

Campus as a Living Lab



Workshop: October 11, 2017



Campus Sustainability

A Common Goal for Students, Staff and Faculty

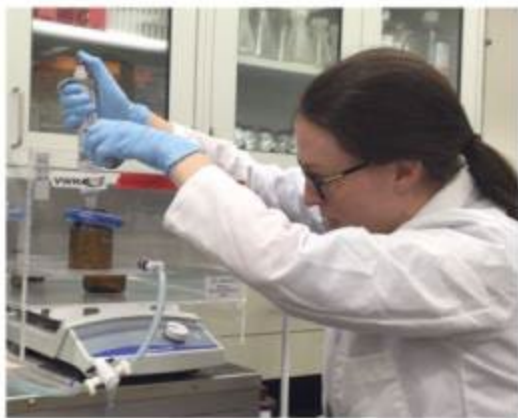


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ABOUT ISEE[®]



ACTIONABLE RESEARCH



CAMPUS SUSTAINABILITY



EDUCATION & OUTREACH



Living lab and campus sustainability

- “living lab is an open innovation environment centered on users to test concepts and ideas on real scenarios with multidisciplinary research teams” (smartcities.ieee.org)
- Merging campus facilities management and academics to help students address sustainability issues (Cohen and Lovell, 2014)
- Campus sustainability is crucial for universities to remain competitive and viable in training students to battle sustainability challenges

Examples at Peer Institutions

- Harvard University: [Campus Sustainability Innovation Fund](#) for [Living Lab](#)
- Ohio State University: [Campus as a Living Laboratory \(CALL\)](#) and [Campus as a Testbed](#)
- University of Minnesota: [Living Lab](#)
- University of Washington: [Campus Sustainability Fund](#) and [Green Seed Fund](#)

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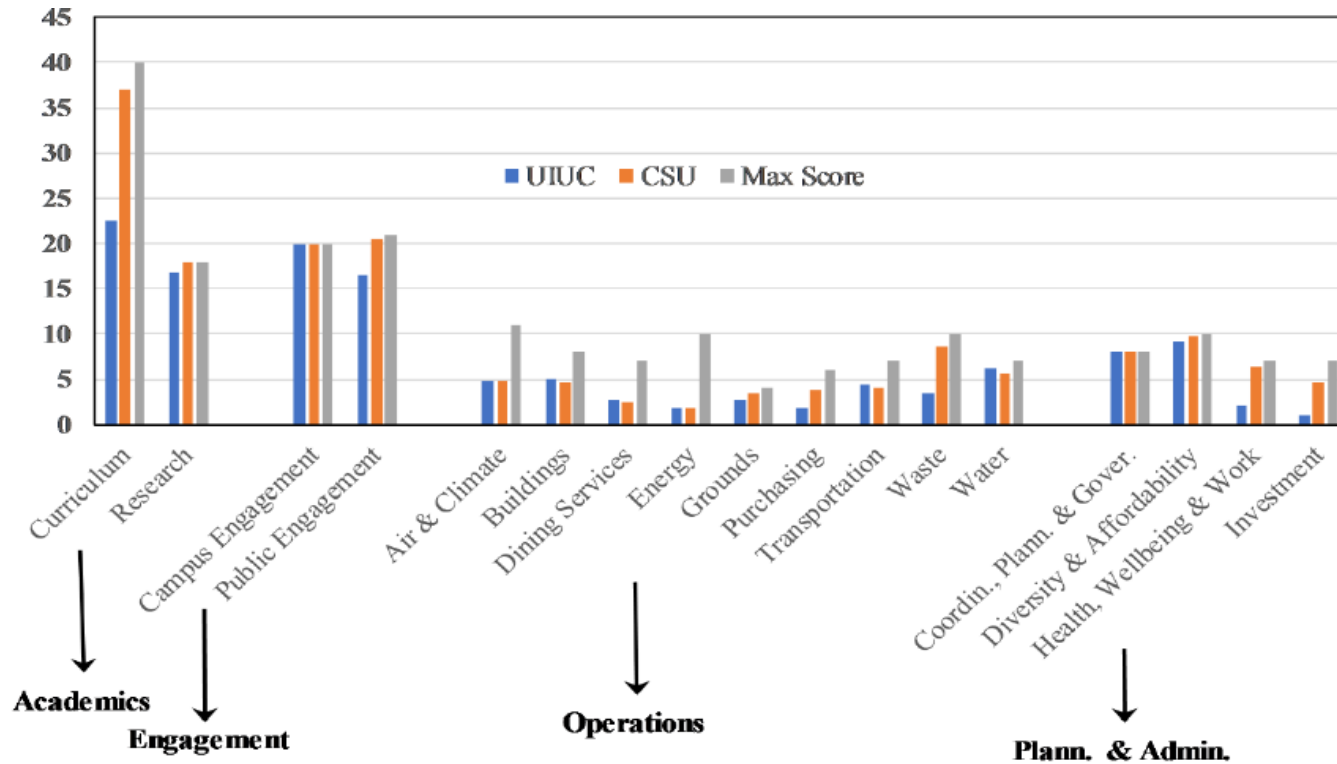
The living lab at Harvard University

“Campus as a living lab” implies that students, faculty, and staff should be brought together to use campus and the surrounding community as a “testbed” to “pilot promising new solutions to real-world challenges ...” <https://green.harvard.edu/series/living-lab>

Funding and programs at Harvard

- [Campus Sustainability Innovation Fund](#)
- [Climate Solutions Living Lab Course and Research Project](#)
- [Student Grants](#)

Comparing U of I with the best



Colorado State University was the only Institution ranked as Platinum ; U of I was ranked as gold but in the low band

Category	UIUC	Max
Academics	39	58
Engagement	36	41
Operations	33	70
Planning & Admin.	20	32

Some Issues

- Faculty and students are not aware of academic opportunities involved in campus sustainability projects
- Facility operation and management staffs are not aware the benefits of collaborating with faculty and students (Savanick et al., 2006)
- Appropriate funding mechanisms and incentives are not in place to properly engage all groups

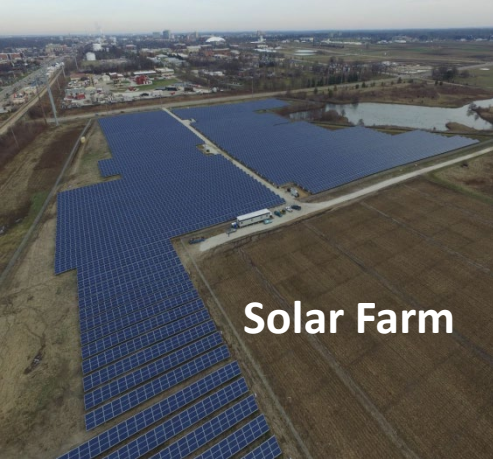
What may we need to do?

- Promote using campus sustainability projects as testbed for research and education projects
- Seek additional funding for campus sustainability projects
- Strengthen the engagement of students, faculty, and staff beyond our current practices
- Strengthen the collaboration with communities

iCAP projects and iCAP Portal: Resources for R&E

- Among the over 700 iCAP projects available on the iCAP Portal, many of which are landmarks of the campus
- Many of the projects/facilities have already been used for R&E
- There exist potentials for using the projects to attract major external grants

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Solar Farm



Food waste treatment



Biofuel crop



Boneyard Creek



Solar houses



Green roofs



Agroforestry farm



Porous Asphalt Parking



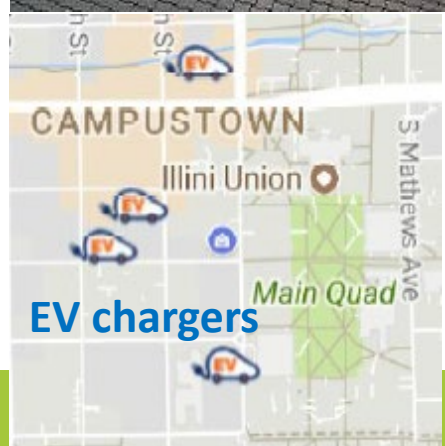
Net-Zero Energy Building



Rain garden



Biomass boiler

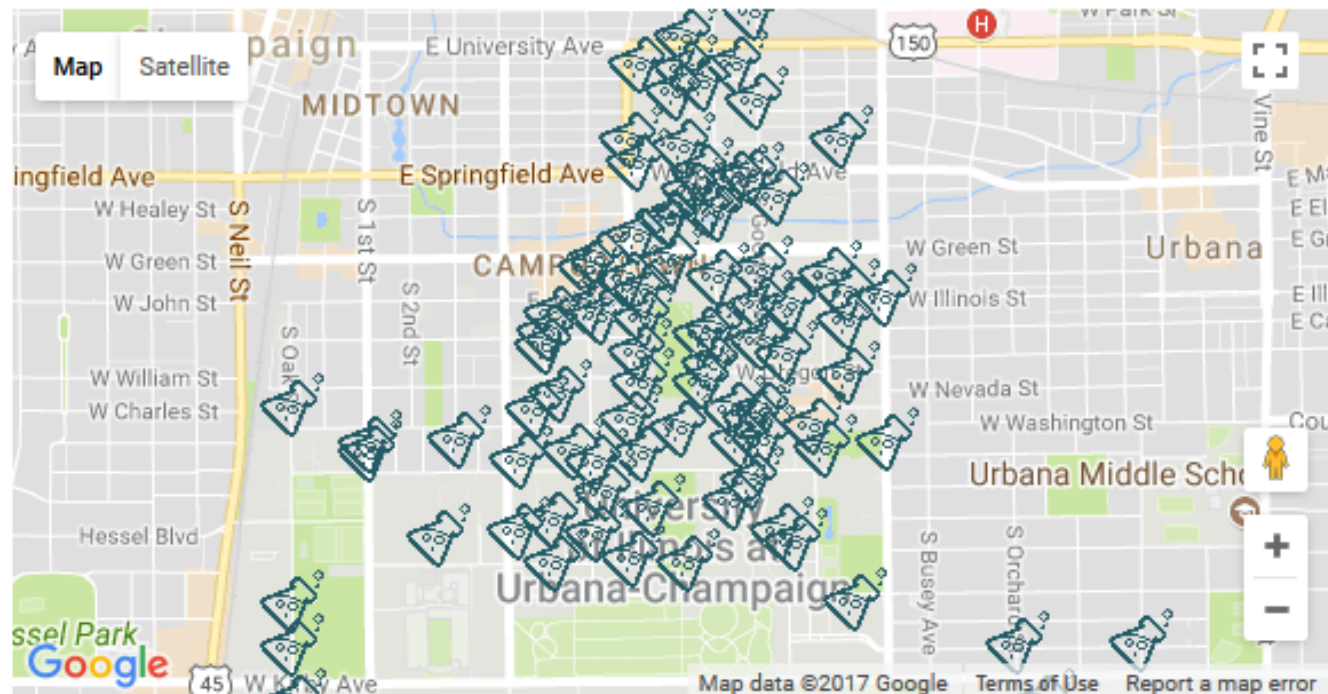


EV chargers

Map iCAP projects and National Research Program

<https://icap.sustainability.illinois.edu/themes/research>

Map of Research-themed Projects



Our Common Goals

- **Campus as a living lab for sustainability research and education**
- **Campus as sustainability example for communities**
- **Campus as home for bringing up next generation of professionals for sustainable development**

Supporting materials

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<https://uofi.app.box.com/s/wtxfoypd8x1jb75ysx6ltxaywkhwvlv>

<http://sustainability.illinois.edu/seed-funding-program-highlights-campus-as-living-lab-workshop/>