

SUSTAINABLE SOLUTIONS COLLABORATORY
WHITE PAPER
ACADEMIC FUTURES

Respectfully Submitted by Kelly L. Simmons

BACKGROUND: Project-based learning is well regarded as a pedagogical means of engaging students in academic learning, and retaining their interest and excitement, while increasing connections to content and improving skills. Indeed, many CU faculty value engaged project based learning, and it is particularly common in both the Business School and Engineering schools, but also in Departments across the College of Arts and Sciences. It is also clear that students value an opportunity to apply their academic knowledge and creativity towards developing innovative solutions to solve problems and gain valuable career experience.

However, there is a problematic lack of coordination in project-based learning that severely limits the effectiveness of student projects, innovation and ideas and creates headaches for staff (and sometimes community members) who have responsibility over the particular arena involved.

- Faculty are very often unaware of the project-based assignments in other courses and departments. Barriers to creating meaningful projects in a syllabus can also be high.
- Students are often unaware of the projects that have been undertaken in the past that can be improved upon, or that have failed. Students have a limited time in which to complete projects for courses during a semester which decreases the impact on their learning and in the world.
- Professional staff are often approached late in the development of the assignment, or not at all, limiting the impact for student learning and innovation on campus. For example, campus staff in facilities, housing and dining, and other areas are repeatedly approached by a wide variety of students regarding class projects with ideas that students would like to implement. Students often have little grounding in the history of the topic on campus, what has been tried in the past, and plans for the future. They also have inadequate working knowledge of the stakeholders involved in implementing their ideas and little time to undertake effective coordination before their class assignment is due and/or the course is over.
- Community members with potential learning projects have difficulty finding entry points and contacts to bring ideas forward, since while faculty research areas are clear on the campus website, the courses that faculty are teaching which might benefit from a community project are not clear. Community members also experience challenges when a project is not completed, but a semester's course has ended.

These barriers and lack of coordination result in a great loss both to students, whose education and skill development could benefit greatly from more coordination and support, and to the campus or community as a whole, where good projects are sometimes undertaken without

proper coordination only to fail or languish, and for staff who are sometimes left to clean up or manage poorly executed projects. Projects are not as effective as they could be. Learning opportunity is lost. Further career and skill development is also less effective.

This is particularly true regarding projects aimed at advancing sustainability on campus and in the community, where innovation and impact could be particularly high and where collaborations between campus sustainability staff and students and faculty could yield important innovations for the campus and in the community.

PROPOSAL: This White Paper proposes the founding of the cross-campus and cross-college **Sustainable Solutions Collaboratory** to serve as a clearinghouse, curator, and applied learning and engagement hub at CU Boulder, supporting engaged project development, student leadership and applied sustainability learning as well as meaningful campus and community partnerships that help leverage both campus and community resources and connections

The vision for the **Collaboratory** is to bring faculty with engaged project- based learning needs or courses together with campus staff and community organizations to support, curate and assist with course-based projects and other project based opportunities and to mentor students in their project ideas and class assignments.

This proposal is based on a tested and successful model from [Portland State University](#) and their outstanding book about their work, [Let Knowledge Serve the City](#). (Copies are available to be checked out in the Al Barlett Science and Communication Center on campus)

One cornerstone to the **Sustainable Solutions Collaboratory** is founding and supporting a vibrant “[Campus as Living Lab](#)” (CLL) effort. CLL is a successful applied-sustainability educational model that has been implemented at a host of other universities including Yale, Harvard, University of Washington, Princeton, MIT, and Cornell, (among many others) that fosters collaboration between professional staff, faculty and students and would greatly benefit the learning outcomes, engagement and retention for CU Boulder students. Opportunities under a Campus as Living Lab are currently abundant, but there is no central coordinating unit on campus that can bridge the academic – campus operations divide. The **Sustainable Solutions Collaboratory** can serve this purpose.

Enclosed are a few of the proposed goals and tasks of the proposed CU **Sustainable Solutions Collaboratory** which is envisioned as an administrative partnership between CU Engage, CU Environmental Center and the proposed School of Sustainability and the Environment, or in the absence of the School, various relevant departments across campus, but with significant cross college interdisciplinary responsibilities.

- Lower the burden and barriers for faculty to engage in collaborative solutions-related research as well as applied learning activities with students by serving as a curator and facilitator of community or campus sustainability-related projects

- Increase overall impact of applied learning projects and formalize participation in sustainability solutions with attention to projects that leverage lasting significant outcomes on campus and in the community.
- Organize and formalize applied sustainability learning projects for synergy, collaboration and impact between faculty across disciplines and within the community.
- Establish more formal “Campus as Living Lab” efforts: Provide curated opportunities for faculty and facilities management staff to partner in using the campus as a learning forum for research and application of sustainability solutions to the benefit of students and the campus community.
- Assist in designing and developing employment skills-related sustainability workshops in addition to curated applied learning activities and projects that directly improve and impact professional job skills and career readiness for students.
- Support connections and build capacity between sustainability-oriented faculty across campus for excellence in interdisciplinary sustainability curriculum and in applied learning projects.
- Track and engage faculty who have sustainability integrated into their courses. Capture, track and assess diverse applied learning efforts and impacts across campus for STARS and other reporting.
- Advocate for and assist in implementing key competencies in sustainability learning for students across campus.

CONCLUSION:

Support for the idea of a **Sustainable Solutions Collaboratory** was included In the Final Report by the Community Engagement Working Group for the proposed School of Environment and Sustainability (SES). The report noted that “While a rich array of community engagement is already in play on campus, mechanisms for finding them are hit or miss for students, staff and faculty. There is also no easily identified “front door” for potential community partners who might contribute their expertise.”¹

Report Recommendations included:

- *“Creating an office to support engaged scholarship which can help build productive community partnerships, foster interdisciplinary collaboration and conduct program evaluation.*
- *“Designing engagement into student learning*
- *Build Community Partnerships²”*

The vision for the CU **Sustainable Solutions Collaboratory** can meet these recommendations and solve these challenges.

¹ ibid p. 7

² ibid p. 2, 9, 10, 11