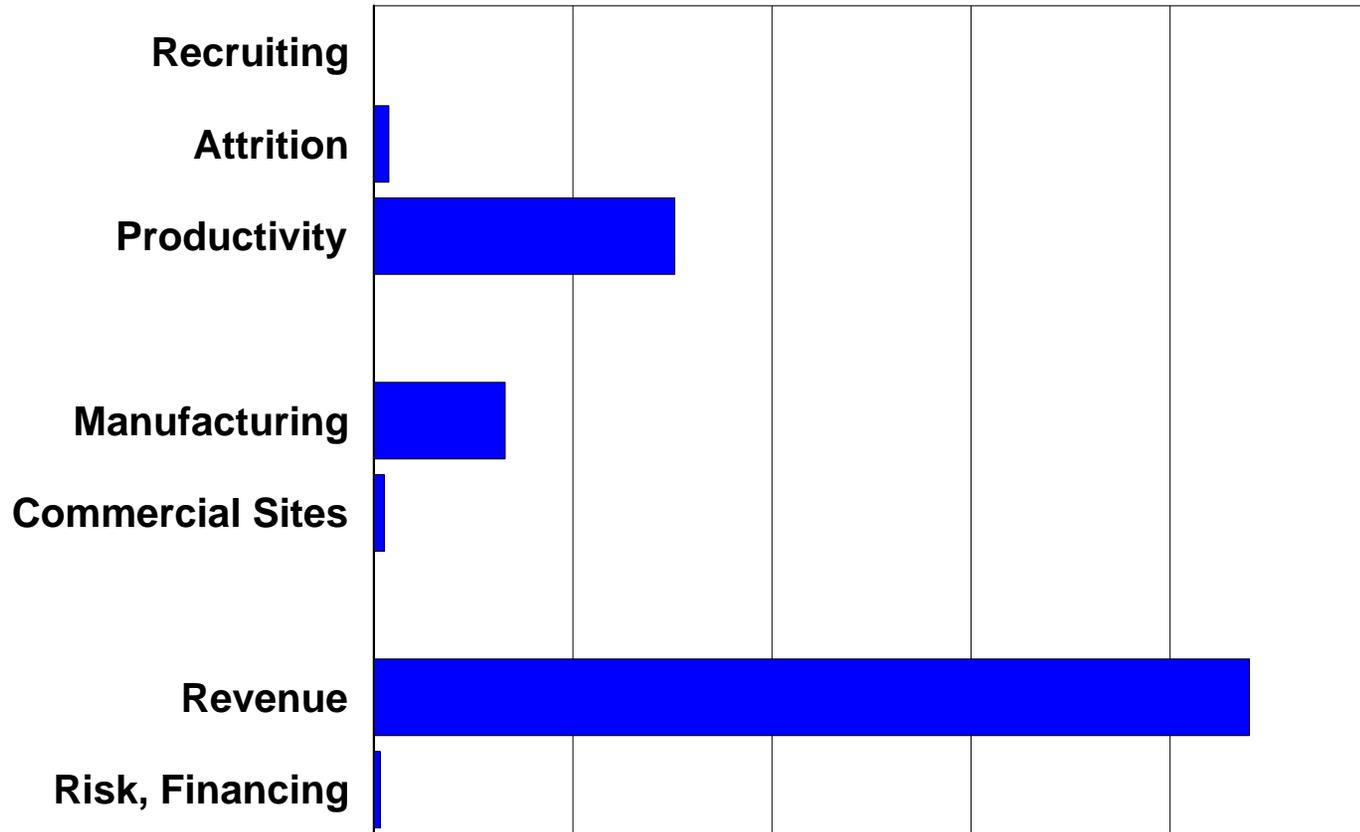
7 Benefit Areas ... % Improvement

1. Reduced recruiting costs **-1%**
2. Reduced attrition costs **-2%**
3. Increased employee productivity **+10.5%**
4. Reduced expenses in manufacturing **-5% (-2.5%)**
5. Reduced expenses at commercial sites (energy, water, consumables) **-20%**
6. Increased revenue / market share **+5%**
7. Reduced risk, easier financing **-5%**

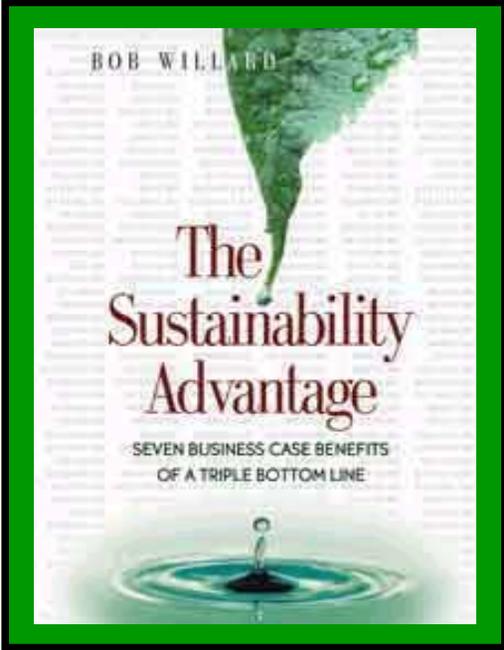


... yielding a Profit increase of **+38%**

7 Benefit Areas ... Relative Sizes



\$32.00	\$16100.00	\$2456.00	\$11571.00	\$430992.00	\$32.00	\$1932.00	\$16100.00	\$2456.00	\$11571.00	\$430992.00
\$100835.00	\$80140.00	\$9837.00	\$64991.00	\$1915817.00	\$105497.00	\$100835.00	\$80140.00	\$9837.00	\$64991.00	\$1915817.00
\$1406.00	\$6350.00	\$385119.00	\$8767870.00	\$80140.00	\$1200.00	\$1406.00	\$6350.00	\$385119.00	\$8767870.00	\$80140.00



**For more information,
please get Bob's book or
visit his website!**

Bob Willard
www.sustainabilityadvantage.com

Sample 3BL/4BL Application: Four Profit's Implementation Steps

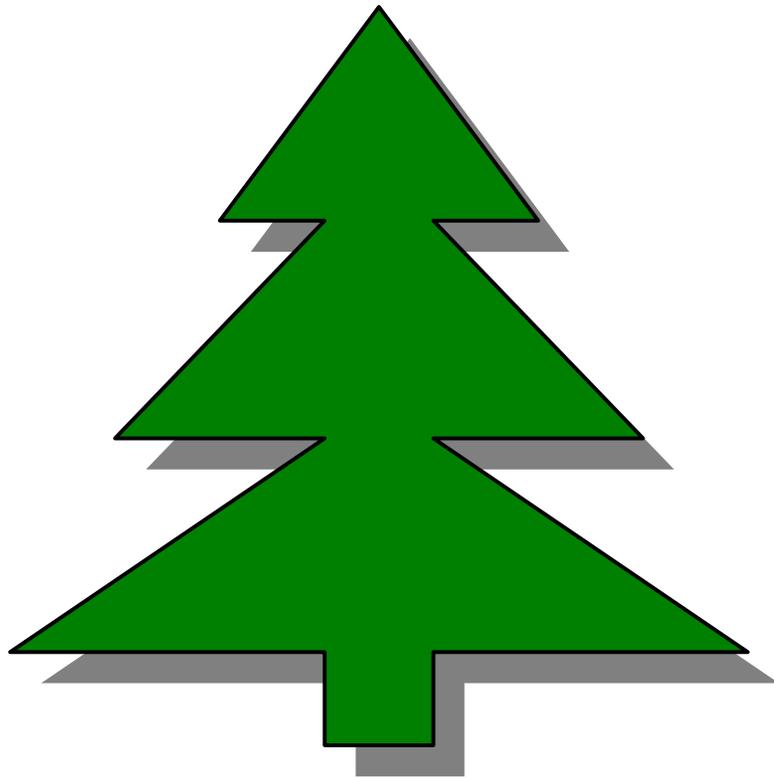
(Note 4BL: Financial, people, environment, community)

1. Articulate existing strategy
2. Develop business case for sustainability
3. Diagnose current sustainability performance
4. Target innovation efforts
5. Determine concrete goals for future state
6. Create sustainability improvement plan
7. Design system for measuring progress
8. Implement sustainability improvement plan
9. Measure results of improvement plan, adjust as necessary

Sustainability frameworks can help with business case , diagnosis, goals, innovation improvement plan, metrics, etc.!

- The Natural Step (TNS)
- Natural Capitalism
- Zero Emissions Research & Initiatives (ZERI)

The Natural Step (TNS)



- Karl-Henrik Robèrt
- Tree as metaphor
- Funnel
- Manifesto
- Big mailing
- Pilot tests (IKEA, Scandic, McDonald's)
- Going international

TNS system conditions

“In the sustainable society, nature is not subject to systematically increasing...

- 1.... concentrations of substances extracted from the Earth's crust
- 2.... concentrations of substances produced by society; or
- 3.... degradation by physical means.

And in that society...

... human needs are met worldwide.”

TNS guidance for practice

1. Use abundant resources rather than scarce minerals and fossil fuels.
2. Substitute biodegradable materials for unnatural compounds and use all materials efficiently.
3. Harvest resources in ways that preserve ecosystems and exercise caution in modifying nature.
4. Use all resources efficiently and responsibly so that everyone's current and future needs can be met.

Communication tools (KHR)



- Simplicity Without Reduction Strategy (search for over-arching principles)
- Yes, and Technique
- Asking Advice Attitude

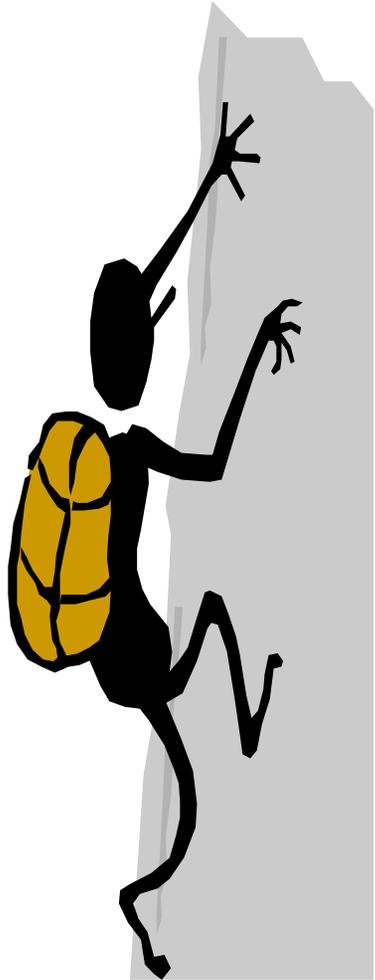
“A,B,C,D Analysis” (KHR)

- A. Sharing the Natural Step Framework
- B. How does the organization look today?
- C. How does the organization look in a sustainable society?
- D. Solutions from the C-list are prioritized into an early activity program for change (direction, platform, low-hanging fruit)

TNS core processes (Nattrass & Altamore)

- “Perceiving the nature of the unsustainable direction of business and society and the self-interest implicit in shifting to a sustainable direction;
- Understanding the first-order principles for sustainability, i.e., the four System Conditions;
- Strategic visioning through ‘back-casting’ from a desired sustainable future; and
- Identifying strategic steps to move the company from its current reality toward its desired vision.”

Ray Anderson: Interface



- Ambition to become the world's first truly sustainable enterprise
- Climbing Mount Sustainability with 4 systems conditions at the top: TNS as compass and magnet
- Assembling Eco-Dream Team of advisors
- Changing business model from selling carpets to leasing floor-covering services (Evergreen Lease)
- Redesigning to close loops: Solenium remanufacturing
- Doubled revenue, doubled employment, tripled profits from 1994-98; now facing economic challenges
- Few customers interested in leasing carpet service
- Fortune 100 Best Companies list
- PLETSUS: Practices Leading Toward Sustainability - see "Mid-Course Correction" (1998)

Natural Capital

“...refers to the earth’s natural resources and the ecological systems that provide vital life-support services to society and all living things. These services are of immense economic value; many are literally priceless, since they have no known substitutes. Yet current business practices and public policies typically ignore their value. As a result, natural capital is being degraded and liquidated by the wasteful use of energy, materials, water, fiber, topsoil, and ecosystems.”

Natural Capitalism as a new business model

- Transforming industrial processes and business practices to economize on what is now the limiting factor of production: natural capital
- Article in March/April 1997 *Mother Jones*
- Article in May-June 1999 *Harvard Business Review*
- *Natural Capitalism: Creating the Next Industrial Revolution* by Paul Hawken, Amory Lovins & L. Hunter Lovins
- Rocky Mountain Institute hosting book website www.natcap.org
- Natural Capitalism Academy within Global Academy (www.theglobalacademy.org)
- Natural Capitalism Group (www.natcapgroup.org)

Natural Capitalism Strategies

- **Advanced resource productivity:** Introducing dramatic (e.g., ten-fold) increases in resource productivity to slow resource depletion, lower pollution, and create new employment opportunities.
- **Ecological redesign (biomimicry):** Using models derived from nature to design production methods that use less energy and eliminate waste and toxicity.
- **Service and flow economy:** Shifting focus from product acquisition to new business models that sell the use of products, with manufacturers retaining responsibility for reuse and disposal of components.
- **Reinvestment in natural capital:** Sustaining all forms of life by restoring the generative capacity of the planet.

Paul Hawken's new challenge

- “The Fortune 500 is structured against CSR (e.g., Nike taking CVCs off toe tips yet promoting inhumane factory work; Coca-Cola acquiring 100-year licenses for aquifers; has Shell apologized for Nigeria yet?).”
- “Natural Capitalism Institute creating database of 700 SRI funds to show current investments (e.g., Microsoft as largest SRI holding); creating list of 100 best companies in the world because businesses can change and inspire; visit www.nci100.org to nominate.”
- “What is a socially responsible rate of return? What should it be?”
- “What are the conditions that make us socially irresponsible (e.g., corruption, subsidies, lack of transparency, personal accountability)?”

Historical note: Ecover

Ecover was one of the first in Europe to be approved as complying with the 4 system conditions. However, Gunter Pauli asked them to stop using the Ecover case. He felt that TNS had overlooked the fact that Ecover was destroying the rain forest in their drive to be the most biodegradable. **Gunter asked TNS to include a 5th system condition which would refer explicitly to value added being generated.** “Then one would see the negative value due to the destruction of the forest and the loss of habitat for the orangutan!”

Gunter Pauli: ZERI

Zero Emissions Research & Initiatives



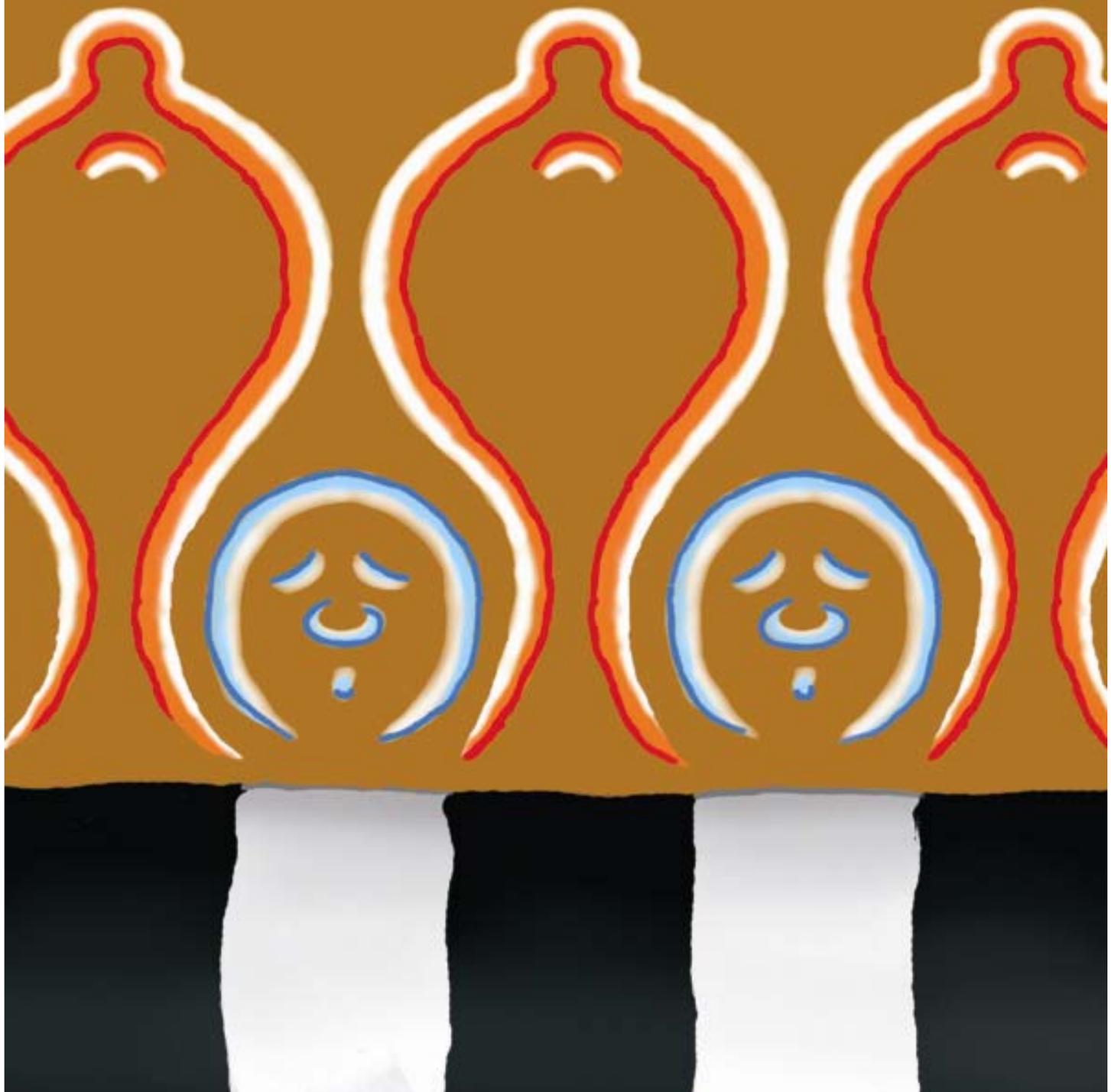
- Homo non sapiens
- Zero waste
- Uncompromising
- Systems thinking
- 5 kingdoms of nature
- Value added
- Education
- Research
- Project implementation

ZERI definitions

- Sustainability: “Responding to the basic needs of all species on Earth in co-evolution with each other.” (Note this definition involves all species, and is always changing.)
- Zero Emissions: “The re-use of all components as value-added, so that no waste is discarded.”
- UpSizing: “Building up economic activities through the clustering of industries which re-use the waste of one as value-added input for another.”

**DO YOU
KNOW
WHY THE
ZEBRA
HAS
BLACK
AND
WHITE
STRIPES?**





THE SMART MUSHROOM



by: GuNTeR PauLi

illustrations: PaMeLa SaLaZaR o.



Educational
Initiative

ZeRi



THE KING OF HEARTS



by: GuNTER PauLi

illustrations: PaMeLa SaLaZaR o.



Educational
Initiative

ZeRi



WHAT CAN YOU DO WITH THIS?



ZERI methodology

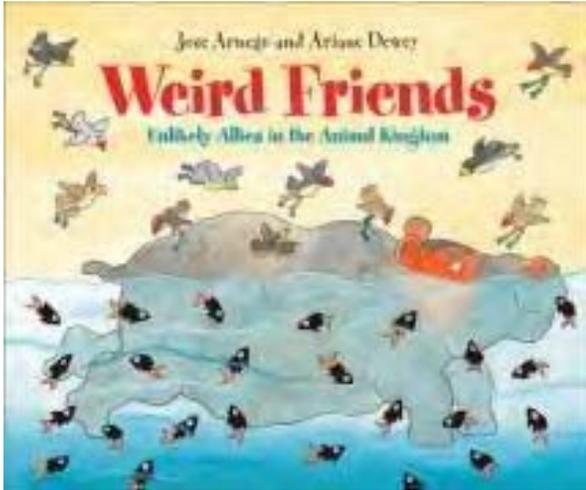


- Building total throughput models by using Input-Output tables
- Seeking creative, value-added uses for all outputs using the Output-Input tables
- Clustering businesses and industries in new ways
- Identifying breakthrough technologies
- Changing industrial policy and regulations

ZERI design principles

- Whatever is waste for one kingdom of nature is food for another.
- Whatever is a toxin for one species is a nutrient (or neutral) for at least one other species belonging to another kingdom.
- The more diverse, the more local, the more resilient, the more efficient.
- Whenever species of the five kingdoms interact, the system will integrate and separate all matter at ambient temperature and pressure.

5KN Friends: Helping animals survive... and evolve!



- Food
- Digestion
- Shelter
- Energy
- Atmosphere/Environment
- Protection
- Medicine
- Symbiosis
- Inspiration



Example: Living Wisdom Project

An Eco-Park of Clustered Businesses Interacting Cooperatively

ZERI Crestone Team:

Barrett Brown, Katherine Holt, Eric Lohan,
JoDee Powers, Amelia Terrapin & Mark Walker

Living Wisdom Project Goals

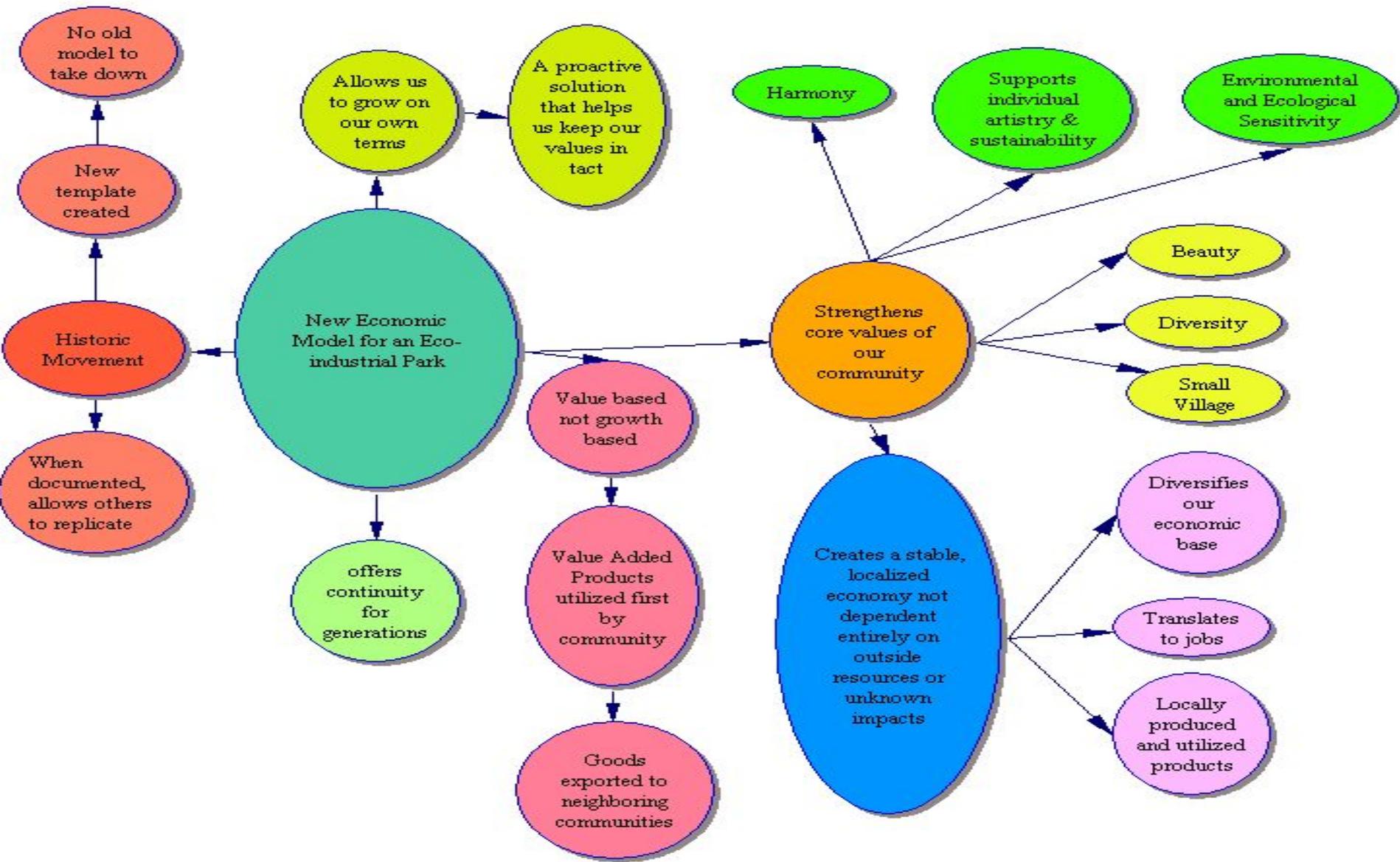


- Provide a sustainable local economy
- Offer a living wage to employees
- Provide sustainable, needed products to the community
- Create a viable, living system of business clusters that have zero emissions while utilizing the 5 kingdoms of nature

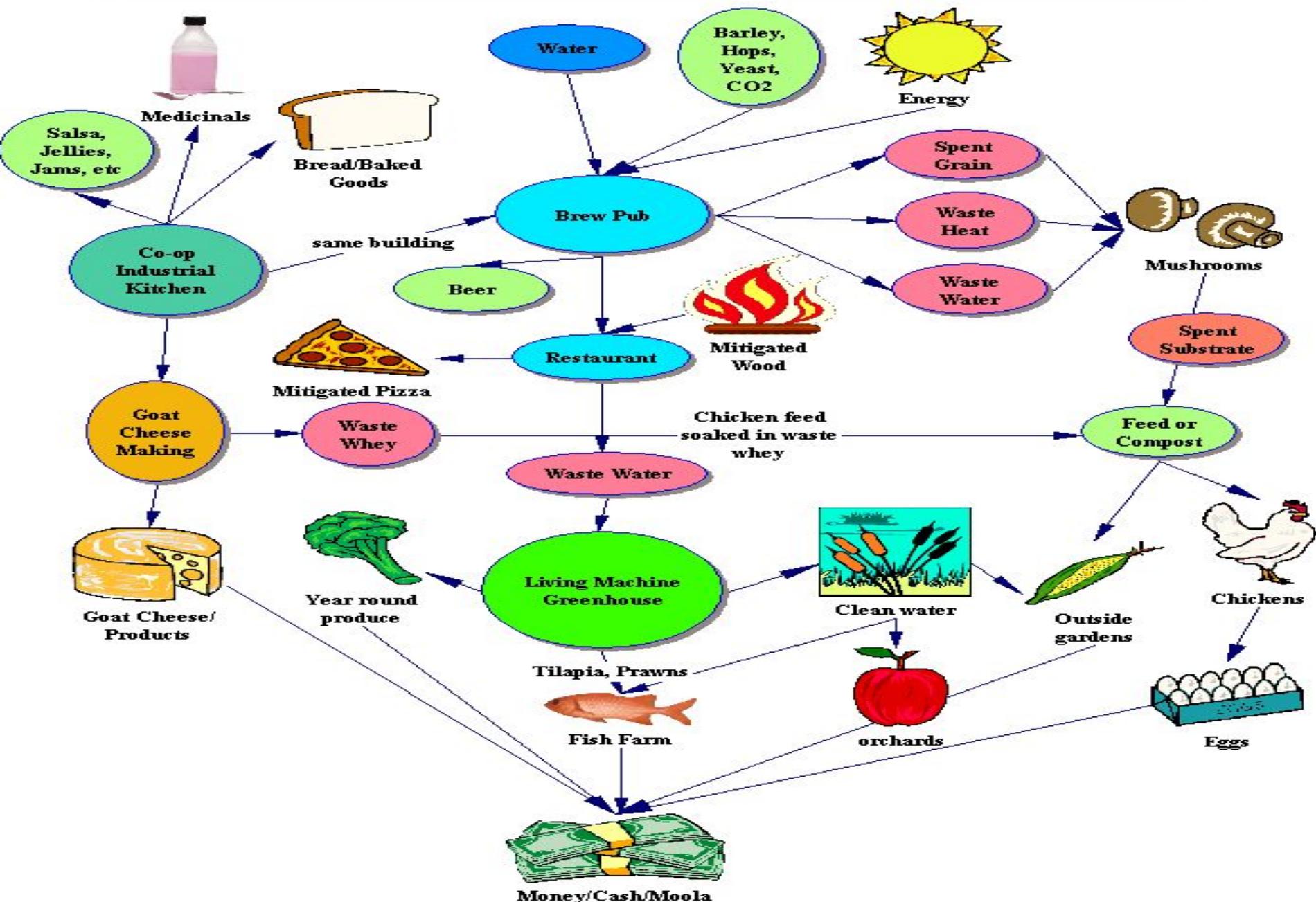
Living Wisdom Project

Crestone, Colorado

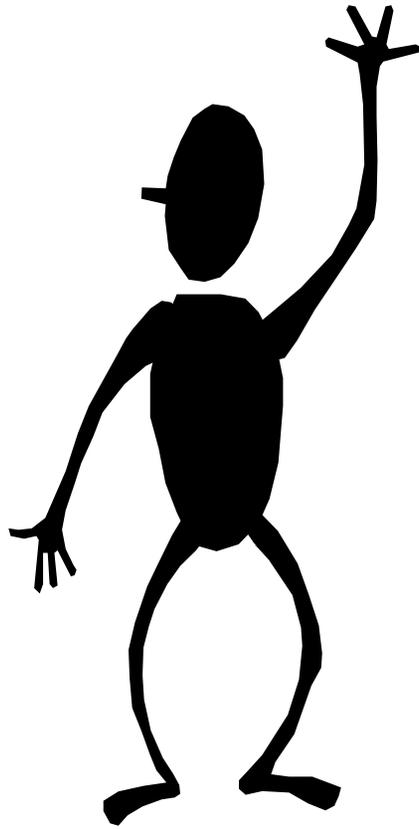
A New Economic Model



Living Wisdom Project Crestone, Colorado



2nd Person Research: Speaking (Bill Torbert)



- Framing
- Advocating
- Illustrating
- Inquiring
- (& Listening)

Discuss: Sustainability frameworks

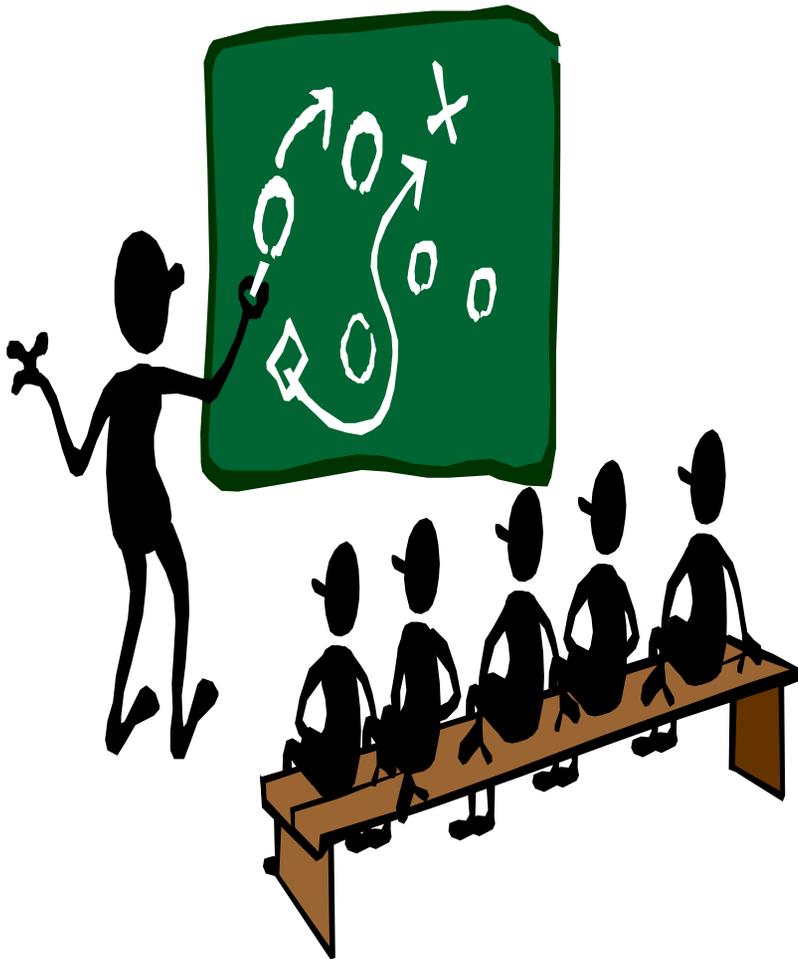
COMMONALITIES

-
-
-
-
-
-

DIFFERENCES

-
-
-
-
-
-

3rd Person Research: Organizing (Bill Torbert)



- Visioning
- Strategizing
- Operating
- Assessing

Discuss: Rethinking organizational systems & improving 3BL

-
-
-
-
-
-
-

Discuss: Research collaboration

-

-

-

-

-

-

-

Resources

- Ceres Principles: www.ceres.org
- Four Profit: www.fourprofit.com
- Future 500: www.globalff.org
- Innovest: www.innovestgroup.com
- Natural Capitalism: www.natcap.org
- Social Investment Forum: www.socialinvest.org
- The Natural Step (TNS): www.naturalstep.org
- The Sustainability Advantage:
www.sustainabilityadvantage.com
- World Business Council for Sustainable Development (WBCSD): www.wbcSD.org
- Zero Emissions Research & Initiatives (ZERI):
www.zeri.org



The beginning