



HAWORTH®

Centre for Interactive Research on Sustainability - University of British Columbia Vancouver, BC

Client Space

Calling the new Centre for Interactive Research on Sustainability (CIRS) the “greenest building in North America” isn’t giving it enough credit.

The building is designed to not only have as little impact as possible, but to actually improve the surrounding environment. The goal was to help make inhabitants healthier, happier, and more productive as they help shape public policy through new ideas.



Each space was intentionally designed to optimally support the people in it and the environment they live and work in.

The CIRS mandate is to accelerate sustainability through an ongoing commitment to more quickly develop solutions to the world's environmental challenges.

In 2011, CIRS opened the doors on a concept that began taking shape seven years earlier with the idea to create a building that didn't just reduce people's impact on the world, but actually helped restore it. The four-story building, which provides space for students, researchers, and partners to collaborate and innovate, is a showcase for experimental sustainability solutions.

For example, the CIRS facility uses water from the sky and heat and cooling from the sun, ground, and neighboring buildings. Liquid waste is treated on site. And the building sequesters more carbon than was emitted during construction. Going forward, it returns more useful energy to campus than it consumes.

The challenge, however, was finding the budget for high-performance features such as solar collectors, heat exchangers, and liquid waste treatment equipment. Even though these elements would clearly reduce the total cost of ownership throughout the life of the building, they require a greater up-front cost than traditional building systems and

materials. Through careful planning, the budget was met and the building proceeded without compromising its goals.

CIRS project management preferred an integrated design process that ensured partners were involved at the early stages for maximum efficiency and greatest outcomes. This meant that the Haworth team was able to form a strategic alliance with CIRS that would not only leverage our research and knowledge of new building practices, but allow us to test new ideas, monitor environmental quality and performance, and gauge the success of human factors associated with the space.

A modular approach to the interior architecture provides future assurance—as the Centre's needs evolve, Haworth furniture and walls can be reconfigured as needed, and new Haworth products will integrate seamlessly with the existing investment. This not only minimizes cost associated with change, but reduces waste as well. A raised-access floor enhances the flexibility by providing easy access to modular power and data while distributing air throughout the space. The user-friendly, ergonomic workstations and seating create a more comfortable, productive atmosphere.



Because Haworth shares CIRS's broad interpretation of sustainability—including environmental, human, and cost-efficiency objectives—our Integrated Palette™ products were an ideal fit.



Building for a Sustainable Future*

1. **SOLAR ENERGY:** Converted from the sun through solar collectors and photovoltaic panels. Sunlight supplies approximately 10 percent of the building's demand for electricity and about 60 percent of the demand for hot water heating. (Shown Above)
2. **RAINWATER HARVESTING SYSTEM:** Catches rain from the rooftops and carries it to subterranean tanks, where it's purified using filtration and disinfection. The drinking-quality water produced at CIRS will satisfy 100 percent of the demand for potable water.
3. **LIGHTING:** Uses daylight to reduce the demand for electric lighting with dimming and occupancy sensors. All horizontal work surfaces are lit by natural sources.
4. **GREEN ROOF:** Provides a meadow environment for birds, insects, and native plants, and contributes to reducing urban heat island effects. (Shown Above)
5. **LECTURE HALL:** Uses daylight as its major lighting source. This 423-seat auditorium features state-of-the-art audio-visual technology and serves as a classroom for undergraduate courses. (Shown Above)
6. **WASTE ENERGY SYSTEM:** Reclaims energy previously released into the air from the nearby Earth and Ocean Sciences building (EOS). Waste energy satisfies 100 percent of the demand for space heating in CIRS. Surplus heat is returned to EOS, reducing UBC's GHG emissions and use of natural gas.
7. **WASTEWATER TREATMENT SYSTEM:** Treats and recycles wastewater from CIRS and campus buildings for continual use. Cleansing process uses solar aquatics and constructed wetlands. Reclaimed water is used for flushing toilets and for irrigation.
8. **BC HYDRO THEATRE:** Features advanced visualization and interaction technologies to engage audiences in simulations of sustainability scenarios. Groups "fly" to different locations, visualize a region now and in the future, and manipulate information using wireless devices connected to large visual display screens to consider the potential impacts of climate change, energy use, and sustainability.
9. **GEOHERMAL HEATING AND COOLING:** Transfers thermal energy between the ground and building, and vice-versa, depending on the season, using a geo-exchange system.
10. **THE LOOP CAFÉ:** Serves distinctively fresh and organic choices that reflect local flavours. There is no disposable packaging on site, which minimizes carbon and environmental footprints.
11. **WOOD BUILDING:** Demonstrates wood as a viable construction material for commercial buildings. CIRS uses both pine beetle-damaged and certified wood throughout. Wood locks in carbon and eliminates GHG emissions that would have resulted from using other materials, such as concrete and steel.
12. **LIVING WALL:** Provides cooling through shade during the summer and allows warmth from the sun's rays to be absorbed by the building in winter. This vegetated wall of vines is three stories tall, and uses reclaimed rainwater for irrigation. (Shown Above)

* For a full map description and additional information regarding CIRS, go to sustain.ubc.ca



“The old agenda of designing buildings that do less damage is not good enough. We need a net-positive agenda—can we construct buildings that improve the biophysical and human environment? This 5,600–square–meter building will actually reduce the university’s total energy use.”

John Robinson, Executive Director, UBC Sustainability Initiative



Not only does TecCrete flooring contain 58% recycled content, it is height-adjustable, providing a flexible flooring option to accommodate diverse application—from a typical office environment to a state-of-the-art auditorium.



Haworth is proud to be one of CIRS's Strategic Alliance Partners, working alongside UBC and CIRS to move their joint research agenda forward over the long term. These partners are involved in many aspects of CIRS, including testing and demonstrating building technologies and systems, training and certification programs, collaborative research, tenancy, and sponsorships.

Customer Profile

The Centre for Interactive Research on Sustainability (CIRS) has been established by The University of British Columbia in 2011 to accelerate sustainability by quickly finding effective solutions to the challenges of urban development. This living laboratory demonstrates The University of British Columbia's commitment to leadership in sustainability through research and innovation. The center is driven by three criteria—to be smart, humane, and green.

Haworth Product

- Systems Furniture: Compose®
- Moveable Walls: Enclose®
- Seating: Very®, Zody®, Hello®, SE04, Improv®
- Tables & Conference Furniture: Planes®
- Accessories: Jump®2Stuff
- Access Floors: TecCrete®

- Architectural & Design Firm:** Perkins + Will – Vancouver, BC
- General Contractor:** Heatherbrae Builders – Richmond, BC
- Flooring Contractor:** Camino Modular Systems, Inc. – Vancouver, BC
- Haworth Furniture Dealer:** The Brooks Corning Company – Vancouver, BC
- Photographer:** Stang Photography – Calgary, AB

