

Cultivating a Sustainable Community: University of Denver Just and Sustainable Future Initiative

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I. Introduction

As the University has initiated strategic planning process, we have considered two related questions: What more can we offer to engage our students, our faculty, our staff, and the broader community? What can we do to differentiate ourselves in higher education? We propose that one answer to both of these questions is to dramatically expand our commitment to a just and sustainable future, especially within our urban context. This transformative idea directly reinforces our University mission and values, enhances our brand, and emphasizes concepts embraced by the millennial generation. By explicitly integrating a commitment to a just and sustainable future into all aspects of University operations – from curriculum to athletics to facilities to recruiting – DU can become a true leader, for other universities, for the regional community, and for communities around the world, embodying our mission of a great private university dedicated to the public good.

Urban sustainability – more than half the people on our planet now live in cities – can never be about isolated self-reliance; it must be sought through a broad array of mutually beneficial partnerships. The City of Denver has long been a leader in urban sustainability. Denver supports an extremely high density of both for-profit and nonprofit entities committed to a broad range of sustainability-related goals. The University of Denver should commit to building networks of community partners to address the complex challenges our region faces in pursuing a just society and a healthy environment. In doing so, we would greatly expand opportunities for our students to engage in real-world, meaningful problem solving; we would build a more inclusive campus community; and we would provide a model for integrating University teaching, scholarship, and outreach within networks of partnerships that are committed to the well-being of our broader community and the health of our planet.

A growing number of colleges and universities in the United States and elsewhere, including all major institutions of higher learning in Colorado, have adopted *environmental* sustainability as a guiding principle. Like other Colorado universities, our campus community identifies sustainability with “being green.” From its roots in international development thinking, however, sustainability has always embraced the interconnectedness of economic viability, environmental quality, and social justice. A truly sustainable society requires that these three goals be sought together. Recently, sustainability-related programs at institutions of higher education have skewed in favor of environmental quality, largely neglecting the other two components.¹ By emphasizing that sustainability must embrace more than environmental quality, by committing to a “just and sustainable future,” we would differentiate ourselves from our peers in higher education.

As a private research university located in city known for sustainability and attracting a growing population of millennials, in a region with a strong commitment to outdoor activities and the natural environment, we are uniquely situated to collaborate with the growing wave of stakeholders from innovative organizations across the region. Several sustainability-related partnerships are at the initial stages of development, as various public and private entities envision a better future for our region and collaborate on creative solutions to complex

¹ Newport, D., Campus Sustainability: It's About People, *The Chronicle of Higher Education* (April 1, 2012).

challenges (see Section II below). This is a critical moment for the University of Denver to assume a role as a strategic academic partner in urban sustainability efforts. Our commitment to the public good, our practice of engaged scholarship, and our academic strengths position us to take an active role in these initiatives.

Additionally, for a University that purchases every kilowatt hour of energy, every cubic meter of natural gas, almost every gallon of water, and every ream of paper, the effort to reduce our ecological impact saves money. Over the past five years, energy conservation efforts at the University of Denver have reduced our carbon footprint by approximately 24%, and at the same time have saved the University roughly \$5 million in operating expenses. Our continued emphasis on alternative modes of transportation can help save us the enormous expense of building a new multi-story parking garage. As more students, faculty, and staff travel by mass transit, by bicycle, and on foot, we enhance our relations with local neighborhoods and increase the opportunities for local businesses.

Finally, sustainability offers an unparalleled foundation for innovative, interdisciplinary, experiential education. Innovation will be the cornerstone of our effort to transform the way we interact with each other and with our environment. Sustainability is not only interdisciplinary in the sense that it requires the integration of disciplines from many traditional departments; it also integrates the operation of the University and the community around it into the educational process. Indeed, an integrated education around a just and sustainable future can provide meaning and context for the educational experiences of our students, helping them grow into global citizens and creative leaders.

We have divided our recommendations into three sections. First, we describe examples of “transformation in context” – a range of proposals that embody the transformative idea of committing to a just and sustainable future. Each of these ideas would actively engage our campus community and build strong regional networks of partnerships. Each idea would build on initiatives and/or discussions that are already underway in the broader Denver community. Next, we list readily achievable priorities (as set forth in the Draft Sustainability Plan), with achievable timelines and measurable benchmarks for success. Finally, we propose an operational structure for implementation of the Sustainability Plan and several options for financing future initiatives. These proposals are not exhaustive; however, each proposal would integrate advancement of environmental stewardship, conscious promotion of social justice, and outstanding educational opportunities for our students.

II. Transformation in Context

Below we provide specific examples of cross-cutting initiatives that explicitly incorporate the commitment to a just and sustainable future. These initiatives would link academic and operational units across campus; would establish meaningful ties with agencies and communities within Denver and across the Front Range; would serve as a platform for rigorous, interdisciplinary scholarship and teaching that engages students with real-world problems; and would cultivate a sustainable campus community that provides a place for all members to thrive. In these ways, the projects proposed below embody the mission of the University while building

community. Many of these initiatives would also result in cost-savings for the University, and/or provide opportunities for extramural funding from unconventional sources. Initial conversations with potential partners are already in progress around each of these ideas, presenting a key opportunity for DU to assume a role as a university partner.

A. DU Partnership in Metropolitan Greenspaces Alliance

Over the past two years, the Rocky Mountain Land Use Institute at the Sturm College of Law has been a pioneering partner in developing a Metropolitan Greenspaces Alliance (MGA) for Greater Denver. Drawing on similar efforts in Los Angeles, Portland, and Chicago², among others, key Denver MGA partners are building a collaborative, community network, developing an ambitious plan to provide every Denver resident with ready access to vibrant, usable open space. The MGA leaders imagine a system of connected green spaces and interpretive hubs across the metropolitan area. The endeavor aims to explicitly address equity issues in the greater metro area, promote wellness in our communities, conserve biodiversity, and promote environmental stewardship. Among the currently participating partners are the Trust for Public Land, the Denver Museum of Nature and Science, and Great Outdoors Colorado.

The University of Denver could become a full partner in the process, designing curriculum around the green space efforts and related ecological and social justice issues, providing a key interpretive green space hub for Denver communities, and working with less-privileged urban communities to extend the qualities of life that bring so many people to Colorado's Front Range. This initiative could be integrated into existing curriculum in disciplines as diverse as anthropology, biology, geography, and law, to name a few; it would build on current conversations between our Division of Athletics & Recreation, South High School, Denver Public Schools, and Denver Parks and Recreation about revitalizing community use of the Veteran's Park open space and the All-City Sports Complex directly north of our campus. This project would improve equity and access to the University from across the metro area, enhance the University Arboretum, and potentially augment neighborhood relations by integrating the Historic Buchtel Boulevard Trail and the Harvard Gulch Trail. The initiative would complement current wellness programming on campus, as small natural spaces in the urban setting are associated with a broad range of benefits, promoting increased physical activity and mental wellbeing.

B. DU Farm to Table Initiative

Food is a theme that cuts across all disciplinary boundaries and all spatial scales – from the intensely personal to the global. Food production is at the core of developing a sustainable and just world. In recent years, DU students (and their parents) have shown great passion regarding the type of food they eat and where it comes from. Recently, the University and Sodexo have entered into the Real Food Challenge, committing to offer its students 20% “real food” (i.e., local and sustainably certified) by 2020. These efforts could be broadened to provide a truly extraordinary urban food initiative at the University of Denver that links local, sustainable, healthy eating and wellness, to food justice and environmental stewardship.

Working with a variety of established community partners, we could facilitate the development of local-scale food production, transportation, and distribution networks that would provide our

²<http://www.chicagowilderness.org/who-we-are/metropolitan-greenspaces-alliance/>

students with engaged learning opportunities, provide our community with high quality, locally sourced food, and provide genuine opportunities to collaborate with underserved communities in the Denver Metropolitan area. The DU initiative could be effective without large development requirements, given the many viable partners in the region who currently engage in various aspects of building just, culturally relevant food systems. Potential partners might include the nonprofits Re:Vision International, GrowHaus, and Green Leaf, as well as private growers both in the urban core and on the perimeter.

In the curriculum, this project would build on existing courses and volunteer efforts, centralizing and broadening the scope of this work. Local experiences with food systems could be linked to international experiences to give students an in-depth comparative understanding of the importance of food security and how food systems further (or hinder) human well-being and equity. Clear links also exist between current living learning communities on campus, as well as students and alumni of the Fritz Knobel School of Hotel, Restaurant, and Tourism Management. Additionally, local food initiatives strengthen the local economy, enhance relationships with our campus neighbors, and improve the overall health of our students, employees, and community.

Again, the timing for joining as a key academic partner in this initiative is at a critical juncture. The City of Denver has a Sustainable Food Policy Council working group, “City Land, City Food,” which is currently collaborating with a variety of community partners to develop public policy for land trusts dedicated to food production. The University of Colorado Denver is currently participating in the design process, but the working group is seeking an active academic partner by fall of 2015, with food production anticipated to begin at several pilot locations in the spring of 2016.

C. Solar Energy Partnerships and Energy Fund Revitalization

Campus solar energy production would significantly reduce our carbon footprint, publicly broadcast our commitment to sustainability, provide a distinct marketing tool, and serve as a safe University investment with a guaranteed long-term rate of return. DU could partner with other large entities in Denver, such as Denver Public Schools and the City of Denver, with the aim of negotiating solar projects on favorable terms, ensuring that we receive the best rates on power per KWH. Coordinating such a partnership network would establish the University of Denver as a leader in renewable energy and sustainability in the city and would set an example for other urban universities. Interdisciplinary curriculum could build on current courses in Sturm College of Law, Daniels College of Business, and the STEM programs, using campus as a living, learning laboratory to explore solutions to real-world problems.

Savings generated by renewable energy production would be returned to the restored revolving fund (see Section IV below), providing continued funding for future energy saving projects, need-based scholarships, and funds for curricular development related to sustainability. This project has the potential to save the University of Denver millions of dollars and model creative donor investment opportunities, while providing many additional benefits in marketing and recruitment – opportunities to more broadly share the mission of the University with a clear vision for the future, while celebrating our past successes in energy sustainability. Again, timing is critical, as it is unclear how long Xcel energy will continue their Solar Rewards Program, which would subsidize this program.

D. Multimodal Transportation Hub

As the Denver metro region population continues to grow, creative transportation solutions are required to reduce congestion, improve air quality, enhance the reputation and attractiveness of the city, and continue to position the region as a leader in sustainability. Transportation planning is a critical theme in student recruitment and University budgeting, as millennials embrace the shared economy and car-free lifestyles, as multimodal opportunities reduce overall student cost, and with proper planning, eliminate the need for additional parking structures on our campus. For these reasons, DU could become a founding partner in designing and coordinating a strong multimodal transportation hub at the University RTD light rail station. Other potential partners in this initiative might include RTD, nonprofits such as the Bike Depot, BikeDenver, WalkDenver, and Transportation Solutions, local developers, and K-12 education partners, including South High School and the Waldorf School. This hub could provide showers and lockers, secure bike parking, mechanic services, education opportunities, and a community gathering space around a coffee cart.

This initiative would raise the profile of alternative transportation options in the city, expand services to the broader community, and demonstrate University leadership in modeling solutions for the region. The project would build on efforts of the DU Center for Sustainability and well@du, provide student employment and engagement, and embody just and sustainable transportation. This hub could showcase the healthy lifestyle of employees who commute by public transit and bicycle, while improving ease of use for all. These efforts would also contribute to the campus wellness goal of increasing employee activity, lowering health risks and absenteeism, while increasing productivity and the ability to manage stress. The hub would provide opportunities for applied classroom projects related to transportation planning, engineering, marketing, health and wellness, among others. Finally, many sources of potential funding could be explored, including grants for air quality improvements, transportation alternatives, healthy neighborhoods, and innovative entrepreneurship, minimizing the direct cost to the University.

Again, the time for this is now, as the prime location for this hub is the currently empty commercial space under the RTD garage on Buchtel Boulevard. This project would enhance the planning efforts currently underway – and strengthen the University’s bid for utilizing that space, one year before the light rail service to the airport opens. Finally, the nonprofit Bike Depot is currently looking for additional space to lease, providing a timely opportunity to grow our existing relationship with them.

E. Sustainability Master’s Degree

The extraordinary opportunities for engaged, experiential education generated by these initiatives should be presented to our students as an organized degree program. Enhancing the currently successful sustainability minor for undergraduate students would serve this function. In addition, we propose an interdisciplinary sustainability master’s degree designed primarily as a dual degree for graduate students across many departments in the University. The success of the sustainability minor shows the interest in a truly interdisciplinary degree or certification program. Sustainability provides an ideal platform to bring together students from across disciplines to focus on applied research in systems thinking, creativity, and authentic problem

solving in real world settings. This platform would also provide an opportunity to develop a new model of interdisciplinary education at our University -- one that overcomes previously identified hurdles in funding, compensation, and faculty time, by providing the institutional framework to support collaboration among faculty from different departments and divisions across campus.

To ensure that as many graduate students as possible could enroll in this degree, introductory sustainability courses could be offered online with interdisciplinary problem-based work built into the curriculum to begin to develop the skills essential to working across disciplines. The experiential component of the degree could then be woven into the elective portion of each student's degree program. Accordingly, for a very modest additional investment of tuition dollars, students could obtain an important additional credential and a set of skills of great value in their subsequent careers.

III. Immediately Achievable Goals

The 2014-2017 Sustainability Plan was drafted with input from stakeholders across the University, with the driving goal of producing measurable, achievable, consensus-based objectives to be accomplished within three years. Because we designed the plan to focus on implementation, not inspiration, the recommended action items represent relatively “low-hanging fruit.” Indeed, many of these action items are already being accomplished or are in progress thanks to efforts of the Sustainability Council, the Center for Sustainability, and the operational groups forming around these efforts. For this reason, the task force took advantage of this planning period to also focus on truly transformative, community building initiatives that will elevate sustainability efforts at the University of Denver. Based on discussion with and feedback from the Sustainability Council, we include (in **Appendix 1**) a number of priorities from the Sustainability Plan, identifying general timelines (currently in-progress, 1-year or 3-year) and relative cost of each (low-cost, moderate-cost, or cost-savings). Accomplishing a majority the recommended action items in the Sustainability Plan will enhance the profile of the University, motivate the University community to achieving more ambitious goals, and engage all stakeholders in an ongoing planning and action process.

IV. Administration

Implementation of sustainability goals can be challenging because it requires crossing the boundaries of many university “silos.” The University has an extraordinary asset in its long-standing Sustainability Council. When it was established in 2008, the Sustainability Council was designed as an open, representative entity to coordinate and facilitate sustainability efforts across the University. The Sustainability Council includes faculty, student, and staff representatives, as well as representatives of University administration. During the past six years, the Council has developed a strong culture of inclusiveness, cooperation, and a strong volunteer ethic. The Council also provides a clear means to involve additional key campus and community partners on these transformative ideas, such as student groups working on sustainability-related issues, the Center for Community Engagement & Service Learning (CCESL), and the Center for

Multicultural Excellence (CME). During the past two years, the Council has developed a strong working relationship with the new Center for Sustainability. We propose that the Sustainability Council continue to lead in bringing together groups from across campus, to engage volunteers from across the university, and to be the creative and inspiring force that seeks innovative and cross-cutting solutions to sustainability challenges.

The Center for Sustainability should continue to grow as the operational arm, building community through active student engagement, expanding and managing programs, providing a link to the broader community beyond our campus, and clearly reporting on these activities. The Center has already demonstrated a strong track record of engaging the campus community. During its second year of operation (AY 2013-14), the Center coordinated the involvement of 25 student employees, 15 interns, 80 students in classes, and 540 volunteers in sustainability projects across campus. The model transformative initiatives outlined in this proposal could be managed through the Center for Sustainability. However, to ensure the success of these programs, additional staff would be needed to maintain current operations and to develop and implement the new initiatives. This should include support staff as well as funding for several graduate students per project, thereby enhancing the educational potential of these endeavors. . In this way, these ideas would proceed with a focus on students, with graduates (potentially from the interdisciplinary degree program) gaining experience in management, entrepreneurship, innovation, and implementation.

Members of the Council have already participated in several discussions with Provost Kvistad and Vice-Chancellor Woody on how to best implement the Sustainability Plan; one idea that has emerged is the formation of “implementation groups.” These groups will be composed of staff whose units would be most directly involved in specific recommendations in the Sustainability Plan and charged with budgeting and implementing the plan initiatives. To successfully achieve the goals outlined in the 2014 Sustainability Plan, we recommend: (i) clearly defining the position of the Center for Sustainability within the broader organizational structure of the University, (ii) enhancing the role of sustainability in decision making processes across the University, and (iii) adding representation from the Center for Sustainability at the Administrative Council level.

V. Finance

While funding interdisciplinary, cross-cutting projects is often challenging, many sustainability efforts have the potential for significant cost savings to the University. Our revolving energy conservation fund once led the way nationally in modeling how these savings could be realized and grown. We propose a return to this fund’s original structure (see references in **Appendix 2**). This structure has been adopted by many schools in the Billion Dollar Green Challenge³, an initiative to transform energy upgrades from perceived expenses to high-return investments, by setting the energy budget at a baseline year, and holding this budget into the future. Savings due to energy retrofits or generation projects can then be realized over time. As the fund grows, we propose a transparent disbursement of these funds, where 50% would pay for additional energy projects, 25% would be committed to need-based scholarships for students from traditionally

³<http://greenbillion.org/>

underrepresented groups, and 25% would be used to pay for academic programs related to sustainability. In this way, sustainability projects would be self-funded through realized savings, returning DU as a leader in the use of revolving funds.

This energy conservation fund would stimulate student, alumni, employee, and community engagement. By providing this clear benefit model, individual offsets and donations that advance sustainability would grow the fund. The fund could be used as a challenge for donor matches, engaging alumni, as well as a broader suite of potential donors. We also advocate the creation of additional revolving funds that would reflect water and transportation infrastructure savings. These would allow us to track benefits to the University as we encourage campus projects that reduce water use and encourage community members to utilize alternative means of transportation. These funds, once established, could be allocated in a manner similar to the energy conservation fund.

It is extremely important that the University track its “return” on sustainability programming to demonstrate to the members of our community--both internally and externally--that sustainability is not only economically feasible, but financially advantageous.

A number of universities across the country are developing innovative structures to finance sustainability investments and track sustainability savings. Oberlin College established the community-based Oberlin Project, as a separate non-for profit entity.⁴ UCLA has initiated a bond-funded energy conservation project.⁵ Whether DU should establish a series of interrelated revolving funds within the University budget, or a separate nonprofit entity to invest in sustainability and reap the returns for the community, depends on factors beyond the scope of this report.










VI. Conclusion












In conclusion, we have prioritized work towards successful implementation of the sustainability plan, work that is already underway. In order to provide clear differentiation among our peers, we propose a transformative approach to community building, where the University articulates a commitment to a just and sustainable future, especially within our urban context. This foundational concept could be embodied in multiple ways; based on current developments on campus and across the region, we propose several key projects as examples of this inclusive, engaging approach. Each of these projects is currently in the development stages, and a timely response would allow the University to take a major leadership role in the community. This truly transformative expansion of our commitment to a just and sustainable future would differentiate the University and strengthen our role as a great private University dedicated to the public good.


⁴ <http://www.oberlinproject.org/>

⁵ <http://www.sustain.ucla.edu/our-initiatives/climate-and-energy/>

Appendix 1: Prioritization of Sustainability Plan

Recommended action items	Time frame	Budget	Community Ideas Overlap
Key: Timeframe: 1 year (1), 3 year (3), in Progress (P) Cost: \$ (low to no cost), \$\$ (moderate cost), \$ (cost savings) Community Idea Overlap:  Greenspace Alliance,  Farm to Table,  Solar,  Multimodal,  Degree Program			
Administration			
Forge a reporting link between the Center and University administration at the highest level.	1	\$	
Clearly position the Center's role in advising administrative units at DU regarding sustainability.	1	\$	
Repurpose the Sustainability Council as a working body for faculty, staff, and student leaders focused on idea generation, information gathering, policy formulating, on-going planning entity.	1	\$	
Buildings			
Leverage rebate gains from utility providers for infrastructure improvements.	P	\$\$	
Curriculum and Research			
Identify Clear learning objectives for sustainability that are applicable across disciplines at the undergraduate level by developing Curriculum and Sustainability Framework guidelines by 2015.	1	\$	
Develop annual faculty training workshops, in conjunction with the Office of Teaching and Learning, on building multi-disciplinary faculty collaborations focused on integrating sustainability issues into the classroom.	3	\$\$	
Develop a proposal for one new interdisciplinary program in sustainability, i.e. a major at the undergraduate level or certificate at the graduate level, which has an emphasis on sustainability.	3	\$\$	
Energy			
Continue our evaluation and installation of LED lighting infrastructure in parking garages and building lighting applications, with goal of achieving an additional 2900 MTCDE in reductions by 2020 through Utility Reserve Fund investment in lighting, mechanical and controls efficiency upgrades.	1	\$	
Implement real-time monitoring and dashboard deployment to 20 main academic buildings.	3	\$	

Engagement			
Develop a mechanism through the Center for Sustainability to facilitate community partnerships, grant funding, and campus opportunities for authentic, project-based experiential learning.	3	\$\$	  
Pilot the University of Denver Forum on Sustainability as a means for faculty, staff, and students to exchange research and experiences of multi-disciplinary project that directly address environmental challenges	1	\$	
Create an external funding mechanism for University gifts and donations to support the actions items in this plan.	1	\$\$	
Food			
Increase the purchase of food that is either locally grown or produced (within 250 miles) and/or third-party certified to be ecologically sound, fair and/or humane, by 3% per year to achieve 10% of total purchases by 2017 (excluding products from Concentrated Animal Feeding Operations, of minimal nutritional value, or processed food with non-local or non-sustainably certified ingredients).	3	\$\$	 
Use food produced in campus gardens in campus food operations.	1	\$\$	
Grounds			
Implement a plan to increase planting of multiple species of trees and shrubs in groupings to reduce maintenance and water needs and to provide a long-term template for planting that can thrive without irrigation after they are established.	1	\$	 
Decrease campus area characterized by bluegrass lawns by 10%.	3	\$	
Purchasing			
Develop visible University of Denver Sustainability Procurement Standards that employ life-cycle analysis for socially and environmentally-responsible vendors and products.	3	\$	
Integrate a University of Denver Sustainability Purchasing Guide into existing training modules required for student groups, faculty, staff.	1	\$	
Consolidate bidding and centralized purchasing for common products and processes such as paper and drink services through on-campus warehousing and timely delivery.	3	\$	
Transportation			
Increase bike commuting by 15%, transit use by 15%, carpooling by 10%, multiple modes by 10%, and walking by 5%.	3	\$	
Obtain a Silver Rating for Bicycle Friendly University Award.	1	\$	

Enroll 30% of study abroad participants and University-funded air travel in the offset program.	1	\$	
Waste			
Increase overall campus waste diversion rates to 30% in 2015, 35% in 2016, and 40% in 2017.	3	\$	
Provide orientation training to all students and all new employees.	P	\$	
Water			
Realize a 40% average annual water use reduction for 2014-2017 for all irrigation and external water use over 2011 baseline.	1	\$	
Realize a 30% decrease in total water use over a 2011 baseline.	3	\$	
Ensure all new construction includes the most water efficient fixtures	P	\$	

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Appendix 2: Energy Conservation Fund References

General information at <http://greenbillion.org/>

Fund Reports:

Greening the Bottom Line 2011

<http://greenbillion.org/wp-content/uploads/2011/10/GreeningTheBottomLine.pdf>

See reference to University of Denver on pages 16, 29, 41, and 46.

Greening the Bottom Line 2012

<http://greenbillion.org/wp-content/uploads/2012/11/Greening-the-Bottom-Line-2012.pdf>

See reference to University of Denver on pages 19, 29, and 52.

University of Denver, AASHE STARS Report, July 20, 2011

<https://stars.aashe.org/institutions/university-of-denver-co/report/2011-07-20/IN/innovation/IN-2/>

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