

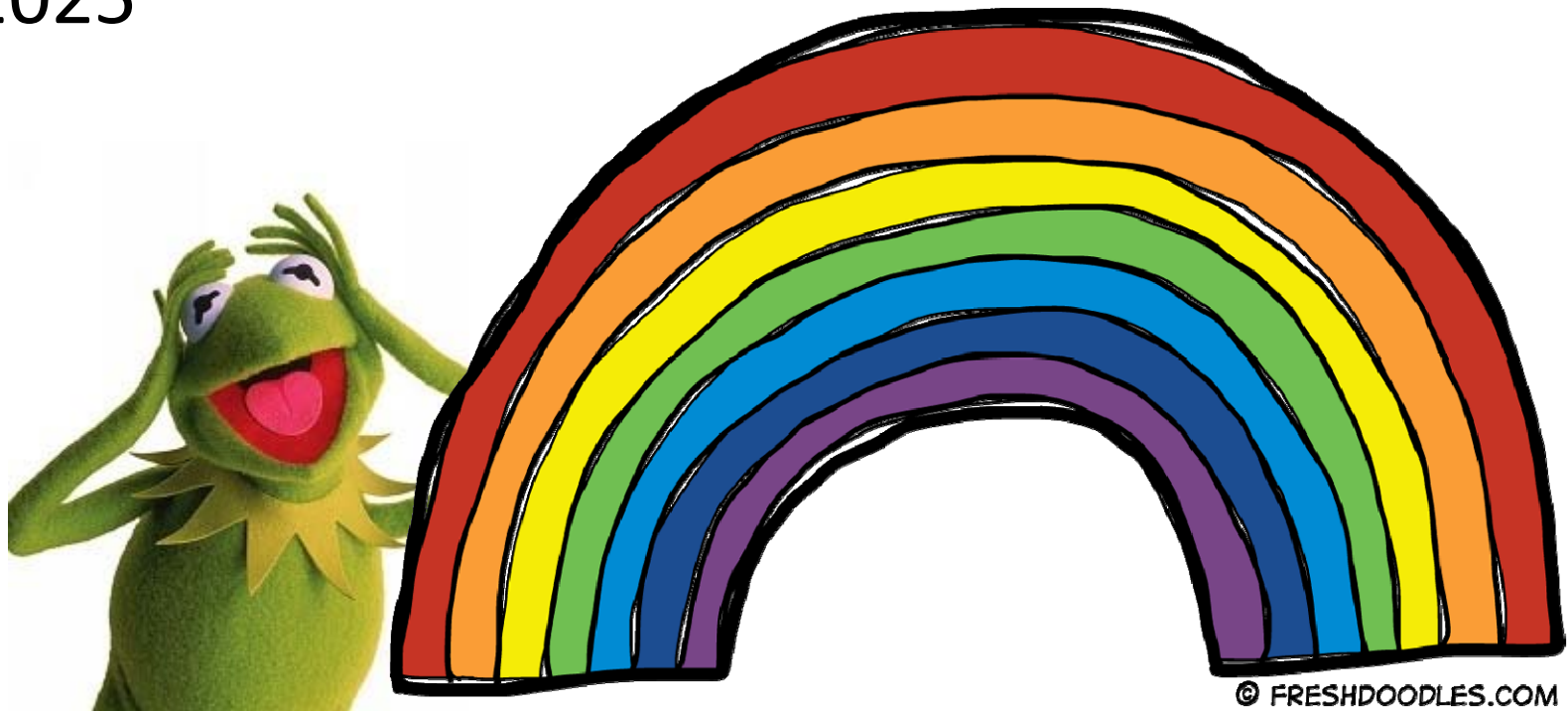
Sustainability @ DU: Our Past and Future Directions

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Department of Geography and Environment

Presented to the University of Denver
Board of Trustees Divestment Task Force
September 29, 2016

Sustainability at DU

- Challenges & Opportunities
- A Brief History
- Future Potential(s): Sustainable DU & IMPACT 2025



CHALLENGES & OPPORTUNITIES

Faculty Senate Divestment Sub-Committee

Resolution *(Revised May 16, 2016)*

- *All members of the committee agree **divestment is only one of a number of responses to the global climate crisis**, and we believe the University should proceed aggressively to confront that crisis. In addition to divestment, there is much we can do. Should the University decide to divest, divestment alone would be an incomplete response to the climate crisis.*
- *.... inevitably, many of the problems of mitigating climate change and adapting to its effects will fall on future generations. Accordingly, DU should follow through in its 2007 commitment to “integrate sustainability into the curriculum and make it part of the educational experience.”*
<http://www.presidentsclimatecommitment.org/>

Challenges

The most
Carbon
intensive
electrical grid in
the nation

Life expectancy
in Denver is
5 years
less than the CO
average

Denver is the
16th fastest
growing city in
the US

32nd in high
ozone days out
of 277
metropolitan
areas

Cost of traffic
and congestion
in the Denver
region in 2011:
\$1.2 billion

1 in 5
households in
our region lack
the resources to
meet their basic
needs

25% of
Denver
children lived
in poverty in
2012

7.7 million
people will live
in CO by 2040

Suburban poor
population in
the Denver area
doubled
in last decade

+2-5 degree F
could decrease
regional water
supply by **7-14%**

Opportunities

Denver has
13th highest
share of bike
commuters
among large
US cities

Denver is **#2**
ranked region for
innovation &
entrepreneurship

79%
of Denver
residents live
< 0.5 mile of a
park

\$4.7 billion
slated to build
119 miles
of light &
commuter
rail lines

Denver has
2nd highest
increase in the
number of
millennials

Real-world
problem-solving is
most strongly
linked to higher
self-reported work
quality

Energy conservation
efforts at DU
contributed to
> \$2.5 Million
in savings over the
past 7 years

Employees who
make a social &
environmental
impact on the job
are **TWICE** as
satisfied

Defining
the DU
“brand”

Strong
community
partnerships →
engaged
learning
opportunities

What is *Sustainability*?

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

– *United Nations Bruntland Commission Report*, 1987

We recognize that ***people are at the centre of sustainable development*** and in this regard we strive for ***a world that is just, equitable and inclusive***, and we commit to work together to promote sustained and inclusive economic growth, social development and environmental protection and thereby to benefit all.

–*The Future We Want*, United Nations Conference on Sustainable Development, Rio+20,
2012

Sustainability: the secret to recruiting millennials

[g+1](#)[Tweet](#)[Like](#)[Share](#)[Email to a colleague](#)

by HRM | Dec 25, 2013



According to an Oxford Properties study, 60% of workers under 35 believe that in the next 5 years, they will want to work for an employer that is committed to fostering wellbeing, including sustainability. And though the train



Inc.

Login or s

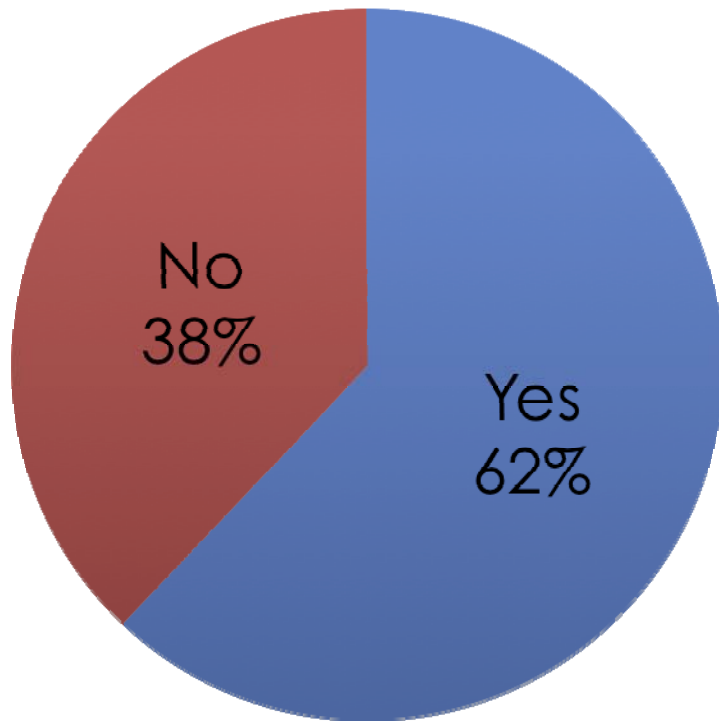
Why Your Brand Should Appeal to Sustainability-Friendly Millennials

BY MAUREEN KLINE @KLINE_MAUREEN

Metrics show sustainability is catching on fast among consumers, investors, and companies. Don't get left behind.

Student Recruitment

Was your decision affected by the University's commitment to the environment?



23% said this would "strongly" or "very much" contribute to school choice.

The Princeton Review's 2013 College Hopes & Worries Survey



COLORADO

Colorado College

Colorado State University

Naropa University

University of Colorado--Boulder

University of Denver

Western State College of Colorado

Student Engagement



**58 STUDENTS IN 23
DIFFERENT MAJORS IN THE
SUSTAINABILITY MINOR**



Student Organisations with Sustainability

Sustainability Council
Center for Sustainability
Net Impact
Students for Sustainable Food
DUET
USG Sustainability
Committee
DU Vegan and Vegetarian
Societies
Natural Resources
Environmental Law Society
Eco Conscious
DU Sustainability Alliance
SIDI - Sustainable
International Development
Institute
Environmental LLC
A World With...
Student Life Sustainability
Action Team

A Growing Presence in the Curriculum

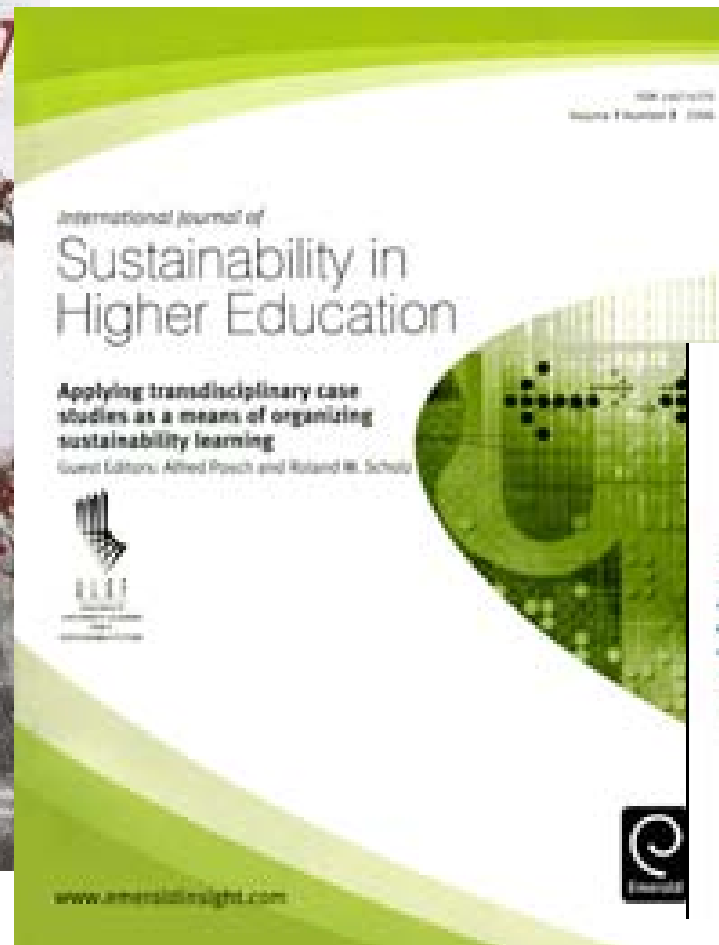
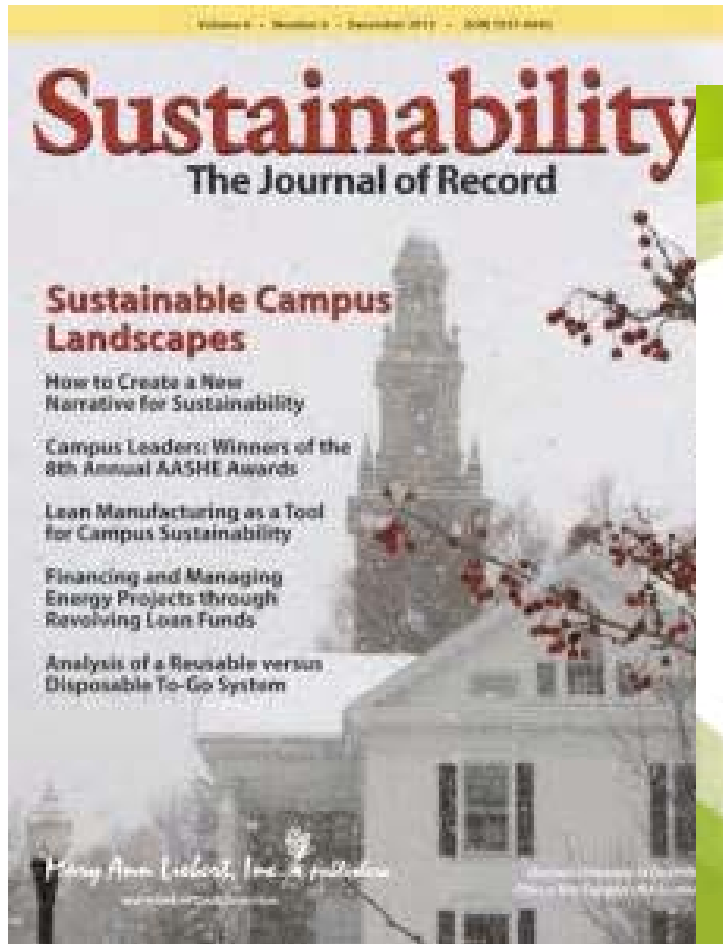
Example: The sustainability minor



As of Spring 2016:
76 minors from
26 major disciplines

Faculty represented from all
undergraduate division

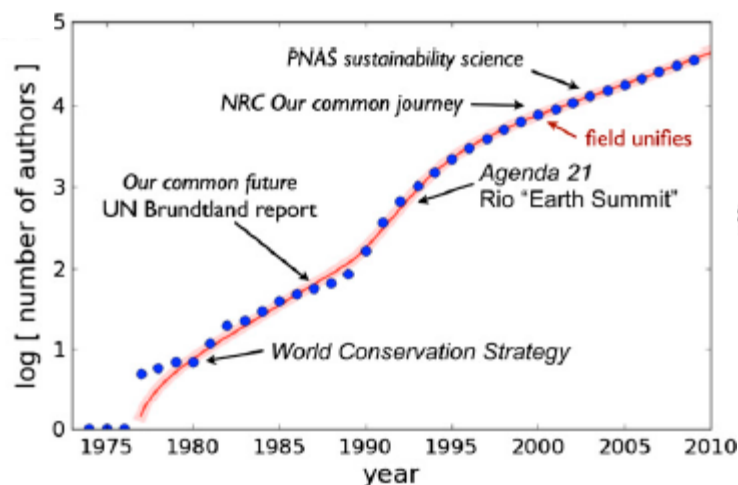
A Growing Field of Research



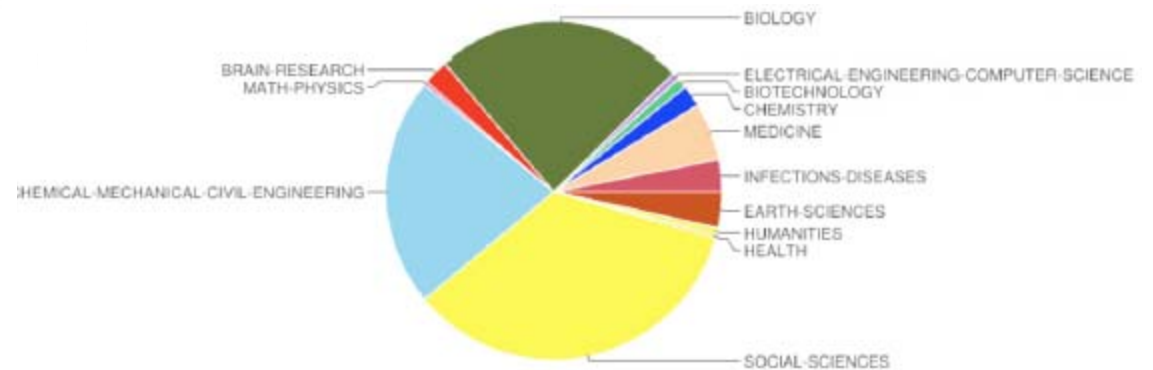
A Growing Priority for Funding Agencies

- Federal research agencies have identified Sustainability as a *defining issue of the 21st C.*
- Explosive growth of **sustainability science** as research field since 1980s

A. Number unique authors vs. time

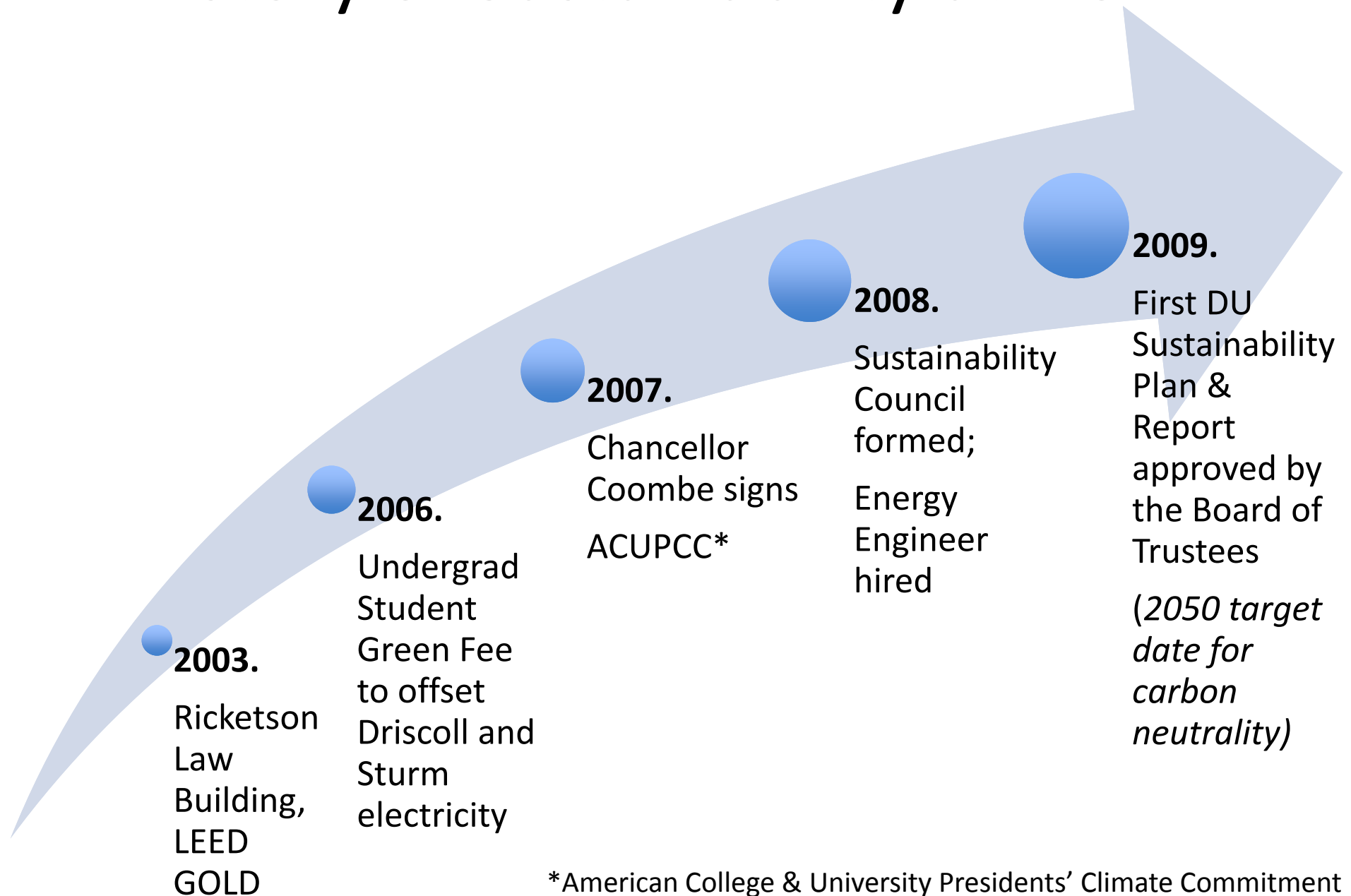


B. Percent distribution by discipline

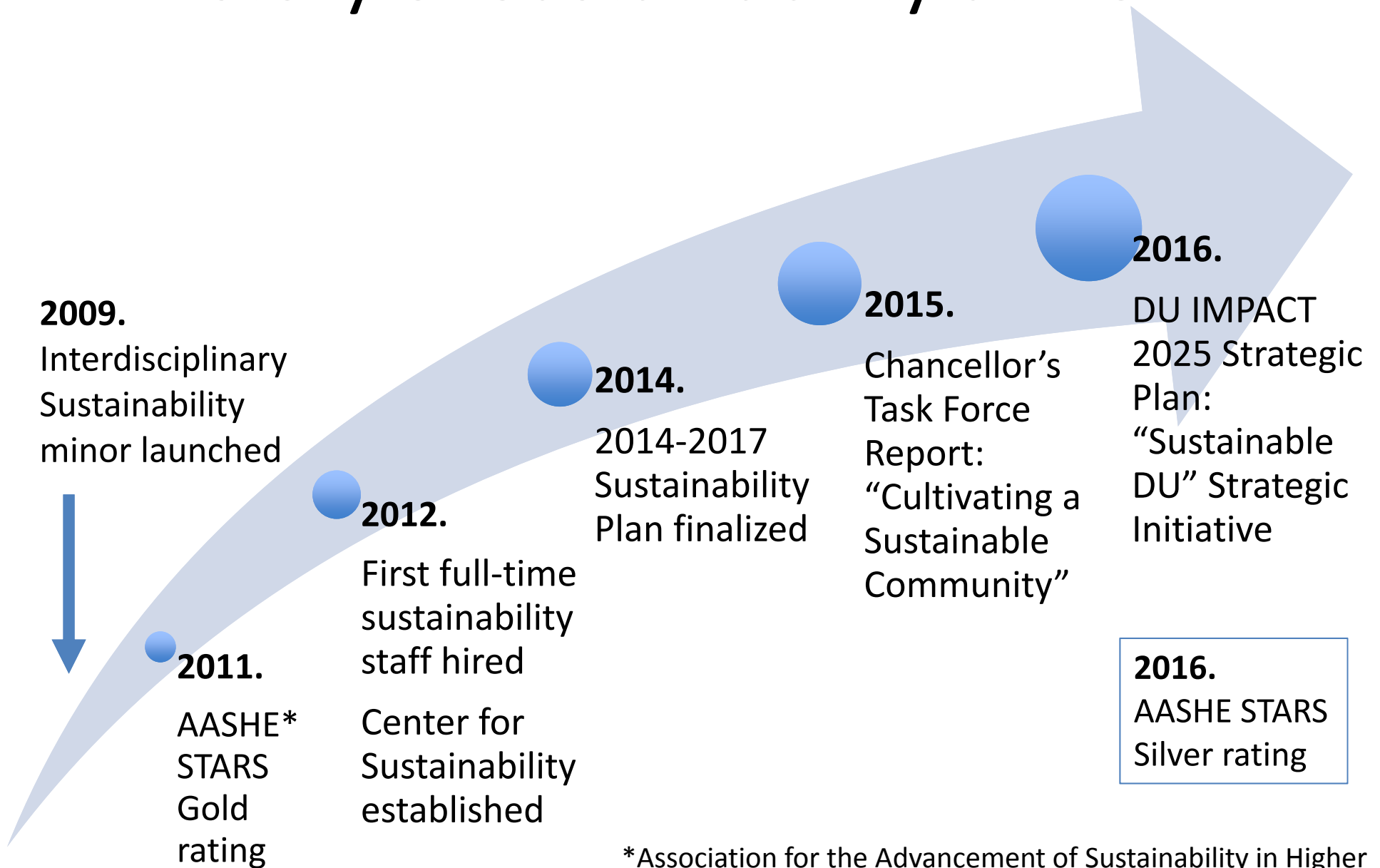


HISTORY OF SUSTAINABILITY @ DU

History of Sustainability at DU



History of Sustainability at DU



*Association for the Advancement of Sustainability in Higher Education – Sustainability Tracking and Rating System

Directives & Administration

ACUPCC

The American Colleges & University Presidents' Climate Commitment

Signed in 2007 by Chancellor Coombe

Over 680 colleges and universities have signed the ACUPCC

Commitment

Reach carbon neutrality by 2050

Achieve a 24% carbon footprint reduction by 2020 (over 2007 baseline)

"Carbon footprint" is the sum of all emissions (electrical use, heating, travel, waste, etc.

Administration

The Sustainability Council includes students, staff, and faculty from across campus

The Center for Sustainability oversees the execution of sustainability initiatives

Multiple student groups are actively engaged in sustainability efforts

Planning

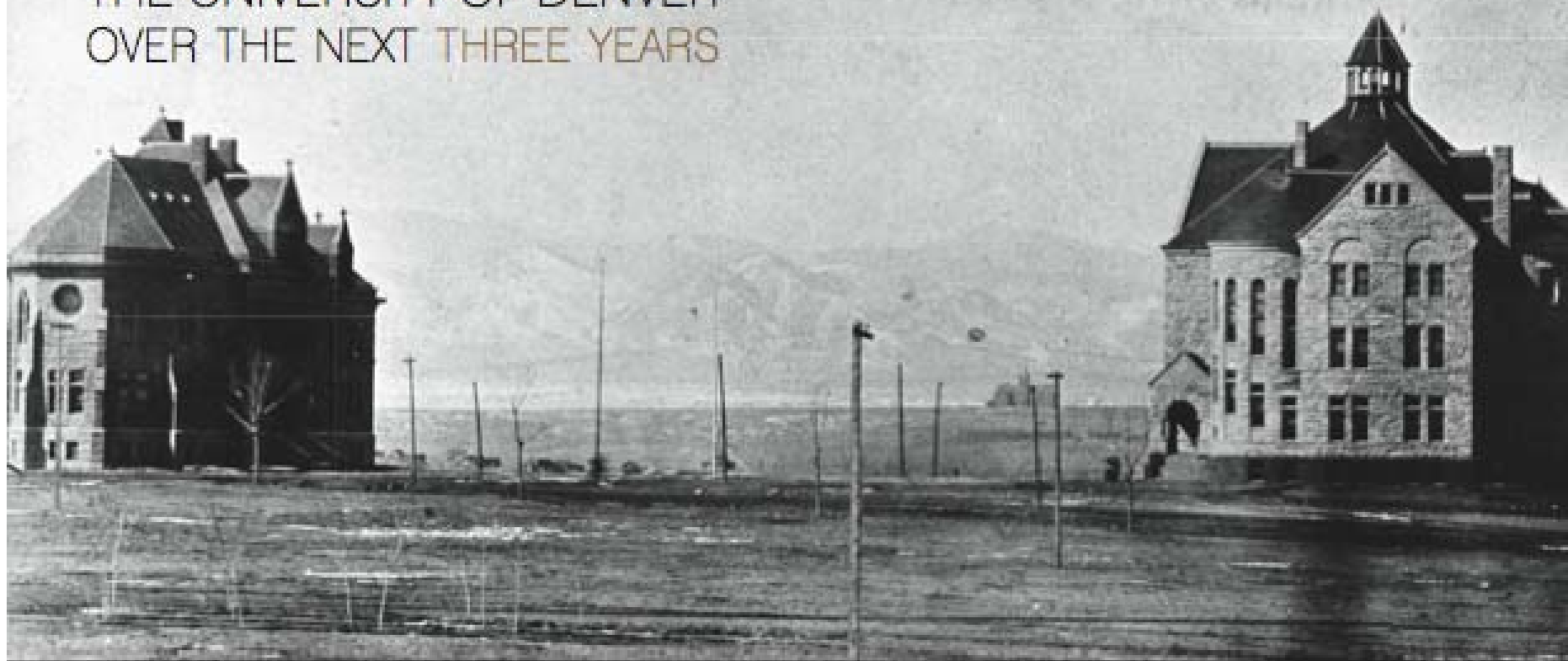
Sustainability Plan was written in 2009 by the Sustainability Council

Updated in 2014

Includes specific objectives, challenges, and measures of success for all areas

2014-2017

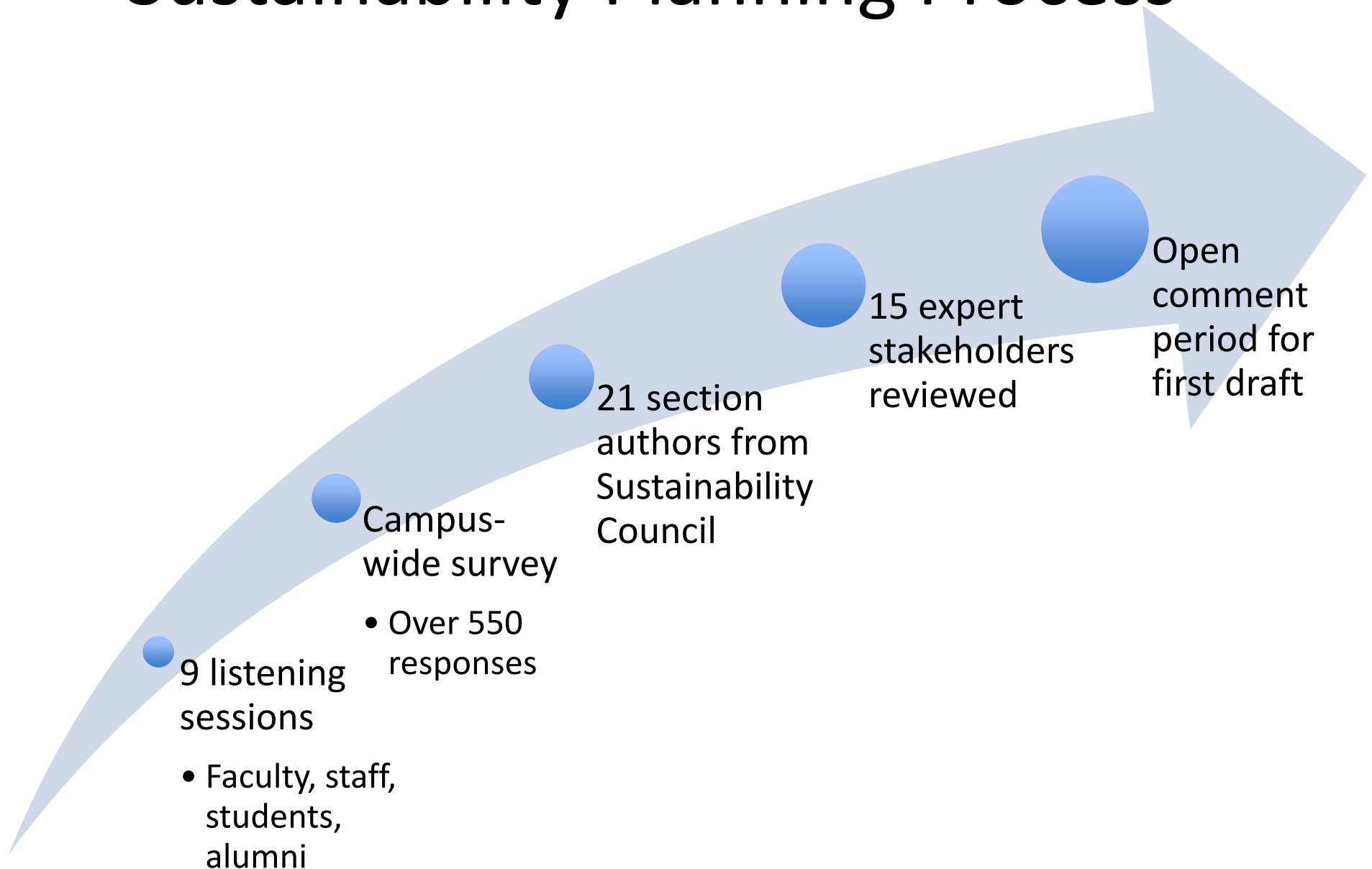
SUSTAINABILITY PLAN
THE UNIVERSITY OF DENVER
OVER THE NEXT THREE YEARS



UNIVERSITY *of*
DENVER

THE CENTER FOR SUSTAINABILITY

Sustainability Planning Process



2014-2017 Sustainability Plan

Grounds
Buildings
Transportation

Energy
Water
Food
Purchasing
Waste

Engagement
Curriculum and Research
Administration

2014 Sustainability Plan Progress Report

	In progress	Recommended Action Items	Percent in progress
Grounds	3	9	33
Buildings	5	5	100
Transportation	7	10	70
Energy	5	5	100
Water	2	4	50
Food	4	5	80
Purchasing	0	7	0
Waste	3	7	43
Engagement	1	5	20
Curriculum and Research	2	8	25
Administration	4	7	57
Totals	36	72	50%

28%*

Carbon Footprint Reduction

over 2006 Baseline

Goal achieved 6 years early!

*FY 2015

Growing DU campus community

- Identify and map a broad coalition of campus partners with complimentary objectives, focused on:
 - Growing community engagement and experiential learning
 - Enhancing the student experience
 - Improving student learning
 - Contributing to the public good
- Engage this coalition in strategic planning to expand the reach and impact of DU in the community

Just & Sustainable Communities

Improving quality of life
and wellbeing

Meeting needs of
present and future
generations

Essential
conditions

Justice and equity
*in terms of recognition, process,
procedure, and outcome*

Living within ecosystem
limits

DU IMPACT 2025: *One DU*

Sustainable DU: *We will expand DU's focus on a just and sustainable future*

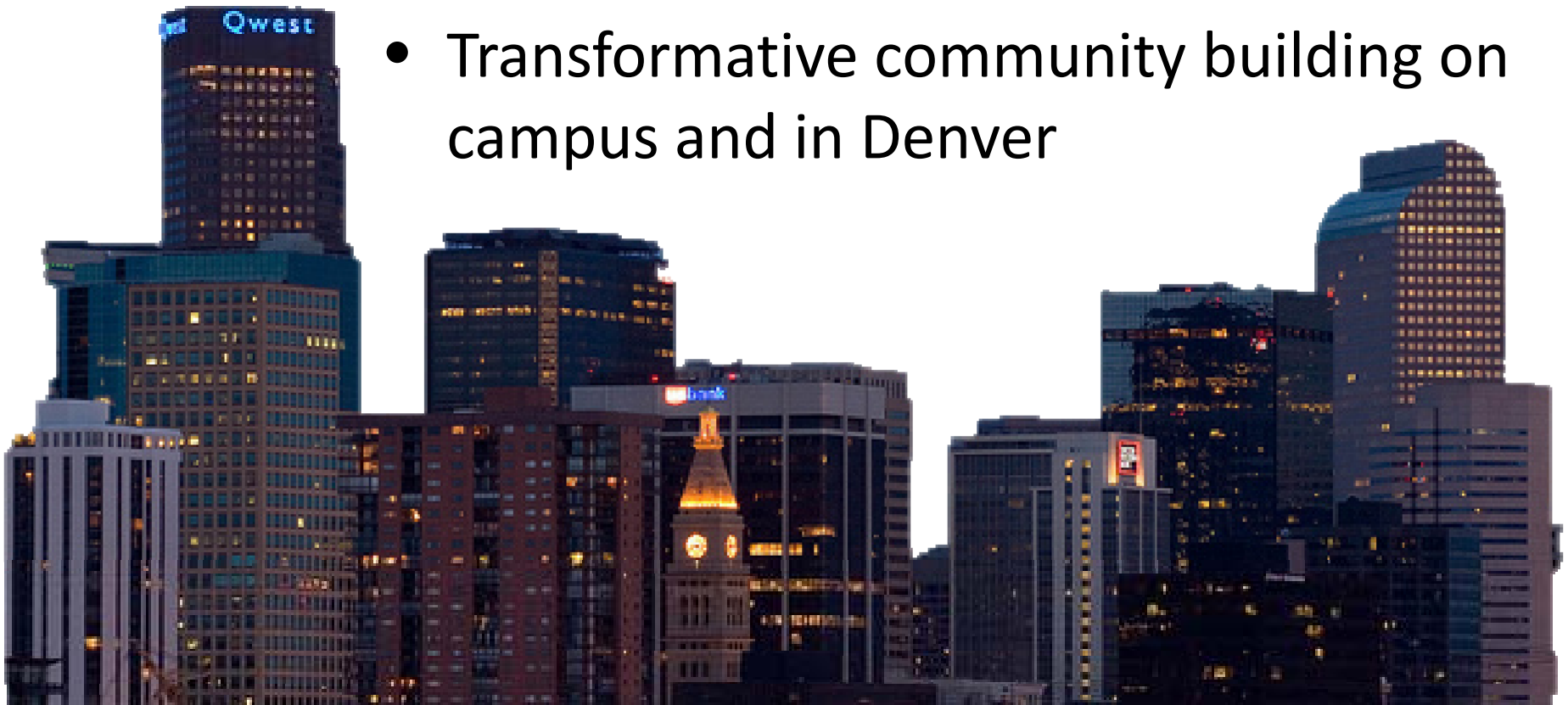
- Expand sustainability across campus, creating robust interdisciplinary connections and exploring enhanced curricular options



- Support sustainable economic development and transportation options
- Act as the academic partner to urban green space initiatives
- Support sustainable food initiatives
- Continue to establish and meet carbon footprint reduction goals

Just and Sustainable Future

- Builds on our vision, mission, strengths
- Provides opportunities for experiential, engaged scholarship
- Places DU as a regional leader
- Transformative community building on campus and in Denver



FUTURE POTENTIAL(S)

To further explore pilot projects proposed in the Chancellor's Expanding Sustainability Task Force, approximately 75 students, faculty, staff, and community partners participated in the

Sustainability Forum: Dialogue Across Disciplines

• Friday, April 3 • Driscoll Underground • 1:30-3pm •

The DU Center for Sustainability and Sustainability Council invite faculty, students, and staff to creatively envision possibilities for interdisciplinary research and teaching related to four potential projects: Metropolitan Greenspace Alliances, Multimodal Transportation Hub, Farm-to-Table Network, and Solar Partnerships.

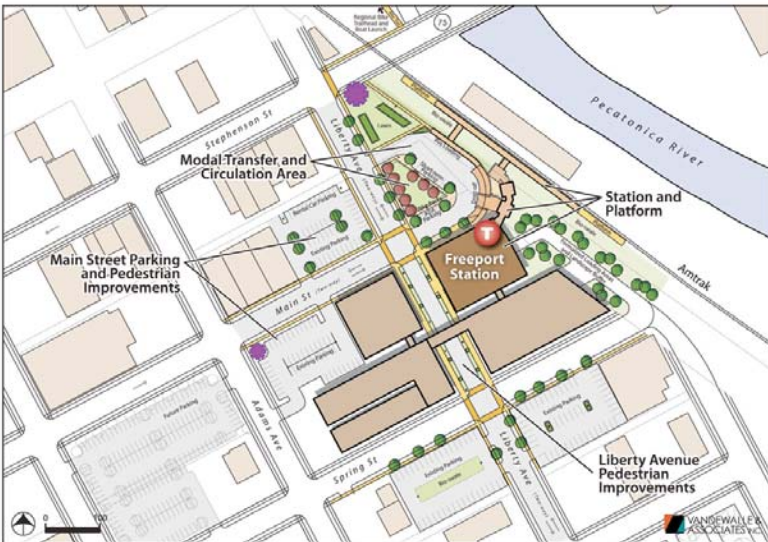


Sustainable Transportation

- **IMPACT 2025 objective:** Partnering with the Denver metro region to support economic development and sustainable transportation options. Possibilities include a multi-modal transportation hub tied to the DU District and energizing the University of Denver RTD light rail station area.



Multi-modal Transportation Hub



- **DU Partnership with Transportation Solutions**
- Multi-Station Plan and Mobility Study: Colorado and University Stations
- ~\$200,000 funding through Denver Regional Council of Governments (DRCOG) for 14 month study
- Project management team includes:
 - Chad King, Sustainability Coordinator
 - David Greenberg, VC Institutional Partnerships
 - Steve Rijo, DU alumnus

Multi-modal Transportation Hub

Spring 2016 classes involved:

- Transportation Geography (Goetz)
- Land Use Law Clinic (Daggett)
- First-year Writing Research (3 sections, Singer)
- UC Denver Planning Design (2 classes, Park, Ittelson)



Reducing DU's Carbon Footprint

- **IMPACT 2025 objective:** Continuing to establish and meet goals related to reduction of our carbon footprint by meeting green building requirements on new construction and retrofitting older buildings, resulting in cost savings and eventual carbon neutrality and exploring alternative energy options on campus and via partnerships.



Renewable Energy Law Project Class

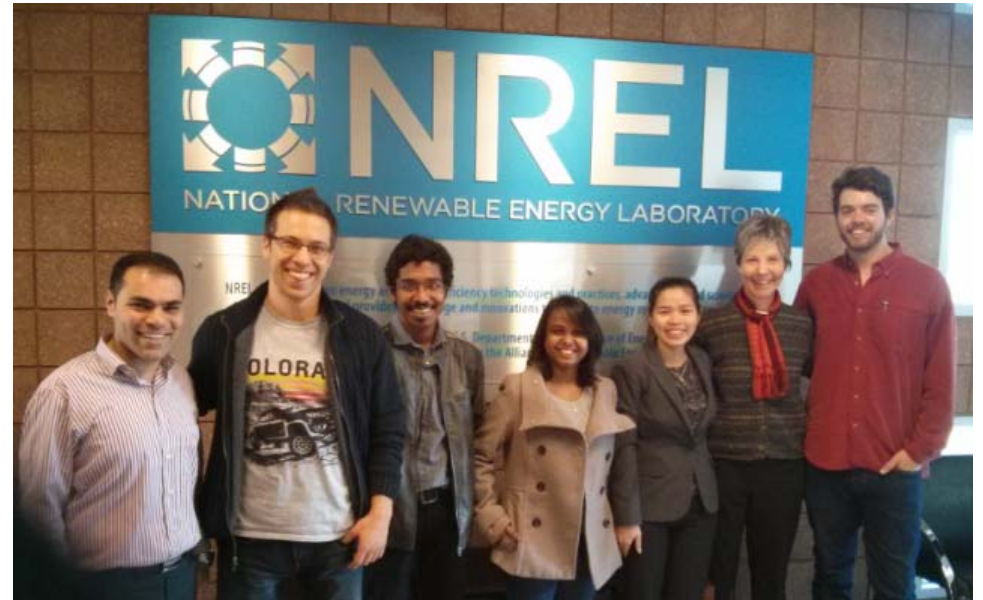
(Spring 2016)

- Interdisciplinary, experiential learning course offered through the Sturm College of Law (Prof. KK DuVivier)
- Course goal: to bolster university-wide support for the implementation of renewable energy on campus, ultimately attempting to secure final approval for a project
- 14 students and 6 faculty from the schools of business, engineering, and law.
- Engaged staff from facilities, finance, student life, and members of the Sustainability Council



Interdisciplinary Course on Renewable Energy

- Course offered a practical, real world, hands-on approach to sustainable energy development and all phases of the development for a small and large-scale renewable energy project on the DU campus



Sustainable Urban Food

- **IMPACT 2025 objective:** Supporting sustainable urban food initiatives by emphasizing education and service learning via partnerships with local food justice nonprofits and provision of local food for the campus community in campus dining establishments.



Sustainable Urban Food

- DU Community Garden (re)established at Iliff and Race (Spring 2015)
- Current research: pollination study (Murphy, PINS grant)
- Future research: visualizing bee activity with digital media (Weaver)



Sustainable Urban Food

- Other University partnerships: Sodexo, Anderson Academic Commons, Living and Learning Communities
- Portion of food donated to So All May Eat (SAME) Café
- Related student groups: Students for Sustainable Food, Food Recovery Network
- Community Partnerships: City & County of Denver, Re:Vision International, GrowHaus, West H.S.



Metro Denver Nature Alliance

- **IMPACT 2025 objective:** Acting as the academic partner in initiatives related to urban green space, working on strategic projects with Great Outdoors Colorado, the Greenway Foundation and other organizations.



Metro Denver Nature Alliance

- Goals: (i) All people in Metro Denver have access to and engage in quality natural spaces, and (ii) The metro Denver region supports a healthy and connected natural system.
- Represents a ***Rocky Mountain Grand Challenge***
- Community partners include: Trust for Public Land, Denver Museum of Nature and Science, The Nature Conservancy, Boys and Girls Club of Metro Denver, and many others



Metro Denver Nature Alliance

- Alliance has received seed funding from GOCO INSPIRE
- Two graduate research assistants supported through Rocky Mountain Land Use Institute (Daggett)
- CCESL partnering to fund a Community Engaged Fellow in support of faculty cluster on urban greenspace issues and to facilitate inter-disciplinary collaboration
- Models process for building ***Knowledge Bridges***

INSPIRE INITIATIVE



Overlap with other Strategic Initiatives in DU IMPACT 2025

APPENDIX I: Overlap between *Sustainable DU* and other Strategic Initiatives in DU IMPACT 2025, identified in consultation with the DU Sustainability Council, October 15, 2015.

Participants: Becky Powell, Sustainability Council Chair, Brianna Johnson, Sustainability Council Vice-Chair, Chad King, Sustainability Coordinator; *Faculty:* Julie Morris, Ruth Jebe, Elizabeth Henry, Timothy Weaver, Tom Quinn, K.K. DuVivier, C.J. Larkin, Dale Rothman, Fred Cheever; *Students:* Corey Martz, Kaela Martins, Jonathan Seals, Jaser Alsharhan, Nick Stubler, Stephanie Grover, Kyle Sundman, Jackson Trott; *Staff:* Sarah Catanzarite, Andrea Howland, Lisa Bingham, Mandilyn Beck, Chris Wera, Mike Furno, Cara DiEnno, Randy Wagner, Ben Gerig; *Alumnus:* James Tyson.

One: Students Striving for Success

With the Center for Sustainability and the numerous sustainability focused student organizations, our community is active in supporting student success. This Transformative Direction would provide opportunities to expand our support and communicate sustainability values to a larger population.

SI 1: Financial Support for Students	
<i>What DU is doing</i>	<i>How TD4, SI3 overlaps with this initiative</i>
The Center for Sustainability employs students with work-study awards	Funnel savings earned from sustainability initiatives into a scholarship fund
Nearly half of the discretionary budget of Center for Sustainability goes to employing students, building and engaging their passion and skillsets in applied work on campus.	Explore creative ideas for financing projects, e.g. a solar panel donation would allow us to invest revenue stream from savings back to a sustainability fund to support student scholarships, putting DU on the leading edge of sustainability, creativity, public-private partnerships, etc.

Acknowledgements

This work represents the cumulative hard work and creativity of many people over many years.

Thanks to the many, many faculty, staff, and student members and volunteers of the Sustainability Council over the years.

Thanks, especially, to:

Fred Cheever, Professor, and many years chair of the Council
and

Chad King, Ph.D., DU's first Sustainability Coordinator