



Campus Living Labs

A Best Practices Guide for Canadian
Colleges and Institutes

Volume III



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ImpAct–Climate is a five–year pan–Canadian project delivered by Colleges and Institutes Canada and funded by Environment and Climate Change Canada.

About Colleges and Institutes Canada

CICan is the national and international voice of Canada’s largest post-secondary education network. It advocates, builds capacity, and drives knowledge to strengthen Canada’s publicly supported colleges, institutes, CEGEPs, and polytechnics to meet Canada’s biggest challenges. With more than **95%** of Canadians living within **50 km** of a member institution, and thanks to its extensive reach around the globe, CICan works to future-proof communities in Canada and abroad. We respectfully acknowledge that CICan’s offices in Ottawa are located on the traditional and unceded territory of the Algonquin Anishinaabe Nation.

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Table of Contents

1. Executive Summary	4
2. About the Campus Living Labs Program.....	6
3. Cohort III at a Glance	7
4. National Themes and Insights	9
5. Case Studies: Campus Living Labs in Action.....	10
6. Institutional Snapshots.....	13
7. GHG Reduction and Impact Summary.....	18
7.1 Cohort III GHG Overview	18
7.2 Direct Emissions Reductions	18
7.3 Behaviour-Based and Long-Term Emissions Reductions.....	19
7.4 Cohort III GHG Impact Summary Table	20
7.5 Why These Reductions Matter	23
8. Lessons Learned Across Cohort III	24
8.1 Project Implementation Lessons	24
8.2 Engagement and Awareness Lessons.....	24
8.3 Systems-Level Lessons.....	25
8.4 Barriers to Implementation Across All Cohorts.....	25
8.4.1 Barriers Emerging in Cohort III.....	25
9. Scaling the Campus Living Labs Model	27

1. Executive Summary

Across Canada, colleges and institutes are turning their campuses into living classrooms — places where climate action is not only taught, but practiced, measured, and made visible to thousands of students every day. This third cohort of Campus Living Labs builds on five years of learning, experimentation, and collaboration through CICan’s ImpAct–Climate initiative, funded by Environment and Climate Change Canada.

Cohort III brought together twelve institutions from British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and Quebec. Each institution addressed a real, place-based climate challenge: wasted energy, food-system emissions, campus mobility, land stewardship, interpretive sustainability education, and the need for Indigenous-led design and knowledge sharing. Their solutions were creative, deeply local, and grounded in hands-on learning.

This third cohort builds on the foundation laid by Cohorts I and II, which together established Campus Living Labs as one of Canada’s most promising frameworks for applied climate action in post-secondary education. While early cohorts demonstrated proof of concept, Cohort III reflects a maturing program that deepens institutional integration, strengthens cross-campus collaboration, and situates individual projects within a growing national learning community.

Taken together, the projects tell a national story.

A story of students planting native species, designing signage that honours Indigenous ways of knowing, rethinking food and waste systems, and installing the technologies that will shape the low-carbon buildings of tomorrow. A story of staff learning new tools, communities joining in, and institutions demonstrating what climate leadership looks like, not in theory, but in practice.

Across the cohort, institutions collectively delivered:

- Significant GHG reductions, particularly through lighting retrofits, HVAC optimization, and food waste prevention
- New living-lab infrastructure, including sensors, signage, composting systems, native gardens, and energy-efficient equipment
- Thousands of engagement touchpoints through workshops, signage, tours, surveys, student projects, and communications campaigns
- Meaningful partnerships with Indigenous Knowledge Keepers, municipal partners, food service providers, conservation organizations, and industry collaborators
- Replicable models with strong potential for national scaling

Cohort III reinforces a central truth:

Climate action accelerates when campuses become living laboratories; places where experimentation is welcomed, learning is public, and impact is measurable.

This report presents the stories, themes, insights, and results from Cohort III, situating them within CICan’s broader climate action journey. It is both a record of progress and an invitation to continue building climate leadership across Canada’s post-secondary system.

2. About the Campus Living Labs Program

CICan’s ImpAct–Climate project is a five–year initiative funded by Environment and Climate Change Canada to increase climate literacy, accelerate behaviour change, and reduce greenhouse gas (GHG) emissions across the Canadian college and institute sector.

Campus Living Labs bring this mission to life.

Living Labs enable institutions to transform real campus spaces, buildings, grounds, food systems, and transportation networks into hands-on environments for climate experimentation. They bridge campus operations, applied research, curriculum, and community partnership, enabling meaningful climate action while offering students authentic learning experiences.

Cohort III projects aligned with one or more of five themes:

1. Indigenous Knowledges and Practices
2. Transportation
3. Food
4. Waste Management
5. Buildings and Land Management

These themes reflect areas where institutions can simultaneously reduce emissions, raise awareness, strengthen skills, and test innovative, scalable approaches to sustainability.

Across all three cohorts, the Campus Living Labs program has evolved from a collection of pilot projects into a cohesive, pan-Canadian movement. Institutions are no longer simply implementing stand-alone demonstrations; they are building internal capacity, influencing policy, shaping curriculum, and contributing to a shared national model for climate action. This report positions Cohort III within that evolution.

3. Cohort III at a Glance

Twelve institutions participated in the Cohort III Demonstration Projects, representing six provinces and a wide range of campus sizes, geographies, and community priorities.

<p><i>Participating Institutions</i></p> <ul style="list-style-type: none">• Bow Valley College• Cégep Saint-Jean-sur-Richelieu• Coast Mountain College• Collège Boréal• Collège Montmorency• Confederation College• Durham College• Humber Polytechnic• Nova Scotia Community College• Red Deer Polytechnic• Red River College Polytechnic• Suncrest College	<p><i>Types of Interventions Undertaken</i></p> <ul style="list-style-type: none">• Lighting retrofits (Suncrest)• Demand-controlled HVAC optimization (RDP)• Food waste reduction interventions (Bow Valley, Boreal, Coast Mountain)• Composting and circularity pilots (Confederation, Durham)• Mobility planning and building/landscape redesign (Saint-Jean, Montmorency, NSCC)• Indigenous-led signage and interpretation (RRC Polytech)• Biodiversity and healthy landscape planning (Humber)
<p><i>Project Themes Distribution</i></p> <ul style="list-style-type: none">• Indigenous Knowledges & Practices – 2 projects• Transportation – 2 projects• Food – 2 projects• Waste Management – 3 projects• Buildings and Land Management – 3 projects	<p><i>Engagement Highlights</i></p> <ul style="list-style-type: none">• Campus-wide surveys• Student-led research and capstones• Workshops and tours• Demonstrations and field activities• Storytelling campaigns• Social media outreach• Partnerships with Indigenous• Knowledge Keepers

A Cohort Defined by Hands-On Learning

Perhaps the most powerful thread running through Cohort III is the role of experiential learning.

Whether students were planting native species, conducting food waste audits, analyzing energy consumption data, or designing interpretive signage, each project created meaningful opportunities to:

- Apply technical skills
- Build climate literacy
- Shape campus culture
- Influence long-term sustainability planning

Cohort III shows that when students become collaborators in solving real climate challenges, they not only learn more deeply, they change the institutions themselves.

4. National Themes and Insights

Cohort III projects spanned all five program themes, yet shared a common approach: identifying campus-specific challenges and turning them into opportunities for experimentation, learning, and measurable impact.

Projects focused on buildings and land management delivered some of the most tangible GHG reductions and served as powerful teaching tools. Food and waste projects demonstrated that upstream behaviour change can significantly reduce emissions. Transportation and mobility initiatives emphasized long-term systems change, while Indigenous-led projects reinforced the importance of ethical space, relational accountability, and place-based knowledge in climate innovation.

Together, the cohort shows that climate action is most effective when it is contextual, participatory, and embedded in campus culture.

5. Case Studies: Campus Living Labs in Action

The following case studies showcase four Cohort III projects that exemplify innovation, partnership, and measurable climate impact. Each demonstrates how a campus can serve as a testbed for climate solutions and how students, staff, and community partners can co-create meaningful change.

Case Study 1: Red Deer Polytechnic

Optimizing HVAC Through IIoT and Real-Time Data

Theme: Buildings & Land Management

GHG Focus: Energy efficiency, emissions reduction

Red Deer Polytechnic transformed its Alternative Energy Lab into a working model of data-informed climate action. By installing occupancy sensors, air quality monitors, and advanced metering, the project team developed a demand-based HVAC control strategy that adjusts ventilation and heating in response to real-time usage. This shift from **24/7** full-capacity operation to intelligent, responsive ventilation is projected to reduce natural gas consumption by **25** percent and electricity use by **40** percent.

The project stood out not only for its technical sophistication but for the robust student engagement it enabled: class visits, tours, hands-on data analysis, and integration into research and coursework. Faculty, IT, facilities staff, and external contractors collaborated seamlessly, demonstrating the power of cross-departmental leadership in climate innovation.

Case Study 2: Bow Valley College

Reducing Food Waste at the Source Through Behaviour Change

Theme: Food

GHG Focus: Upstream food waste prevention

Bow Valley College tackled an issue many campuses face: excess food waste from catered events. Through a series of waste audits, the team identified patterns in portion sizes, dishware use, and attendee behaviour that contributed to unnecessary waste. Their interventions, including reusable dishware, smaller plates, educational signage, and catering process changes, reduced edible food waste from **253** grams per person to **98** grams per person.

The project's success hinged on communication and culture. Staff-facing awareness sessions reframed food waste as a climate issue, while student-facing campaigns, a photo contest, and hands-on workshops connected climate action to daily practices. The project also led to new reusable dishware infrastructure and stronger partnerships with Sodexo and other external organizations.

Case Study 3: Red River College Polytechnic

Indigenous-Led Interpretive Signage and Ethical Space

Theme: Indigenous Knowledges & Practices

GHG Focus: Awareness and interpretation of sustainable building systems

At RRC Polytech, the Manitou a bi Bii daziigae building is a living demonstration of Indigenous-led sustainable design. Cohort III funding supported the creation of interpretive signage and a self-guided building tour that highlights the building's energy-efficient infrastructure, green technologies, and Indigenous design elements.

The project was guided by Elders, Knowledge Keepers, Indigenous artists, and the original design team, ensuring that each element reflects teachings, relationships, and place-based knowledge. Engagement extended beyond the campus, with tours offered to external organizations and presentations delivered at national events. The inclusion of a capstone student added a meaningful layer of experiential learning.

Case Study 4: Suncrest College

Lighting Retrofit with High-Impact GHG Reductions

Theme: Buildings & Land Management

GHG Focus: Energy efficiency, avoided emissions

Suncrest College originally planned a heat-recovery project but pivoted when unexpected barriers arose, underscoring that Living Labs must remain flexible and responsive. The team shifted to a high-impact lighting retrofit in the Trades and Technology Centre, replacing **76** aging metal halide fixtures with energy-efficient LEDs.

The results were substantial: **35.6** tonnes of CO₂e avoided annually, equivalent to removing six cars from the road. Improved lighting quality, reduced maintenance, and **\$8,000** in annual cost savings further reinforced the value of the retrofit. The project also raised awareness across the college's **11** campuses and laid the groundwork to complete the original heat-recovery concept once contractors are available.

Why These Case Studies Matter

Together, these examples illustrate the diversity and richness of the Living Labs approach. Whether the challenge is energy waste, food waste, land stewardship, or climate storytelling, each institution showed that meaningful change happens when applied learning, operational improvements, and climate communication intersect.

Each case study also highlights a key truth from Cohort III:

Living Labs thrive when campuses embrace experimentation, trust the process, and engage the full community in climate action.

6. Institutional Snapshots

Each Cohort III institution brought forward a unique approach to climate action rooted in local context, operational needs, and community values. These snapshots provide a concise overview of each campus's Living Lab achievements.

Bow Valley College

Project: Catering Zero Waste: Interventions for Sustainable Campus Food Services

Theme: Food

Bow Valley College focused on upstream prevention of food waste in its campus catering system. Through waste audits, staff education sessions, redesigned buffet setups, reusable dishware, smaller plates, and targeted signage, the college dramatically reduced edible food waste from **253** grams per person to **98** grams per person. The communications approach combined staff-facing process changes with student-facing climate literacy campaigns, including workshops, social media, and a photo contest. The project strengthened partnerships with Sodexo and external food waste organizations and created pathways to explore food recovery. This work informs college-wide event-planning guidelines and future waste-reduction policies.

Cégep Saint-Jean-sur-Richelieu

Project: Aménagement durable de la vitrine du cégep

Theme: Transportation & Land Management

Cégep Saint Jean sur Richelieu reimagined its large front-campus lawn, an underused, low-biodiversity space largely shaped by single-occupancy vehicle use. Through partnerships with consultants COEX and GBI, the cégep developed a comprehensive mobility and landscape plan grounded in pedagogy, nordicity, climate resilience, and community well-being. The redesigned vitrine prioritizes active transportation, differentiated land care, biodiversity, safer pedestrian access, and solar lighting. Community engagement shaped the plan and helped seed long-term culture change. A communications strategy and upcoming awareness installations will continue to build momentum as the cégep phases implementation over multiple years.

Coast Mountain College

Project: Cultivating Sustainability and Climate Awareness

Theme: Food Systems, Climate Action & Community Partnerships

Coast Mountain College partnered with the 'Ksan Society on a Campus Living Labs initiative to reduce food waste, strengthen food security, and advance climate awareness. By locating a commercial freeze dryer and refrigeration at 'Ksan Place, surplus food is preserved and diverted from waste without expanding campus infrastructure. The partnership integrates experiential learning and Indigenous Traditional Knowledge, formalized through a Memorandum of Understanding that supports shared resources and long-term sustainability. Continued engagement and planned expansion will further deepen student and community involvement in sustainable food systems.

Collège Boréal

Project: Transforming Food Waste into Organic Substrate

Theme: Food Systems, Climate Action & Waste Reduction

Collège Boréal launched a Campus Living Labs project to reduce food waste and greenhouse gas emissions by converting campus food waste into an odourless organic substrate using an innovative dehydration system. Implemented at the Applied Biodiversity Research Centre in Sudbury, the project diverts food waste from landfill while eliminating methane-producing decomposition. Applied research and greenhouse trials are testing the substrate's potential for agricultural use, while workshops and course integration build awareness around responsible consumption and climate action. Ongoing testing and future field trials will support refinement and broader adoption.

Collège Montmorency

Project: Mobility Incentives & Active Transport Transition

Theme: Transportation

Collège Montmorency implemented initiatives designed to reduce the environmental impact of daily commuting and shift community habits toward sustainable travel. Through incentives, awareness campaigns, mobility planning, and improved infrastructure, the college supported behavioural change among students and staff. The project highlighted that transportation emissions, often the largest Scope 3 source, require both physical changes and supportive communications. Findings from this project will guide future mobility actions, with an emphasis on accessible, low-carbon commuting choices.

Confederation College

Project: RE: Grow – A Composting and Circularity Initiative

Theme: Waste & Food

Confederation College implemented an on-campus composting initiative to address the high volume of organic waste previously sent to landfill. Following a waste audit showing that **45%** of campus waste was organic, the college installed a FoodCycler to compost food waste generated primarily through food services and daycare operations. The project diverts organic waste from landfill, reduces methane emissions, and produces compost for use in campus landscaping. As part of a broader waste management overhaul, including centralized sorting and organics separation, the initiative has significantly increased waste diversion and awareness. The program will continue to expand to additional kitchens, supporting long-term climate action and circular waste practices.

Durham College

Project: Reimagining Campus Food Systems

Theme: Food Systems, Waste Reduction & Climate Action

Durham College, through the Weston Centre for Food and the Barrett Centre of Innovation in Sustainable Urban Agriculture, launched a Campus Living Labs initiative to reimagine campus food systems through a circular, field-to-fork-to-field model. The project integrates food production, waste reduction, food literacy, and community engagement into both academic programming and daily operations. By embedding a food-waste hierarchy into the curriculum, experiential learning, and partnerships, the initiative reduces food waste, supports food security, and lowers greenhouse gas emissions. The approach strengthens local food systems, advances food sovereignty, and builds a more resilient and inclusive campus food ecosystem.

Humber Polytechnic

Project: Healthy Landscape Plan

Theme: Land Management & Biodiversity

Humber Polytechnic partnered with Carolinian Canada to assess its campus landscapes and develop a plan to improve biodiversity, resilience, and student engagement through a two-eyed seeing approach. A large campus survey reached **218** community members, providing insight into campus space use and perceptions. Students participated in native planting, salt-reduction initiatives, and workshops with the Toronto Regional Conservation Authority. This project blended land stewardship with experiential learning, creating a clear roadmap for future campus standards.

Nova Scotia Community College (NSCC)

Project: Interpretive Sustainability Signage

Theme: Buildings & Land Management

NSCC created interpretive signage to help campus users understand the sustainable building features and energy-efficient systems already in place at the institution. By making invisible climate solutions visible, the project increased climate literacy and helped staff, students, and visitors learn how buildings themselves can support GHG reduction. The signage serves as a communication tool, a teaching resource, and a foundation for future Living Labs work on campus.

Red Deer Polytechnic (RDP)

Project: IIoT and Data Analytics for GHG Reduction

Theme: Buildings & Land Management

RDP implemented an innovative demand-controlled HVAC system informed by occupancy sensors, indoor air quality monitors, and high-resolution energy data. Students, faculty, IT specialists, and industry partners collaborated to build the data pipeline and design the control algorithm. Engagement activities included tours, presentations, and social media outreach. The project demonstrated significant GHG-reduction potential and positioned RDP to scale intelligent building management systems across its campus.

Red River College Polytechnic (RRC Polytech)

Project: Manitou a bi Bii daziigae Interpretive Signage & Engagement

Theme: Indigenous Knowledges & Practices

RRC Polytech's project deepened the ways Indigenous knowledge and values are shared on campus. Collaborating with Elders, Knowledge Keepers, Indigenous artists, students, and the building's original designers, the college developed interpretive signage and a self-guided tour for its near-net-zero Manitou a bi Bii daziigae building. The initiative strengthens the campus's ethical space, highlights sustainable design, and provides an accessible educational experience for thousands of visitors each year.

Suncrest College

Project: Lighting Refit for the Trades & Technology Centre

Theme: Buildings & Energy

Suncrest College completed a high-impact lighting retrofit, replacing 76 metal halide fixtures with LED technology. The project yields an estimated **35.6** tonnes of CO₂e reductions annually, improves lighting quality in instructional spaces, and reduces maintenance needs. Communications through press releases, tours, and social media amplified the project's visibility. The work sparked further interest in GHG reduction across Suncrest's **11** campuses and set the stage for future retrofits – including the original heat-recovery concept when contractors become available.

7. GHG Reduction and Impact Summary

Cohort III demonstrates that when climate action is embedded into everyday campus operations, from buildings and food systems to landscapes and mobility, meaningful emissions reductions follow. While projects varied in scope and approach, together they show how colleges and institutes can reduce their carbon footprint through targeted interventions supported by applied learning and cross-department collaboration.

Some projects delivered direct, measurable GHG reductions through operational upgrades such as lighting retrofits and HVAC optimization. Others focused on behaviour change, awareness, and long-term planning, laying the groundwork for future reductions. Together, these approaches reflect the dual mandate of the Campus Living Labs program: to reduce emissions today while building the capacity for deeper decarbonization over time.

7.1 Cohort III GHG Overview

Across Cohort III, institutions reported both quantified emissions reductions and qualitative impacts that influence emissions over time. These included reduced energy use, avoided landfill methane emissions, and changes in food, transportation, and land-use practices. While not all impacts are immediately measurable, each project contributed to a broader GHG reduction pathway grounded in operational change, learning, and engagement.

7.2 Direct Emissions Reductions

Several institutions achieved substantial, quantifiable emissions reductions through infrastructure and energy system improvements.

Suncrest College – LED Lighting Retrofit: Replacing **76** metal halide fixtures with LED lighting in the Trades and Technology Centre resulted in **35.6** tonnes of CO₂e avoided annually, reduced electricity use in a carbon-intensive grid, and improved lighting quality with lower maintenance requirements.

Red Deer Polytechnic – Demand-Based HVAC Control: Red Deer Polytechnic’s IIoT-enabled HVAC system is projected to achieve a **40%** reduction in electricity use, a **25%** reduction in natural gas consumption, and approximately **10.5** tonnes CO₂e reduced annually in the Alternative Energy Lab.

Confederation College – Organics and Circularity Infrastructure: The RE:Grow composting initiative reduced the amount of organic waste sent to landfill, helping to avoid methane emissions. While results are still emerging, the project provides a scalable model for future expansion.

7.3 Behaviour-Based and Long-Term Emissions Reductions

Several institutions focused on interventions that influence emissions over time by shifting behaviours, improving awareness, and redesigning campus systems.

Bow Valley College – Food Waste Prevention: Edible food waste per person was reduced by more than half, from **253** grams to **98** grams, lowering upstream emissions from food production, transport, and disposal.

Collège Montmorency and Cégep Saint-Jean-sur-Richelieu – Mobility Planning: Both institutions advanced campus mobility and landscape planning initiatives to reduce vehicle-related emissions, increase active transportation, and support long-term changes in commuting behaviour.

Humber Polytechnic and Red River College Polytechnic – Landscapes and Indigenous Knowledge: Projects centred on land stewardship and Indigenous-led interpretation strengthened sustainable land management practices, increased understanding of green building systems, and enhanced climate literacy, supporting future emissions reductions.

7.4 Cohort III GHG Impact Summary Table

Bow Valley College

Theme: Food

Intervention: Food waste prevention

Direct GHG Reductions: Not quantified

Indirect / Long-Term Impact: **61%** reduction in edible food waste per person, resulting in avoided upstream emissions.

Cégep Saint-Jean-sur-Richelieu

Theme: Land and Transportation

Intervention: Campus mobility and landscape redesign

Direct GHG Reductions: Not yet measurable

Indirect / Long-Term Impact: Reduced car dependency, increased active transportation, and biodiversity gains.

Coast Mountain College

Theme: Land and Buildings

Intervention: Place-based sustainability interventions

Direct GHG Reductions: Not quantified

Indirect / Long-Term Impact: Increased climate awareness and groundwork for future operational reductions.

Collège Boréal

Theme: Waste

Intervention: Food waste diversion and dehydration

Direct GHG Reductions: Not quantified

Indirect / Long-Term Impact: Reduced landfill waste and strengthened circular economy practices.

Collège Montmorency

Theme: Transportation

Intervention: Active mobility planning and incentives

Direct GHG Reductions: Not yet measurable

Indirect / Long-Term Impact: Long-term modal shift potential and reduced commuter emissions.

Confederation College

Theme: Waste

Intervention: Composting and circularity infrastructure

Direct GHG Reductions: Emerging

Indirect / Long-Term Impact: Avoided methane emissions and a scalable organics diversion model.

Durham College

Theme: Waste

Intervention: Composting and circularity infrastructure

Direct GHG Reductions: Emerging

Indirect / Long-Term Impact: Avoided methane emissions and a scalable organics diversion model.

Humber Polytechnic

Theme: Land

Intervention: Healthy Landscape Plan

Direct GHG Reductions: Not quantified

Indirect / Long-Term Impact: Nature-based solutions and long-term emissions reduction through resilience planning.

Nova Scotia Community College

Theme: Buildings and Land

Intervention: Interpretive sustainability signage

Direct GHG Reductions: Not applicable

Indirect / Long-Term Impact: Increased climate literacy and visibility of low-carbon building features.

Red Deer Polytechnic

Theme: Buildings

Intervention: HVAC optimization using IIoT systems

Direct GHG Reductions: **10.5** tonnes CO₂e per year

Indirect / Long-Term Impact: Scalable data-driven energy management across campus.

Red River College Polytechnic

Theme: Indigenous Knowledges and Practices

Intervention: Indigenous-led building interpretation

Direct GHG Reductions: Not applicable

Indirect / Long-Term Impact: Ethical space, climate literacy, and Indigenous knowledge integration.

Suncrest College

Theme: Buildings

Intervention: LED lighting retrofit

Direct GHG Reductions: **35.6** tonnes CO₂e per year

Indirect / Long-Term Impact: Reduced maintenance requirements and foundation for future retrofits.

7.5 Why These Reductions Matter

Climate action in colleges and institutes happens at two speeds:

- Immediate operational reductions, which cut emissions today
- Long-term cultural and infrastructural shifts, which unlock deeper reductions tomorrow
- Cohort III demonstrates the importance of both.

A lighting retrofit or HVAC redesign produces measurable results immediately. A food-waste campaign, a new mobility plan, a biodiversity-focused landscape, or Indigenous-led educational signage can shift the behaviours, relationships, and knowledge systems that enable future decarbonization.

Together, the cohort shows that when institutions combine technology, behaviour, pedagogy, and partnership, the climate impact extends far beyond a single project.

8. Lessons Learned Across Cohort III

Cohort III demonstrates that successful climate action on campus is not driven by a single intervention, but by a combination of relationships, experimentation, and institutional learning. While each participating institution approached its Campus Living Lab differently, a set of shared lessons emerged across the cohort. These insights speak not only to what worked, but to how Living Labs can continue to mature as a national model for applied climate action.

8.1 Project Implementation Lessons

Across the cohort, effective project implementation depended heavily on cross-department collaboration. Institutions that brought facilities, sustainability teams, IT, academic departments, and communications staff together early in the process reported smoother implementation and stronger outcomes. Red Deer Polytechnic’s HVAC optimization project, for example, highlighted the importance of early alignment between facilities and IT teams when deploying advanced data systems and sensors.

Flexibility also emerged as a critical success factor. Several institutions encountered unforeseen constraints related to procurement, contractor availability, or timelines. Suncrest College’s experience demonstrated the value of adaptive project management, as the institution pivoted from an initially planned heat-recovery intervention to a high-impact lighting retrofit that still delivered significant GHG reductions.

Student involvement strengthened implementation across nearly all projects. Whether through capstone courses, applied research roles, surveys, or hands-on activities, students contributed meaningfully to data collection, design, and evaluation. Institutions noted that embedding students early not only accelerated progress but also reinforced the educational value of the Living Labs model.

8.2 Engagement and Awareness Lessons

Cohort III reinforced that communication is central to climate action. Projects that paired technical interventions with clear, accessible communications were more successful in building awareness and sustaining momentum. Institutions such as Bow Valley College reframed food waste as a climate issue through staff workshops, signage, and campaigns, helping participants understand how everyday choices connect to emissions.

Effective engagement strategies were multimodal. Institutions combined surveys, social media, signage, workshops, tours, and experiential learning to reach diverse campus audiences. NSCC and Red River College Polytechnic demonstrated how interpretive signage can make sustainability features visible, transforming buildings and landscapes into teaching tools.

A consistent insight across the cohort was that engagement works best when framed as an invitation rather than instruction. Students and staff responded most positively when they were invited to co-create solutions, test ideas, and share feedback, rather than simply being informed of changes.

8.3 Systems-Level Lessons

Many Cohort III projects revealed that climate action is fundamentally a systems challenge. Interventions in areas such as transportation, land management, and energy often require planning horizons that extend beyond a single funding cycle. Projects at Collège Montmorency and Cégep Saint-Jean-sur-Richelieu demonstrated that mobility and landscape redesign efforts lay the groundwork for long-term emissions reductions, even when immediate impacts are not fully measurable.

Designing projects with replicability and scalability in mind strengthened their long-term value. Frameworks such as data-driven HVAC control models, catering waste-reduction protocols, and interpretive signage templates can be adapted by other institutions, thereby amplifying the impact of Cohort III beyond participating campuses.

Several institutions emphasized the importance of integrating Indigenous knowledges and ethical space into climate action. Red River College Polytechnic’s Indigenous-led signage initiative and Humber Polytechnic’s two-eyed seeing approach highlighted how climate solutions are strengthened when guided by Indigenous leadership, relational accountability, and place-based perspectives.

8.4 Barriers to Implementation Across All Cohorts

While project designs varied widely, several barriers emerged consistently across all three cohorts of the Campus Living Labs program. These included procurement timelines, limited staff capacity, challenges accessing reliable data, and the complexity of coordinating across departments with differing priorities and processes.

Institutions also noted that meaningful engagement—particularly with students, Indigenous communities, and external partners—requires time and relationship-building that are not always aligned with academic calendars or operational constraints. These shared barriers underscore that successful Living Labs depend as much on navigating institutional systems as on technical innovation.

8.4.1 Barriers Emerging in Cohort III

Cohort III surfaced several challenges that reflect the increasing sophistication of Living Lab projects. These included integrating advanced technologies, such as IIoT systems, which require coordination among facilities, IT, cybersecurity, and academic teams.

Institutions also identified the challenge of balancing technical implementation with deep engagement, as many projects required both complex operational changes and extensive communications or participatory processes. In addition, projects involving land-use transformation or Indigenous-led design emphasized the need for longer timelines, reciprocal relationships, and ongoing commitment beyond the one-year funding period.

These emerging barriers signal the maturation of the Campus Living Labs program and point to opportunities for future cohorts to receive targeted support, shared tools, and sector-wide learning resources.

9. Scaling the Campus Living Labs Model

Cohort III reinforces a truth that has become clearer with every iteration of the Campus Living Labs program. Climate action grows when institutions learn from one another, build on proven models, and adapt them to their local contexts. The projects in this cohort show how small, targeted interventions can create ripples across an institution by shaping infrastructure decisions, influencing policies, inspiring new course content, and changing the everyday behaviours of thousands of learners and staff.

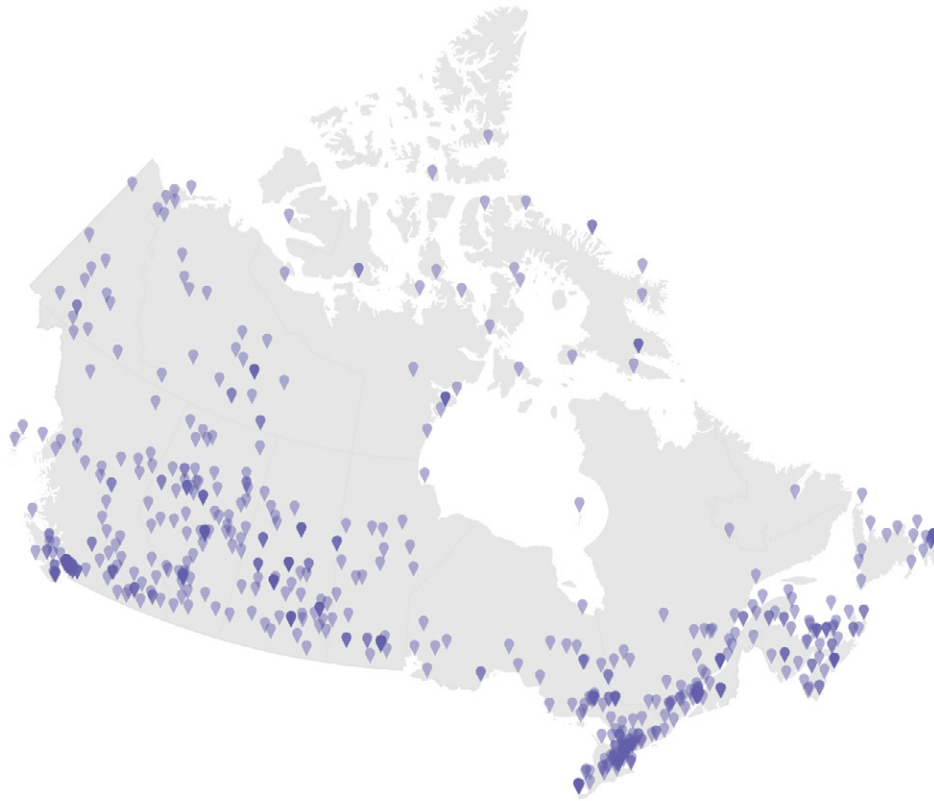
Scaling the Living Labs model begins with a simple premise: start where you are, with what you have, and make the work visible. When a lighting retrofit is paired with a tour, when a composting pilot becomes a teaching tool, when a mobility plan is shaped through community workshops, or when Indigenous Knowledge Keepers guide the design of interpretive signage, the impact extends far beyond a single project. Cohort III institutions demonstrated that scaling is not only about replicating interventions. It is about cultivating the conditions that allow climate innovation to thrive.

Across the cohort, three clear pathways to scaling emerged. First, scaling across campus operations. Institutions such as Red Deer Polytechnic and Suncrest College developed frameworks, technologies, and relationships that can be applied to additional buildings, departments, or campuses. Second, scaling through culture and curriculum. Projects that engaged students deeply through research, hands-on work, or collaborative design created new opportunities for academic programs to integrate climate action into coursework and applied learning. Third, scaling through partnership. Collaborations with Indigenous communities, municipal partners, food service providers, conservation organizations, and industry showed that living labs can extend well beyond campus boundaries.

Looking ahead, the Campus Living Labs model can become one of the most powerful climate tools in Canada's post-secondary sector. Its emphasis on hands-on learning, applied research, operational transformation, and climate literacy positions it to drive both immediate GHG reductions and the long-term mindset shift required for a low-carbon future. Cohort III institutions are already planning next steps, including expanding food-waste interventions, deepening mobility planning, testing new energy systems, advancing biodiversity initiatives, and growing Indigenous-led approaches to campus design.

As CICan continues to support the national Community of Practice, future cohorts will benefit from the resources, templates, algorithms, communication strategies, and case studies developed in Cohort III. The learning is cumulative – each cohort strengthens the foundation for the next.

The path forward is clear: when campuses serve as living laboratories for climate solutions, every student, staff member, and partner becomes part of the movement toward a more sustainable future. The model scales not only through infrastructure and policy but also through people – their learning, actions, and commitment to shaping a more resilient Canada.



Our Members Across Canada

Canada's colleges and institutes work with industry and social sectors to train learners of all ages and backgrounds at campuses serving urban, rural, northern and remote communities across the country.

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