SDG Accord Case Study

Living Lab Initiative

BCIT Fish and Wildlife program students identifying and monitoring plants along the Burnaby campus' restored Guichon Creek.

Integration of SDGs in

☒ Campus operations & infrastructure
☒ Curriculum

SDG focus

☒ Goal 4 - Quality education
☒ Goal 9 - Industry, innovation and infrastructure
☒ Goal 17 - Partnerships for the goals

What did we do?

BCIT's campuses as Living Labs of sustainability initiative is a pan-institutional, collaborative approach to hands-on learning that uses the campus as a vehicle to engage students, faculty, and staff in solving real-world challenges. New campus buildings, like the Tall Timber Student Housing and the Trades and Technology Complex, allow us to share experience of innovative construction approaches like mass timber technology, and passive house in partnership with leading industry consultants. Our schools run Living Labs projects spanning topics from ecological restoration, power transmission and generation, to energy systems, building technology, and materials. These often make use of our existing infrastructure to test new technologies. An ongoing lecture series provides opportunities for BCIT staff and external contractors to present key considerations and share information with students, and ways for students to ask professionals about a project. Some of the lectures include site tours, which provide opportunities to visit projects on campus and learn about real-world issues and challenges in the field.

What were the benefits and outcomes?

1. Foster skills development through access to campus infrastructure and information.

2. Demonstrate leading edge technologies and equipment.

3. Present opportunities to conceptualize, design and implement solutions that advance the state of practice.

What barriers or challenges did you encounter in embedding this aspect of the SDGs into your work and how did you overcome them?

1. Integrating Living Lab activities into already heavy courseloads, which is particularly challenging with construction projects that also have inflexible timelines. It was determined that integrating information or even participation in development projects into curriculum in real-time is often too onerous for its value. Instead, ensuring students are able to follow along with project progress, have site tours when possible, and use projects as case studies was deemed to be a practical and valuable approach for most projects.

2. Determining level of access for students and faculty to real-time infrastructure development projects, which includes access to physical sites as well as data for research and coursework. This was helped by assigning one staff person as the project coordinator for faculty to contact about site tours and developing a protocol for various levels of data access (e.g. public information on a website, mid-level information through campus info services login, and more sensitive or confidential info only by special request).

3. Lack of knowledge of possible projects by faculty and lack of knowledge of existing courses and related curriculum by staff and project consultants. The main response to this challenge has been to create ongoing Living Lab meetings with faculty and staff from across the institute, a Living Lab lecture series, and websites with project information.

What are your conclusions and recommendations for others?

1. Outline a definition and set of principles for Living Labs to ensure everyone knows what it means and how it might apply to them.
2. Create a list of Living Lab activities, ideally those that have taken place at your institution, as examples to spur more ideas.
3. Forge relationships between staff and faculty across a range of departments, schools, and research institutes.
4. Develop communication mechanisms to ensure those with possible projects know about relevant programs and curriculum, and vice versa. This can be through periodic meetings, an intraweb, internal newsletter, or any other communication method that will actually be used by the people needed to bridge silos.
5. Create incentives for faculty and staff to collaborate. This can include flex time for faculty or staff to create Living Lab initiatives, bursaries or grants for relevant equipment, and sign-on at all levels to an approach that recognizes the value of Living Lab activities for everyone and acknowledgement that there may sometimes be trade-offs in terms of speed and efficiency.

Web link to further information:

https://www.bcit.ca/sustainability/living-labs/