## **MEASURING SUSTAINABILITY**





## Sustainability





#### **RECYCLING?**



#### **GARDENING?**



#### **CARBON?**



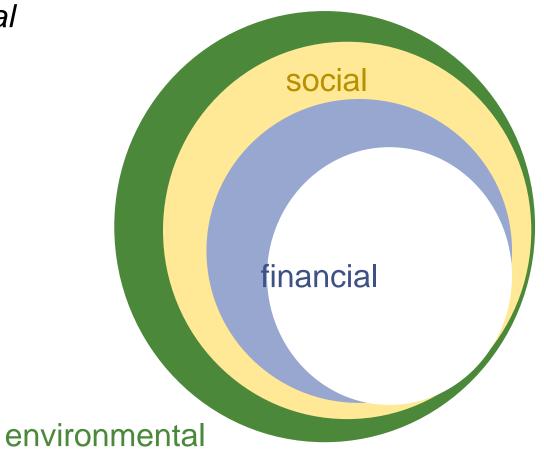
#### **COMPOST?**





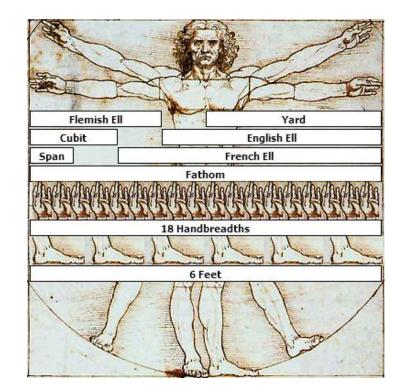
## **Sustainability Principles**

holistic concept that encompasses environmental, financial and social systems.





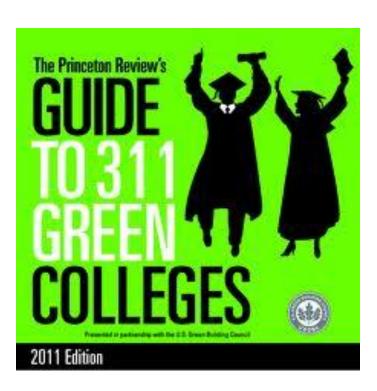
# HOW DO WE MEASURE SUSTAINABILITY?















## **STARS**

## SUSTAINABILITY TRACKING, ASSESSMENT AND RATING SYSTEM





#### **DESIGNED TO:**

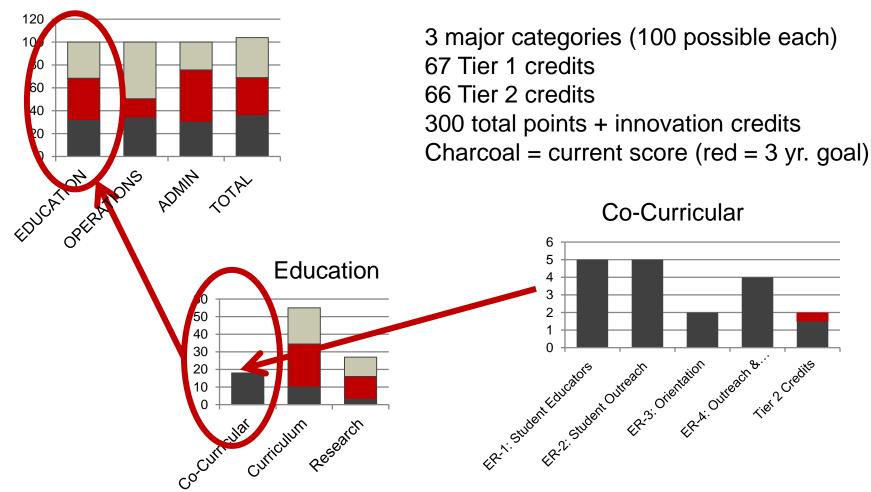
PROVIDE A FRAMEWORK FOR SUSTAINABILITY
ENABLE MEANINGFUL COMPARISONS
CREATE INCENTIVES FOR IMPROVEMENT
FACILITATE INFORMATION SHARING

BUILD A STRONGER, MORE DIVERSE CAMPUS SUSTAINABILITY COMMUNITY.





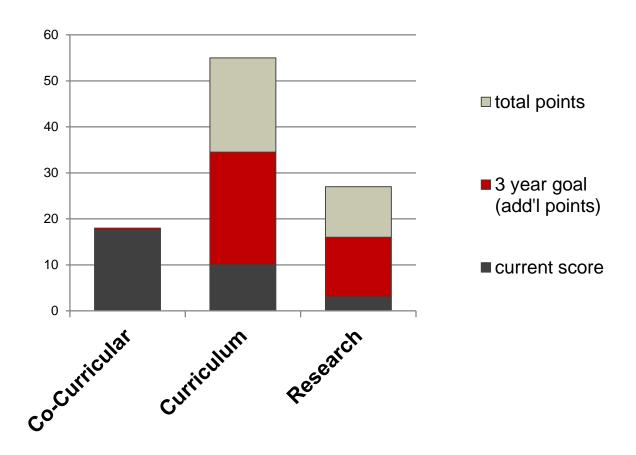
#### **HOW STARS WORKS**



SCORE MAY BE A RESULT OF INSUFFICIENT DATA
OS WORKING WITH EACH "UNIT" TO REFINE GOALS



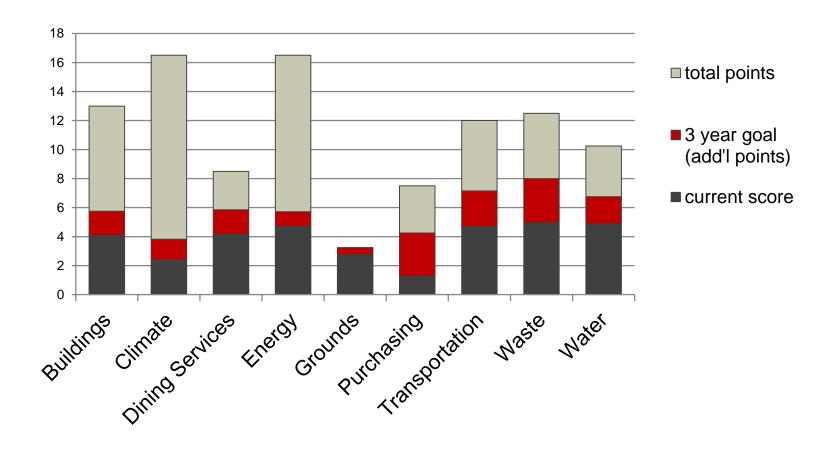
### **EDUCATION**







#### **OPERATIONS**

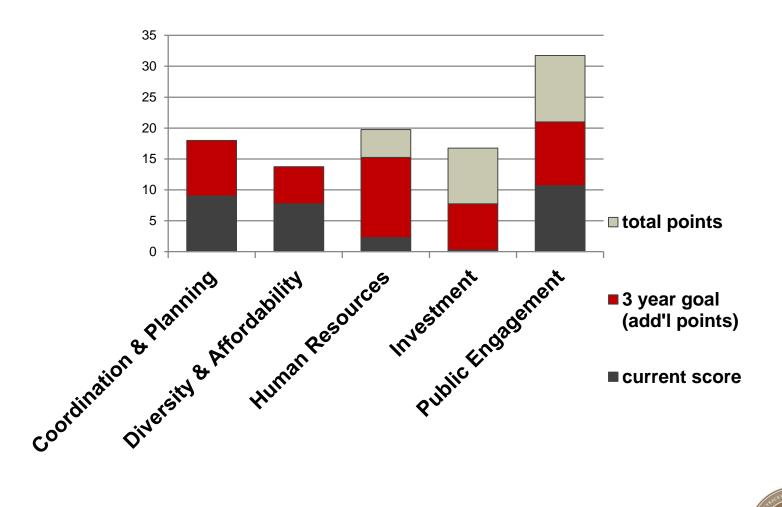


Measuring progress against 2005 baselines





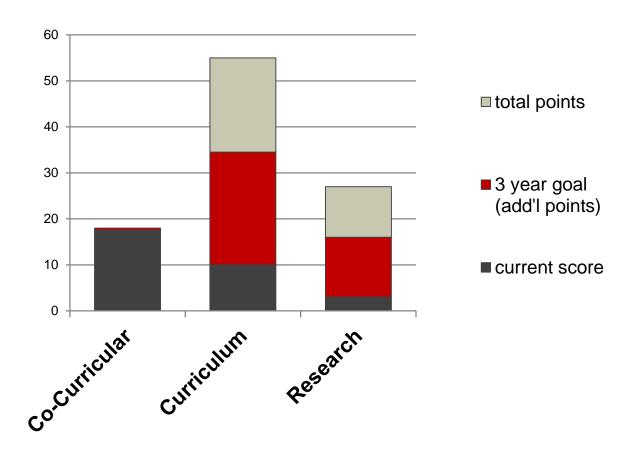
## PLANNING, ADMINISTRATION & ENGAGEMENT







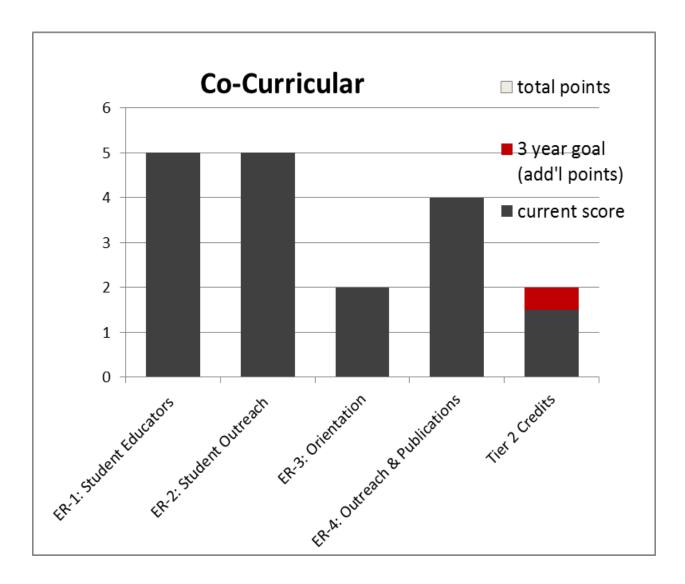
### **EDUCATION**







### **EDUCATION**







- 1 Student Sustainability Educators: Educators in peer-to-peer outreach.
  GOAL(s): Expand Green Floor program double participation students. Energy Ambassadors
- **2 Student Sustainability Outreach:** Measurable results in institution's performance. GOAL: Expand OS "Sustainability Ambassadors" program. Reach twice the number of students.
- 3 Sustainability in New Student Orientation:

GOAL: Improve material and activities – reach transfer and graduate students

4 - Sustainability Outreach and Publications:

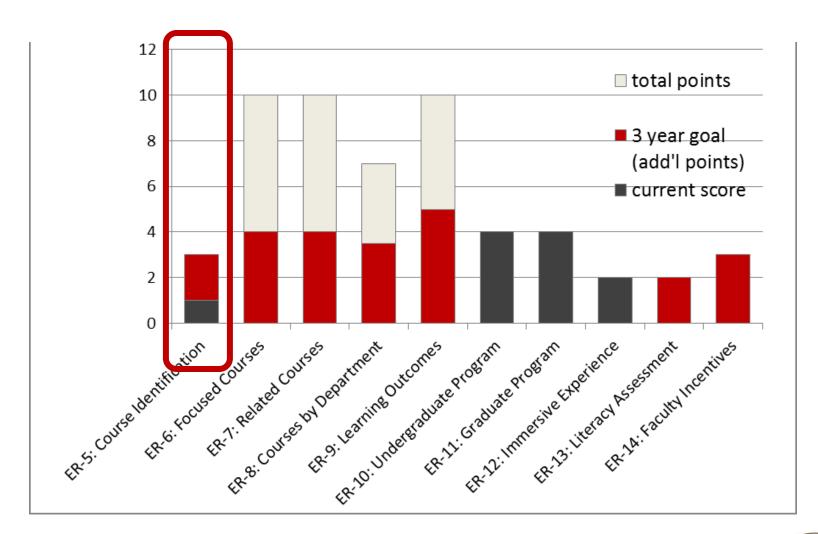
GOAL: Continue existing publications and expand to "non-sustainability-focused" publications

#### **Co-Curricular Education Tier Two Credits**

- **1-Student Group (Y):** Institution has an active student organization focused on sustainability.
- **2-Organic Garden (Y):** Institution has an on-campus garden.
- **3-Model Dorm Room (N):** SCIF project part of Honors Housing project to be complete 2012.
- 4-Themed Housing (Y): Institution has sustainability-themed housing
- 5-Sustainable Enterprise (Y): Institution has a student-run sustainable enterprise
- **6-Sustainability Events (Y): E**vents related to sustainability with students as intended audience.
- 7-Outdoors Program (Y): Wilderness or outdoors program and follows Leave No Trace principles
- **8-Themed Semester or Year (N):** Sustainability-related theme during the past three years. OS & MUSE to sponsor program this year with Sustainability Ambassadors.



### **EDUCATION**







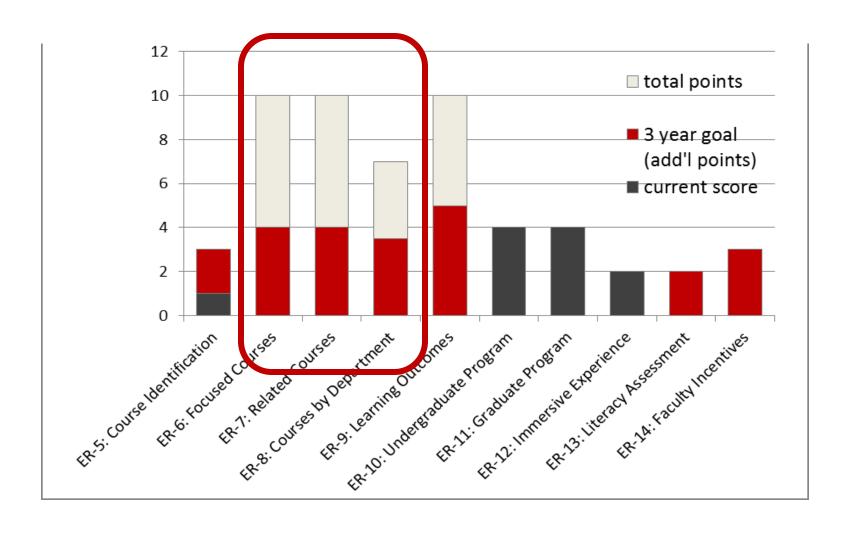
**5 - Sustainability Course Identification:** The definition should distinguish between courses that **focus on**, or **relate to**, an aspect of sustainability

"Sustainability is the harmonious and equitable interaction among ecological, social, and economic systems that provides resources for current generations and leaves future generations with no less access.

Sustainability curriculum provides the necessary breadth and depth of knowledge, skills, and critical and creative thinking to implement solutions for, and adapt with, the interconnected ecosystems for present and future generations.

#### Sustainability-related (1) vs. sustainability-focused (more than 1):

- knowledge to explore aesthetic, ethical, and philosophical dimensions of sustainability
- knowledge from multiple disciplines to comprehensively analyze interconnected relationships among human, environmental, and economic systems;
- methods to analyze life-cycle benefits and impacts of resource management decisions in terms of social, economic, and environmental metrics;
- skills to assess and communicate alternative policy strategies for the use of natural, human, and fiscal resources that are compatible with the constraints on these resources;
- skills to innovate and design practical solutions to socioeconomic and environmental challenges, including those that relate to water, energy, infrastructure, ecosystems, community, policy, and governance."





**6 - Sustainability-Focused Courses: E**ducate students about all dimensions of sustainability. (Information currently unavailable)

GOAL: 2% of total courses

REQUEST: communicate to faculty – help to identify courses

7 - Sustainability-Related Courses: Build knowledge about a component of

sustainability. (Information unavailable)

GOAL: 12% of total courses

REQUEST: communicate to all faculty – help to identify courses

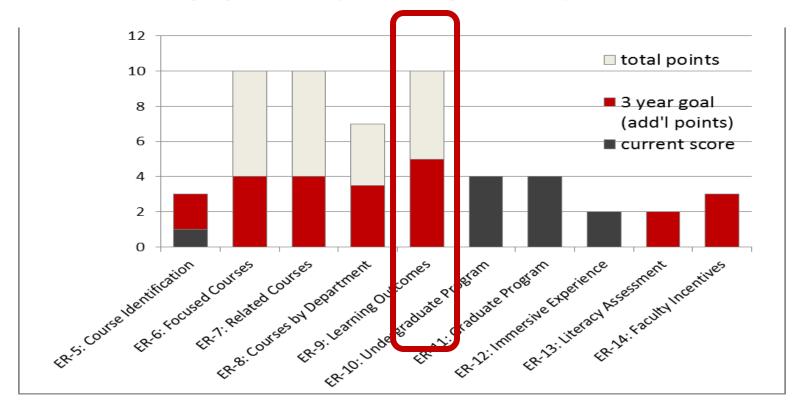
**8 - Sustainability Courses by Department:** Institution's academic departments offer sustainability-related and/or sustainability-focused courses. (Information unavailable)

GOAL: 45% of departments

REQUEST: communicate to all faculty – help to identify courses that meet

definition



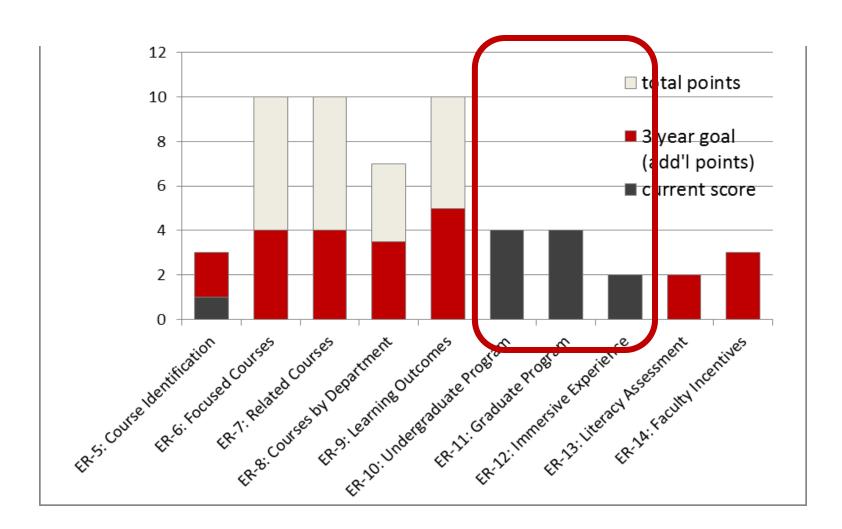


9 - Sustainability Learning Outcomes: Programs include sustainability as a required learning outcome. (Information currently unavailable)

GOAL: 50% of students to graduate... with 1 sustainability learning outcome.

REQUEST: Evaluate potential to incorporate sustainability learning outcome(s)



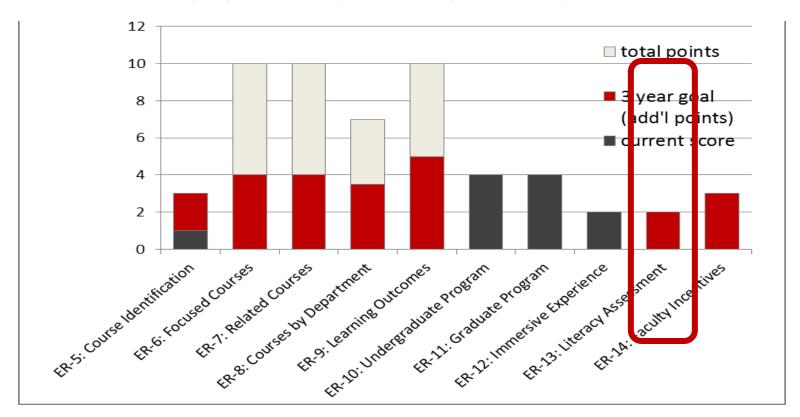






- **10 Undergraduate Program in Sustainability: S**ustainability-focused undergraduate major, degree program, or equivalent. ENVST identified confirm if other programs qualify.
- 11 Graduate Program in Sustainability: Sustainability-focused degree program or equivalent for graduate students. ENV-HUM identified confirm if other programs qualify.
- **12 Sustainability Immersive Experience:** Sustainability-focused educational study program. Costa Rica identified confirm if other programs qualify.

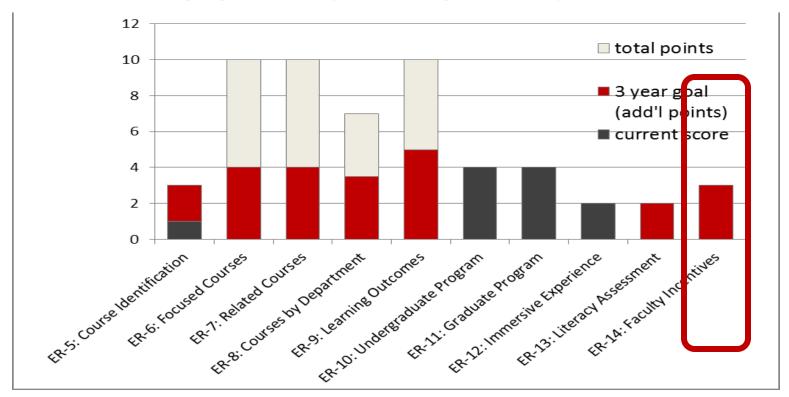




ER Credit 13 - Sustainability Literacy Assessment: Conducts assessment and follow up of sustainability literacy of students. (MPP project team currently working on pilot study)

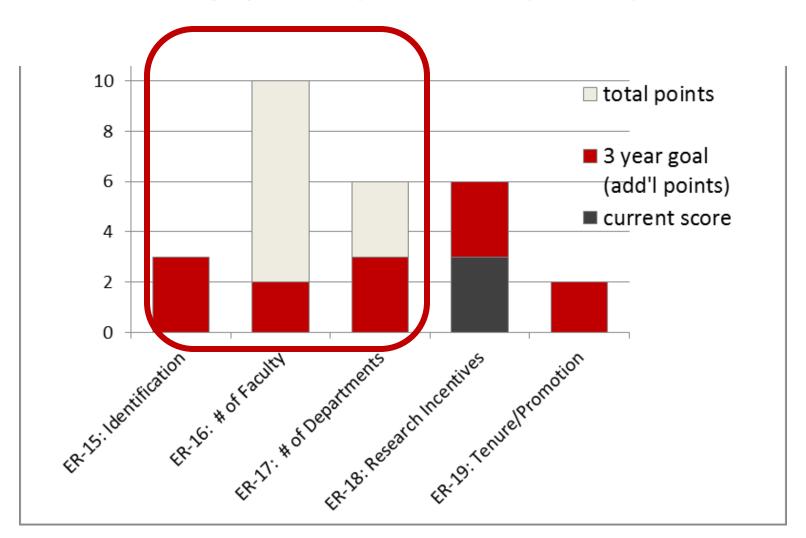
REQUEST: Design and implement valid assessment with IRB approval





ER Credit 14 - Incentives for Developing Sustainability Courses: Provide ongoing programs that offer incentives for faculty to develop new sustainability courses and/or incorporate sustainability into existing courses or departments. REQUEST: Partner with CTLE/UGS/Curriculum Directors, others to create programs and incentives for Peer-to-peer training (similar to Piedmont/ Chesapeake Projects).









- **15 Sustainability Research Identification: D**evelop definition of sustainability research. (Information currently unavailable) REQUEST: Identify faculty to define Sustainability Research
- 16 Faculty Involved in Sustainability Research: Institution's faculty members conduct research on sustainability topics. Institutions earn the maximum of 10 points available for this credit when 25 percent of faculty is engaged in sustainability research. (Information currently unavailable)

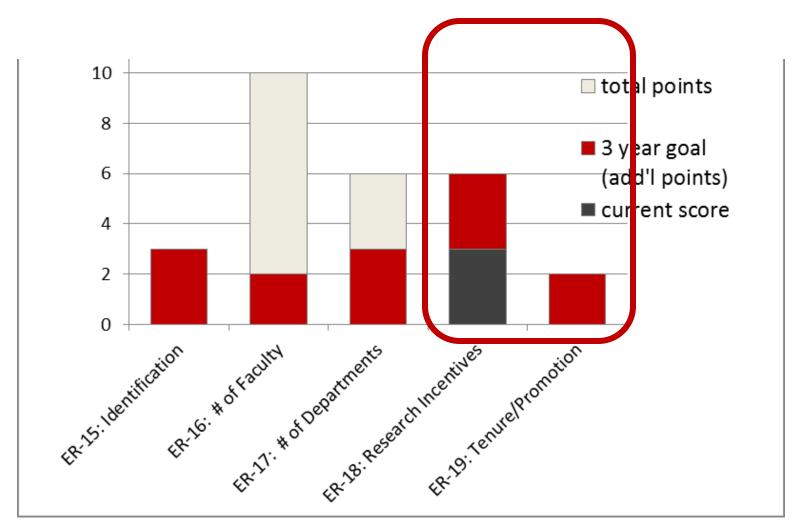
GOAL: 5% faculty engaged

REQUEST: Communicate definition to all faculty members and compile results

17 - Departments Involved in Sustainability Research: Academic departments include faculty members who conduct sustainability research. Institutions earn the maximum of 6 points available for this credit when 75 percent of departments are engaged in sustainability research. (Information currently unavailable)

GOAL: Increase to 37.5% of departments engaged









#### **ER Credit 18 - Sustainability Research Incentives:**

**Part 1: O**ngoing program to encourage students in multiple disciplines to conduct research in sustainability.

**Part 2: O**ngoing program to encourage faculty from multiple disciplines or academic programs to conduct research in sustainability topics. Current student programs = UROP & SCIF

GOAL: Create incentive program for faculty

REQUEST: Help identify appropriate incentives and create funding source

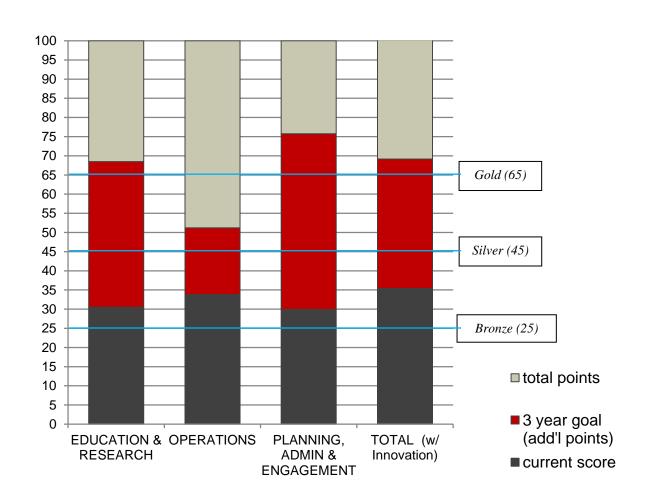
19 - Interdisciplinary Research in Tenure and Promotion: Institution gives positive recognition to interdisciplinary, trans-disciplinary, and multidisciplinary research during faculty promotion and tenure decisions.

GOAL: Create policy or formalize & communicate existing policy.

REQUEST: How is this accomplished (confirmed)? Who moves this forward?



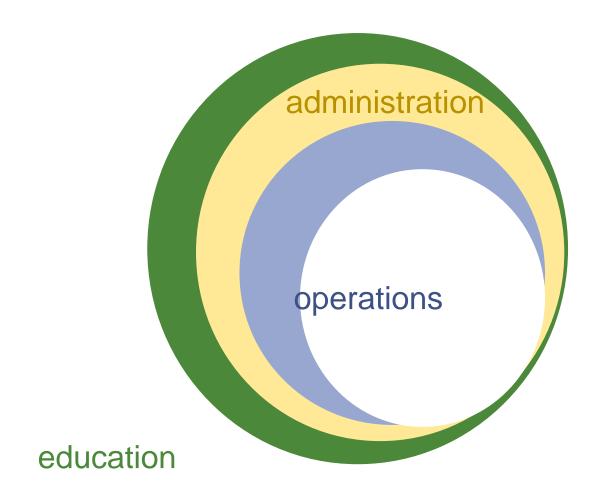
## **STARS TOTALS**







## **Sustainability Landscape**





## **SUSTAINABILITY: MANY BENEFITS**

Categories rated 0 to 3	0 = no effect	1 = little effect	2 = some effect	3= significant effect	
Coloring	0	1	2	3	

	Financial Stability					Academics & Learning		Operational Impacts		Stakeholder Impacts	
	rinanciai stability		Academics & Learning		Operational Impacts		эсикепоїает impacts				
STARS Sustainability Categories	Cost Control	Recruitment, Retention, Enrollment	Auxiliary Services & Revenues	Development and Alumni Relations	Risk Management & Abatement		Faculty Support & Retention	Safe & Healthy Campus	Operational Excellence	Leadership and Professional Development	Community & Stakeholder Relations
Co-curricular	0	2	1	2	1	2	1	2	1	2	3
Curriculum	0	3	2	2	0	2	3	1	1	1	2
Research	0	1	1	2	0	1	2	1	2	1	1
Buildings	3	3	3	3	2	3	3	2	3	2	2
Climate	3	2	1	2	3	1	2	2	3	2	3
Dining	0	2	3	2	1	2	2	2	2	1	1
Energy	3	1	1	1	3	1	1	2	3	2	2
Grounds	1	3	1	2	3	2	2	3	3	1	2
Purchasing	3	1	1	1	3	1	1	2	3	2	2
Transportation	3	2	1	2	2	2	2	2	3	2	3
Waste	3	3	2	2	2	2	1	3	3	2	3
Water	3	1	1	1	2	1	1	2	3	2	1
Coordination & Planning		2	1	2	2	2	2	2	2	2	2
Diversity & Affordability		3	2	2	2	2	2	3	1	3	3
Human Resources	1	1	1	1	3	2	2	3	1	3	3
Investment	1	1	0	2	2	1	1	1	1	3	2
Public Engagement	1	1	0	2	2	2	2	1	1	2	3



Slide courtesy of Dave Newport, Director Environmental Center University of Colorado at Boulder

# HOW DOES SUSTAINABILITY ADD VALUE?





#### **VALUE: FACTORS IN COLLEGE SELECTION**

#### **RECRUITING STUDIES:**

UCLA (2008), PRINCETON REVIEW (2011), ARAMARK (2008)

Rate the importance of the following in deciding								
which college or university to attend. % saying very important	Total	Student Gov't Leaders	Student Opt In	Male	Female	Public	Private, no religious affiliation	Private, religious affiliation
Academic reputation	74%	78%	73%	73%	76%	71%	82%	76%
Location of the campus	59%	62%	57%	52%	64%	62%	63%	48%
Appearance of campus grounds and buildings	50%	52%	49%	49%	51%	52%	52%	46%
Sustainability initiatives	26%	34%	23%	29%	25%	26%	25%	29%
Quality of dining options	24%	20%	26%	22%	26%	25%	23%	24%
Diversity on campus	24%	30%	21%	23%	25%	25%	26%	20%
Community service initiatives	18%	23%	15%	16%	19%	17%	16%	22%
Athletic programs	14%	14%	15%	15%	14%	17%	8%	14%
Greek life and social clubs	12%	18%	10%	13%	11%	14%	10%	10%
Religious affiliation	9%	8%	10%	7%	11%	4%	3%	23%

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## HOW DOES SUSTAINABILITY ADD VALUE?

Curricular & Cocurricular Education

- Increases campus intellectual/social capital & relevance
- Enhances student & faculty recruitment, engagement & retention
- Student learning; interdisciplinary, project-based, critical-thinking skills

Marketing & Branding

- Improves student recruitment
- Enhances community support
- Increases development/fundraising potential

Efficiency, Cost

Resource conservation & waste reduction decreases costs

Control & Full Cost

Staff engaged, motivated and innovative

**Evaluation** 

Improves "systems-thinking" approach: decreases barriers to action

Strategic Mapping, Planning, Inclusive Goal Setting, & Commitment

- Improves campus intelligence more informed decisions
- Inclusion informs of risks and downsides allows hedging
- Improved town/gown relations



## **NEXT STEPS**

#### General

- Confirm commitment to STARS Gold by 2014
- Access to leadership for goal-setting and to report progress
- Provide resources to gather, coordinate and analyze information

#### **Curriculum & Research**

- Faculty programs to integrate sustainability into course curriculum
- Mechanism to coordinate sustainability efforts (definitions, research)

#### **Operations**

- Create funding source and reinvest the savings in the fund
- Green Teams in every administrative unit

#### Planning, Administration and Engagement

- Incorporate sustainability into the University Strategic Plan
- OS = Sustainability Hub







## SUSTAINABILITY IS CORE VALUE (NOT PROGRAM) SUSTAINABILITY DRIVES CAMPUS OUTCOMES





## **PAC-12 COMPARISONS**

University	STARS	Sustainable Endowments Institute	Presidents' Commitment / Climate Action Plan
Arizona	due 2/8/12	В	Y/Y
Arizona State	Gold	A-	Y/Y
California		B+	Y/Y
Colorado	Gold	B+	Y/Y
Oregon	Silver	B+	Y/Y
Oregon State	Gold	B+	Y/Y
Stanford	due 2/16/12	A-	N/Y
UCLA	Silver	В	Y/Y
USC		B-	N/Y
Utah	Bronze	B+	Y/Y
Washington		A-	Y/Y
Washington State		B+	Y/Y



