Transitioning to Green: An Overview of Campus Sustainability in Higher Education

Workshop by:

Joe Rasmussen, Ed.D.

LEED AP BD+C

December 12, 2013

SACRAMENTO STATE

Presentation Overview

- Introduction
- Sustainability in Higher Education
  - ✓ What is sustainability?
  - ✓ Why transition to green?
- Using my Dissertation as a Lens
  - ✓ Literature Review
  - ✓ Methods
  - ✓ Findings
- How do we get there?
- Interactive session

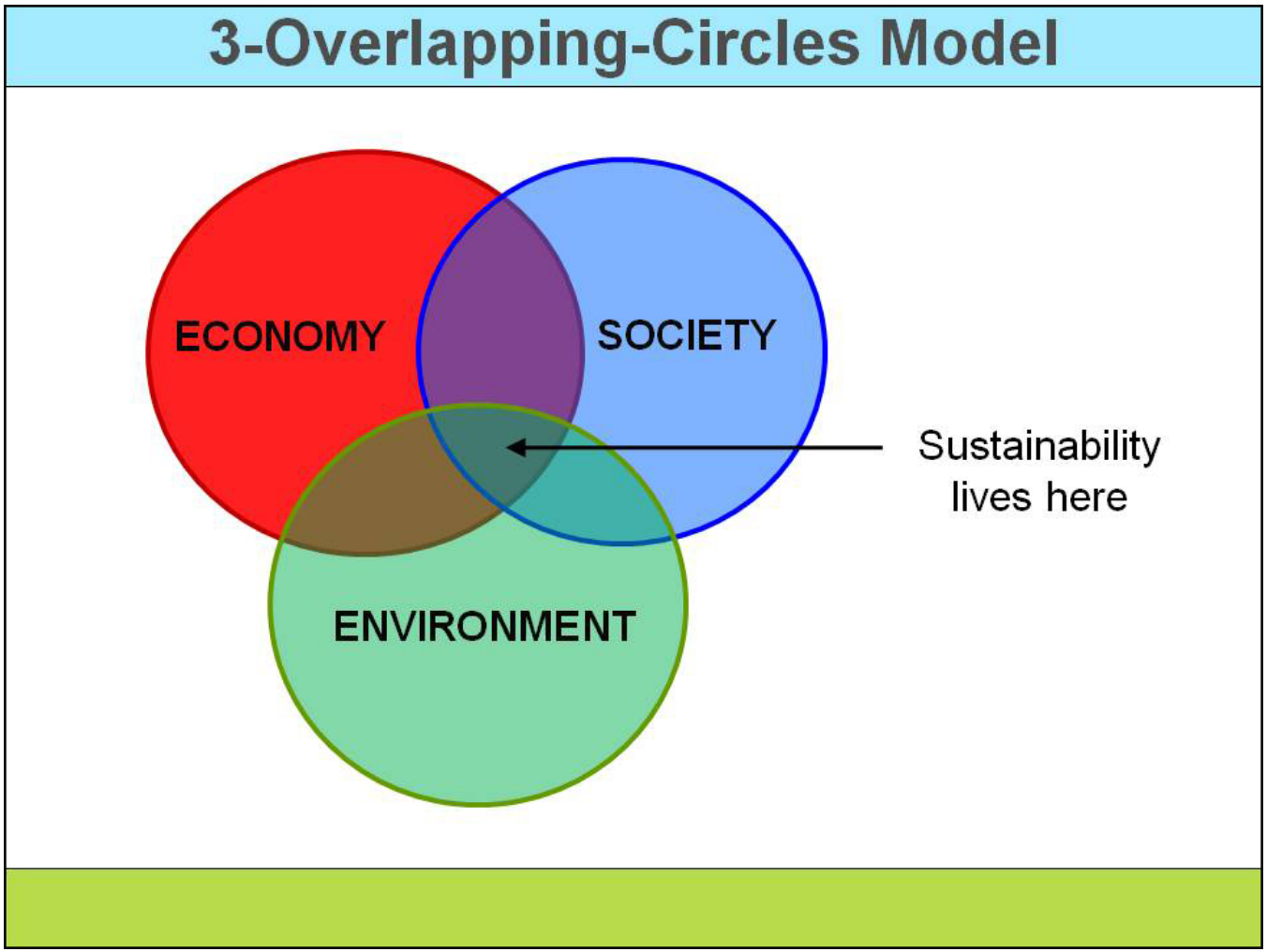
Introduction/Bio

- Over 15 years of experience working for universities, government, consulting firms, and non-profits
- Currently an Environmental Scientist for CalRecycle
- Sustainability Manager at LMU for 3 years
- Ed.D. in Educational Leadership – *CSU, Long Beach*
- M.A. in Philosophy - *CSU, Long Beach*
- B.S. in Natural Resources – *Humboldt State University*
- LEED AP BD+C – *U.S. Green Building Council*
- Presented at several conferences and other events

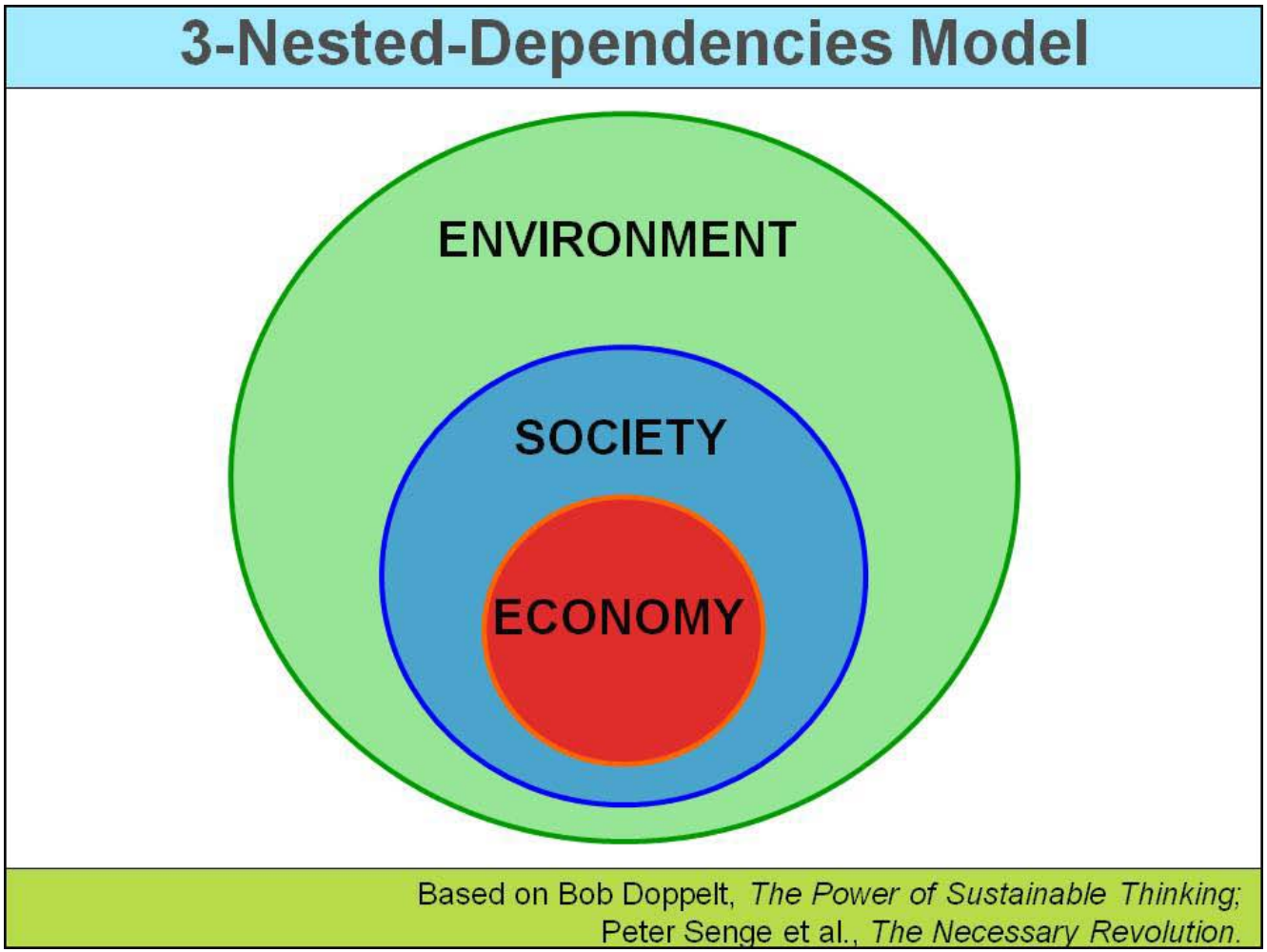
What is sustainability?

- *"Meeting the needs of the present without compromising the ability of future generations to meet their needs."* (Bruntland Commission, 1987)
- "**Triple Bottom Line**" accounting
  - ✓People
  - ✓Planet
  - ✓Profit
- Going "**Green**"

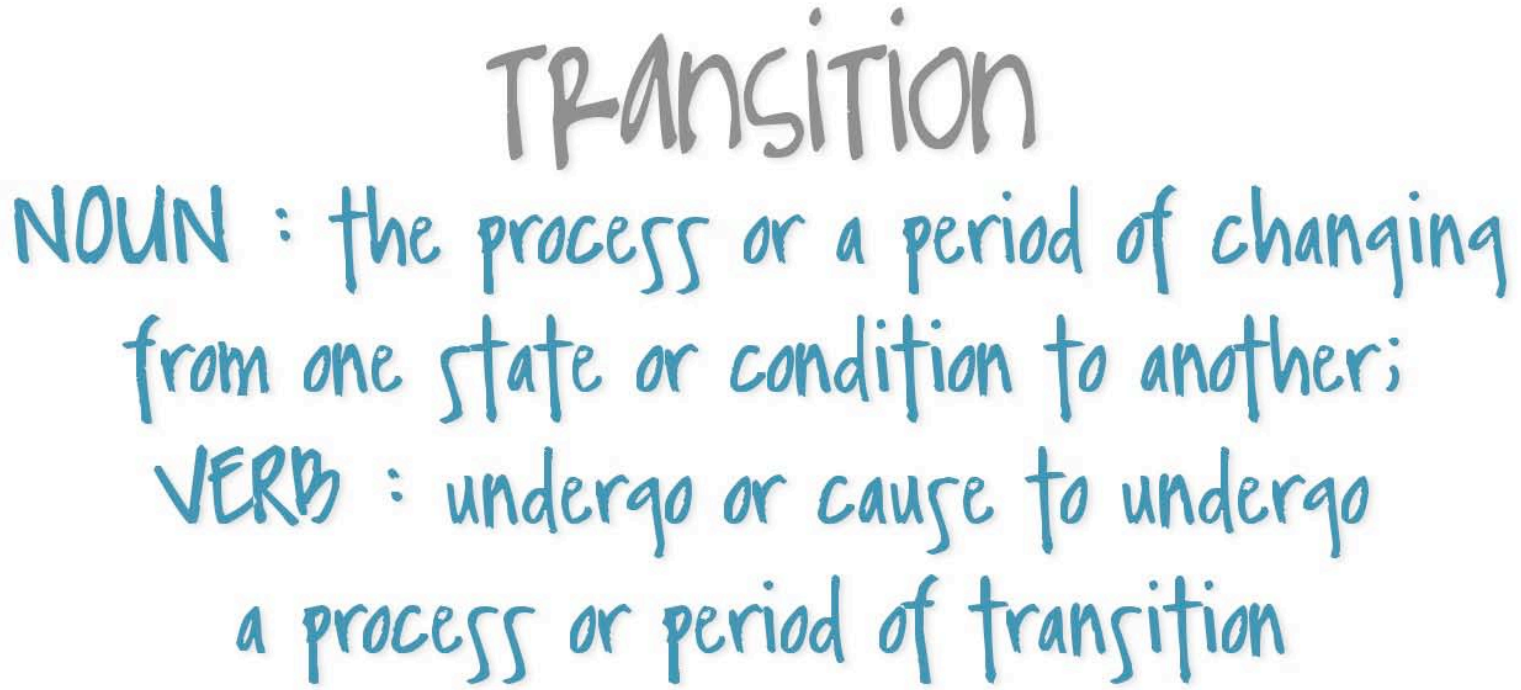
Conceptual Models of Sustainability



Conceptual Models of Sustainability



Transitioning to Green

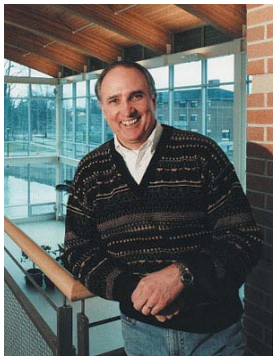


The process of striving toward sustainability is a *transition*.

Why Transition to Green?

Moral Imperative

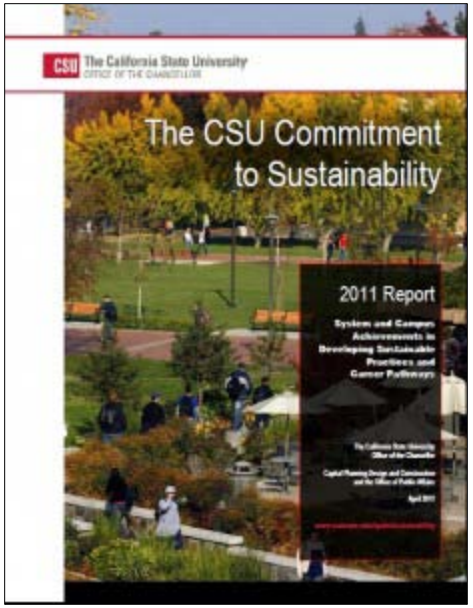
- To successfully transition to a sustainable future, education is necessary.
- Universities are arguably in the best position to provide this education and serve as models of sustainability.
- Several scholars, including David Orr, argue that there is a moral imperative for colleges and universities to provide this education.



Why Transition to Green?

CSU System-wide Effort

- The CSU system has been committed to sustainability for over 30 years.
- The CSU Strategic Plan identifies sustainability as a major public need to be systematically integrated into teaching, service, research and facilities management.



"Universities are the training ground for a better, greener future…We teach our students to deal with tomorrow's problems and our campuses are living laboratories of sustainable practices." -CSU Chancellor Charles B. Reed

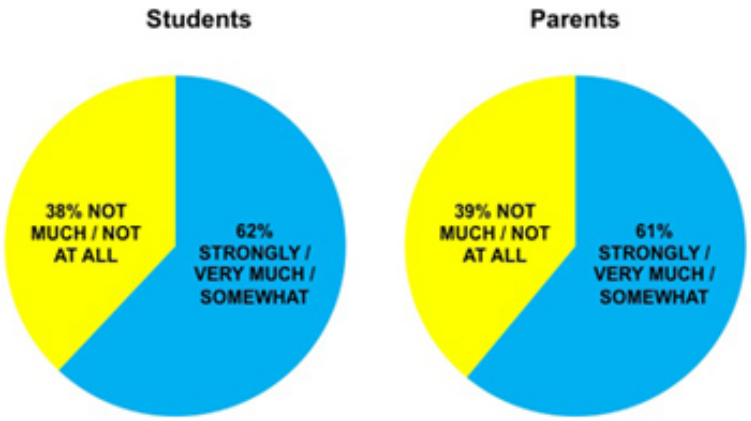
Why Transition to Green?

Student and Parent Demand

Princeton Review 2013 data showed that over 60% of students and parents take campus sustainability into account as a factor in choosing a college.

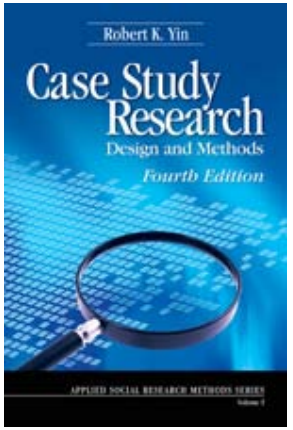
The Princeton Review

If you (your child) had a way to compare colleges based on their commitment to environmental issues (from academic offerings to practices concerning energy use, recycling, etc.), how much would this contribute to your (your child's) decision to apply to or attend a school?



Among respondents overall (students and parents combined), a solid majority, 62%, said having such information would contribute "Strongly," "Very Much," or "Somewhat" to their decisions while 38% of them said it would contribute "Not Much" or "Not at all." Students have placed higher value in knowing about colleges' commitments to the environment than parents have.

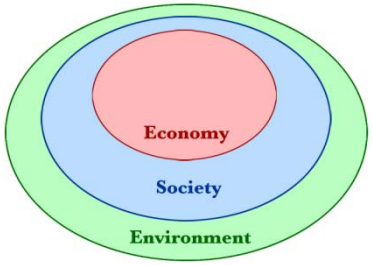
Using my Dissertation as a Lens



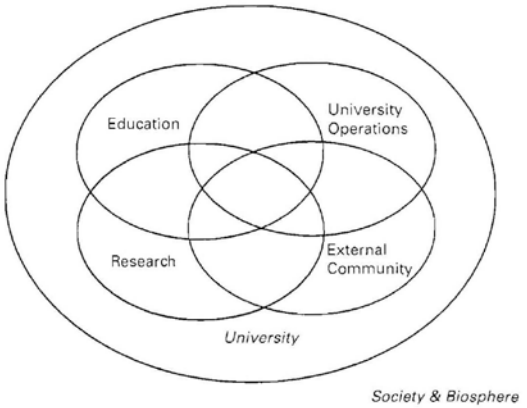
- Qualitative Case Study
- Primary research question: *How does a university implement a comprehensive sustainability initiative?*
- Guiding sub-questions:
  1) *What strategies does the campus pursue?*
  2) *What facilitates the adoption?*
  3) *What obstacles or challenges are faced?*

Literature Review

- **Context** of Sustainability in Higher Education



- **Practice** of Implementing Sustainability Initiatives

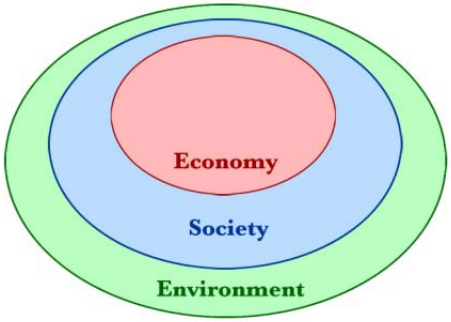


- **Process** of Implementing Sustainability Initiatives

Structural	**Human Resource**
Political	**Symbolic**

Context of Sustainability in Higher Education

- Sustainability as a moral imperative
- Sustainability as a core organizing principle for campus decision making
- Nested model of sustainability; Three dimensions:
  - Economy
  - Society
  - Environment



Environmental Sustainability

- The recent field of environmental sustainability grew largely out of the field of ecology.
- Environmental benefits of implementing sustainability initiatives in higher education:
  - ✓ Reducing GHG emissions
  - ✓ Improving indoor and outdoor environmental quality
  - ✓ Decreasing the pollution of soil, air and water systems
  - ✓ Conserving natural resources
  - ✓ Improving habitat for local biotic communities

Social Sustainability

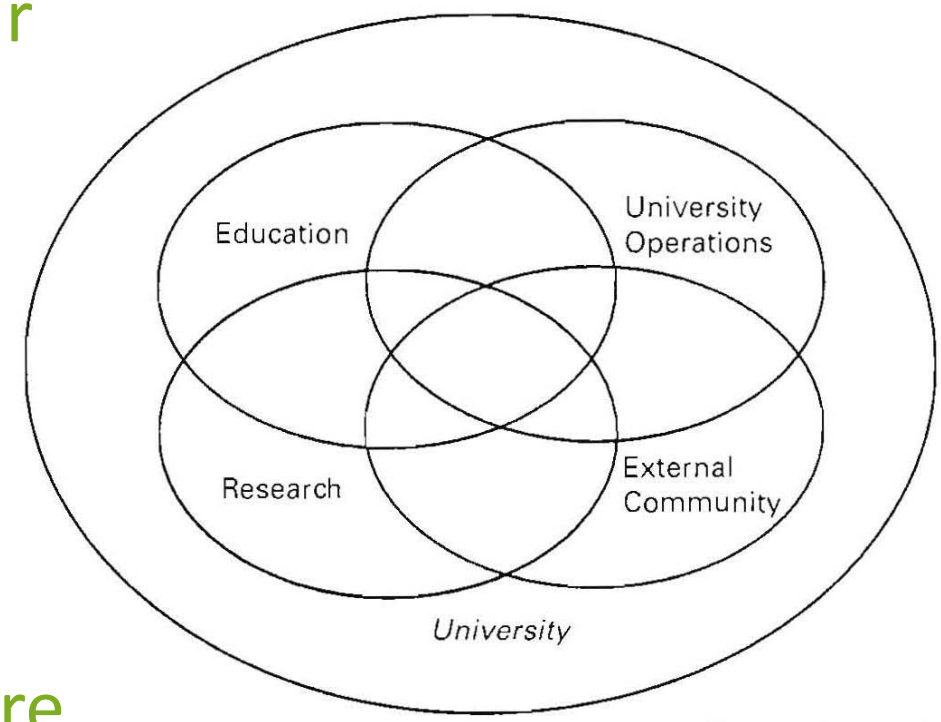
- Need for common worldviews, values, norms and behaviors that support a sustainable society
- Many sustainability initiatives support both human health and social equity:
  - ✓ Clean, filtered drinking water
  - ✓ Healthy and affordable food
  - ✓ Walkable and bikeable campuses
  - ✓ Diversity programs that promote inclusivity
  - ✓ Healthy “green” buildings for all occupants

Economic Sustainability

- Need an economic system that helps societies and ecosystems to *thrive*.
- Conventional economics does not adequately account for social or environmental concerns.
- Areas of emphasis within the field of economics:
  - ✓ Ecological Economics
  - ✓ Triple Bottom Line accounting
  - ✓ Strong vs. Weak approaches to sustainability

Practice of Implementing Sustainability

- This image shows the four main areas of practice.
- Although each area is distinct, there are many areas of overlap and intersection.
- Much descriptive literature in these areas, as well as some empirical studies.



Society & Biosphere

Sustainable Operations

Main areas of campus operations that are focused on sustainability:

- Water Conservation
- Energy Management
- Solid Waste Management
- Dining Services
- Landscaping/Grounds
- Transportation
- Purchasing
- Green Buildings
- Climate Action Planning

Sustainability Education

- Infusing sustainability across the curriculum
- Education for sustainable campus operations
- Educating all campus stakeholders about sustainability in a variety of ways

Sustainability Research

- Research conducted by campuses
- Developing models for the larger community

External Community

- Building partnerships for sustainability
- Conducting assessments and reporting on sustainability initiatives

Process of Implementing Campus Sustainability Initiatives

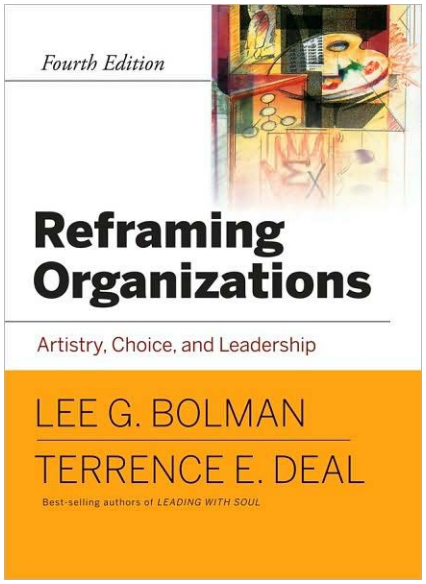
- Organizational Change in Higher Education
- Organizational Change for Sustainability
- Reframing Organizations

Organizational Change in Higher Education

- **A Slow and Difficult Process** - Change in higher education is slow. Colleges and universities are resistant to change for many reasons (both a pro and a con).

- **First and Second Order Changes** – First order changes operate within the status quo, while second order changes alter the status quo.

Organizational Change for Sustainability



Structural	**Human Resource**
Political	**Symbolic**

Bolman and Deal's (2008) "Four Frames" model for understanding organizational change

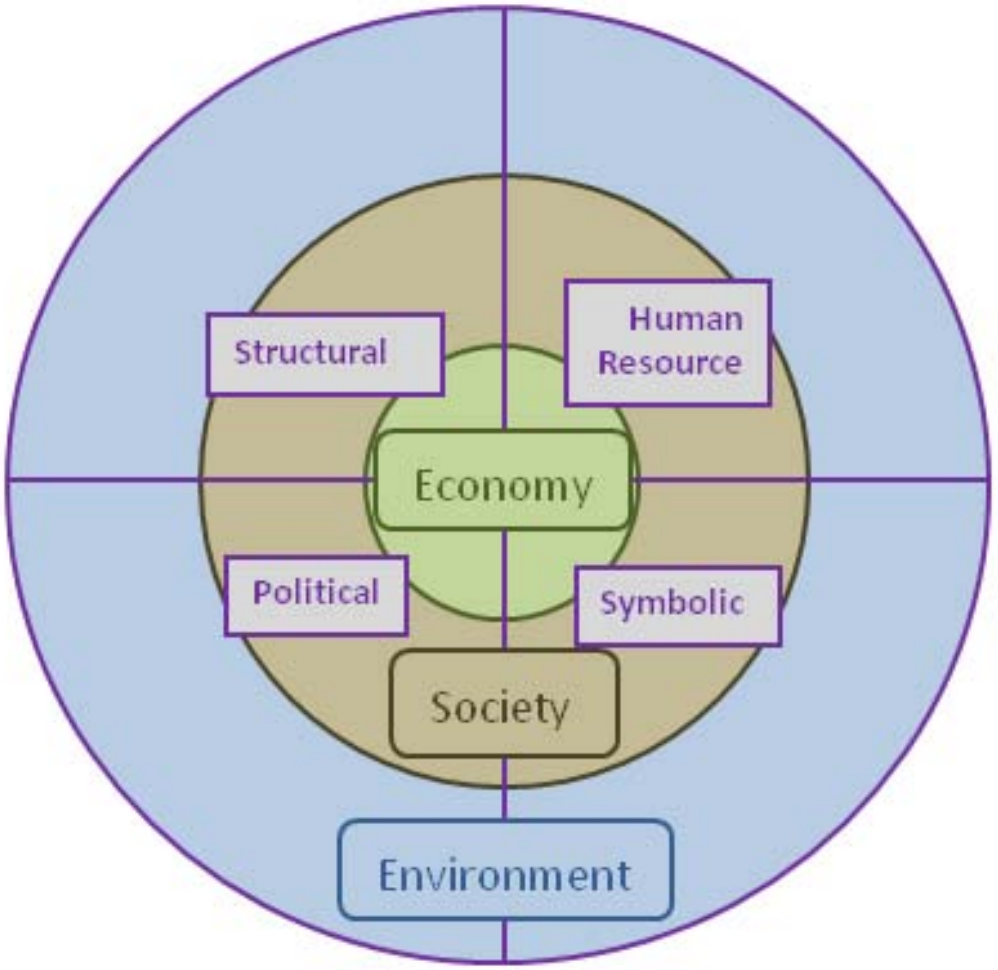
Four Frames of Bolman and Deal

- **Structural** - How an organization is structured and why it is structured in that particular way
- **Human Resource** – Focuses on the human dimensions of organizational dynamics
- **Political** – Analysis of power structures and relationships within organizations
- **Symbolic** – How an organization is perceived and related to by stakeholders

Structural	**Human Resource**
Political	**Symbolic**

Conceptual Framework

Conceptual framework depicting Bolman and Deal's (2008) Four Frames model as a lens through which to view organizational change in the context of a nested model of sustainability.



Structural Frame

- **Financial Resources and Economic Incentives -** Sustainability initiatives require financial resources and work best when there is an economic incentive.

- **Delegating Work to Staff -** It is imperative that qualified campus staff manage and coordinate the implementation of sustainability initiatives.

Political Frame

- **Engaging Stakeholders to Build Support -** Involve multiple stakeholders to get buy-in as well as ongoing support from constituents.

- **Transformational Leadership** - Transformational leaders empower others to grow and develop into leaders themselves.

Human Resource Frame

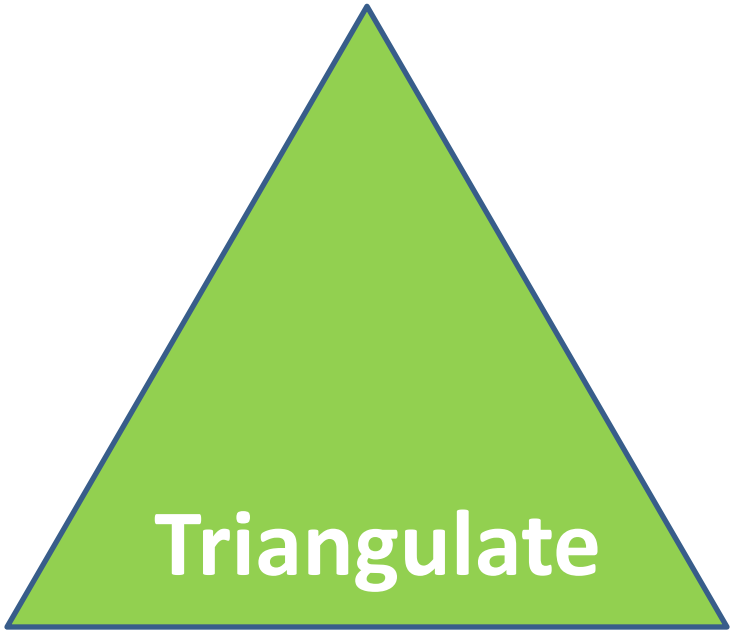
- **Sustainability Champions** - Internal advocates who utilize their influence become a catalyst for change
- **Sustainability Committees** - Representatives from administration, staff, faculty, and students meet on a regular basis to share ideas, set goals, and plan
- **Facilitating an Interdisciplinary Faculty Culture** - Academia ought to reward scholarship that crosses traditional departmental boundaries

Symbolic Frame

- **Declarations and Commitments** – By committing to the terms of these agreements, colleges and universities express a symbolic promise to uphold a particular set of values and make decisions guided by a specific vision.
- **Maintaining a Green Image** - Not only are colleges and universities expected to be green institutions themselves, but they are also expected to be the primary places where others learn about environmental sustainability.

Qualitative Data Collection Methods

Interviews



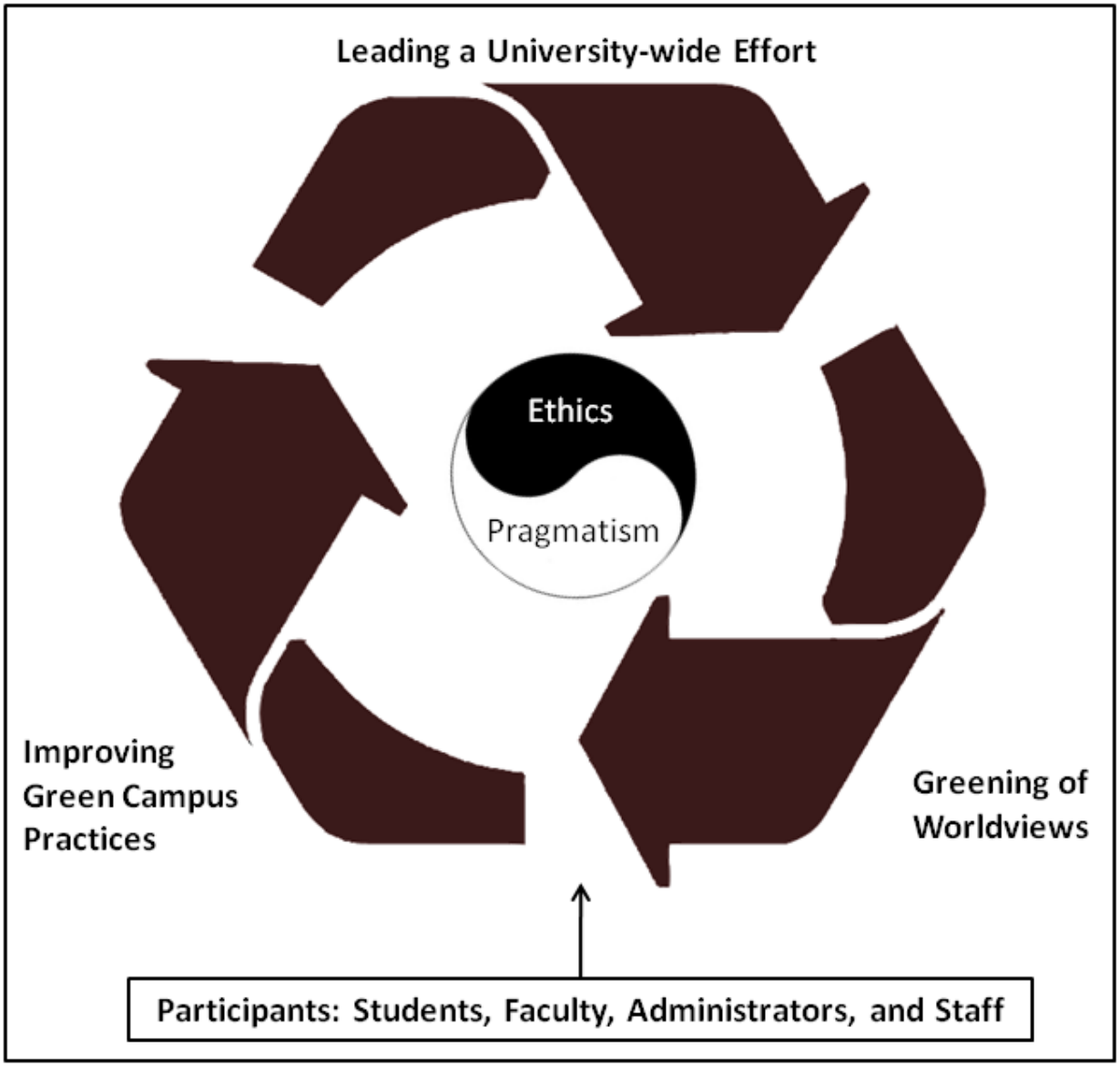
Observations

Document Review

Findings

3 Themes Emerged from Data:

1) Greening of Worldviews
2) Improving Green Campus Practices
3) Leading a University-wide Effort


Leading a University-wide Effort
Ethics
Pragmatism
Improving Green Campus Practices
Greening of Worldviews
Participants: Students, Faculty, Administrators, and Staff

Greening of Worldviews

Categories:

- **Expanding Academic Degree Programs**
- **Infusing Sustainability Across the Curriculum**
- **Learning through Service Work and Community Outreach**

Environmental sustainability is "a worldview as well as a behavior."

- Paul, CBU Urban Ecology Professor

Improving Green Campus Practices

Categories:

- **Reducing Waste**
- **Generating Renewable Energy**
- **Irrigating with Reclaimed Water**
- **Green Building**
- **Reducing GHG Emissions**
- **Alternative Transportation**
- **Healthy and Local Food**

"We have a commitment to renewable energy. We were one of the first universities to install a photovoltaic system. At the time, it was the largest system of any university in the country."

- Frank, CBU Facilities Director

Leading a University-wide Effort

Categories:

- **Connecting Sustainability to the University Mission**
- **Getting the "Best Bang for your Buck"**
- **Planning, Administration, and Engagement**

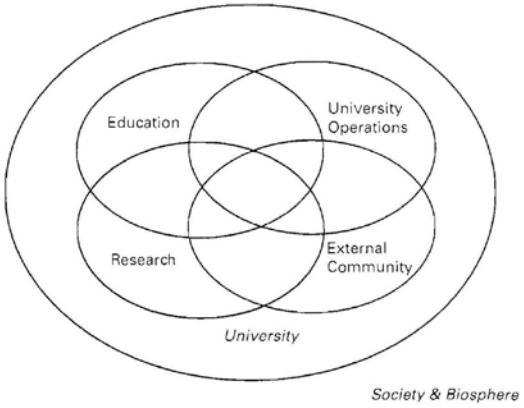
"It is our responsibility, as stewards of the environment, to educate, lead and take action to care for our world."

- Former CBU President (Quote, CBU web site)

Findings and Interpretations

RQ-1: What strategies did the campus pursue?

- Operations - Implemented green practices
- Education - Curriculum and co-curriculum
- Research - Conducted sustainability research
- External Community – Modeled solutions and communicated



Findings and Interpretations

RQ-2: What challenges/obstacles were faced?

1) Funding Issues
   - Recession led to decreases in funding
   - Investing in projects with net-savings

2) Balancing plans for growth with plans for reducing environmental impacts
   - Expanding university services
   - Reaching climate neutrality

Findings and Interpretations

RQ-3: What facilitates the adoption?

- Structural – Investing financial resources
- Human Resource – Supporting staff and faculty
- Political – Developing a sustainability committee and promoting interdisciplinary faculty work
- Symbolic – Participating in various communication strategies

Structural	**Human Resource**
Political	**Symbolic**

How do we get there?

- Maintaining professional affiliations
- Signing commitments and declarations
- Reporting data through transparent systems

aashe
The Association for the Advancement of Sustainability in Higher Education

stars
a program of aashe

The Princeton Review

American College & University Presidents Climate Commitment

SIERRA
EXPLORE, ENJOY, AND PROTECT THE PLANET

How do we get there?

Participate in:

- National competitions
- Established campaigns
- Recognized initiatives

EARTH DAY NETWORK

America Recycles Day
November 15

2014 RECYCLE MANIA TOURNAMENT

CAMPUS CONSERVATION NATIONALS 2014

BIKE MONTH MAY

TREE CAMPUS USA

How do we get there?

Partnerships with:

- Government and local utility providers
- Student government and on-campus clubs
- Non-profit and for-profit organizations

SMUD™

zipcar
wheels when you want them

DEPARTMENT OF ENERGY · UNITED STATES OF AMERICA ·

KEEP AMERICA BEAUTIFUL® INC.

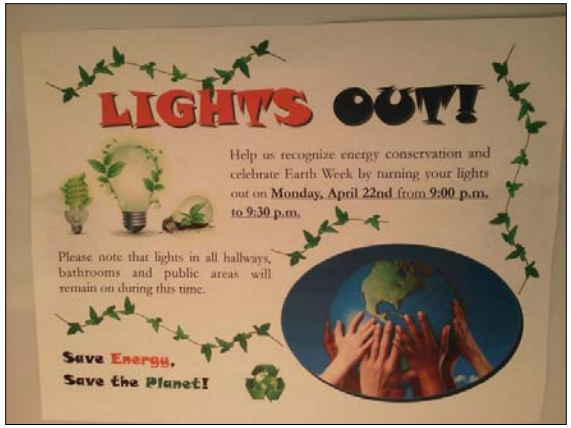
ASSOCIATED STUDENTS SACRAMENTO STATE

How do we get there?

Encourage:

- Student projects and initiatives
- Faculty research and service
- Staff leadership and participation

Below: Energy Conservation Campaign



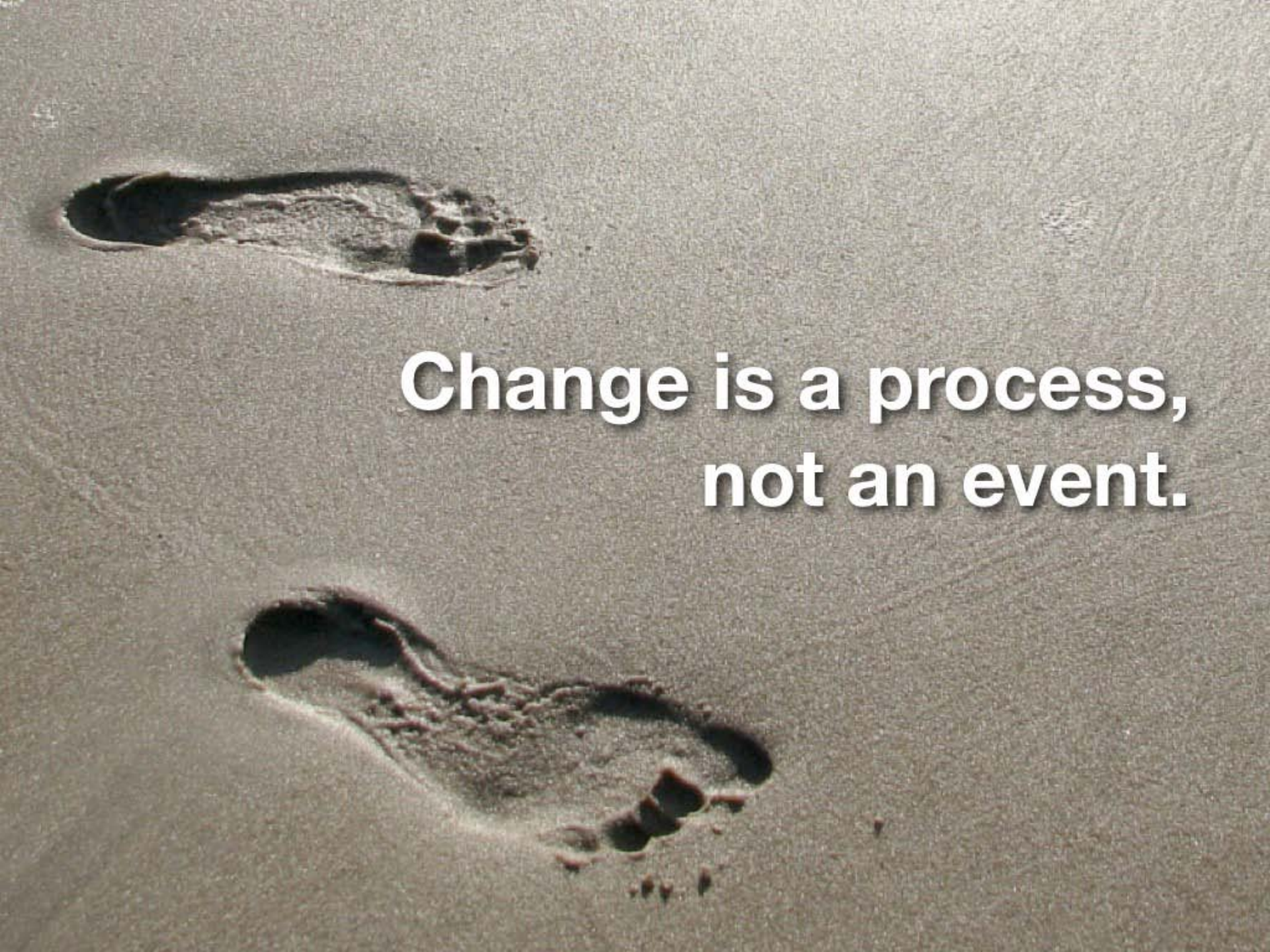
Above: Biodiesel Research Project

Below: Outreach event on campus

Conclusion

- As universities continue to **green** worldviews and ways of living, society will have an increased capacity to **engage** in these efforts and affect **change** in the world.

- These changes will allow for the **transition** to a more **sustainable** society, enabling current and future generations to **thrive**.


Change is a process,
not an event.

Thank You!

Questions?