

RESEARCH & INNOVATION

# Impact Report

2024 - 2025

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# Land acknowledgement

We are committed to conducting research that honours the knowledge, rights, and contributions of Indigenous Peoples across the territories where we live, learn, and work.

**At Conestoga Research, Innovation & Entrepreneurship, we recognize that our work takes place across multiple lands and territories stewarded by Indigenous Peoples since time immemorial. These lands are home to diverse nations, histories, and ways of knowing.**

As we engage in research and innovation, we are mindful of the deep relationships Indigenous communities hold with the land and the knowledge systems they carry. We strive to honour these contributions by approaching our work with respect, humility, and a commitment to learning in partnership with the communities we serve.

## A message from Dr. Michelle Chrétien

Vice president,  
Research & Innovation

**Dr. Chrétien reflects on a year of growth, collaboration, and impact across Conestoga's research community.**

I'm proud to introduce this year's Research & Innovation Impact Report, highlighting the incredible work happening across Conestoga's research community. From applied projects and entrepreneurship to new partnerships and student-driven innovation, this report captures how research continues to grow and evolve across the college.

Over the past year, we've seen research make a meaningful difference in the communities in which we work and operate in. We've helped businesses innovate, supported community organizations, and tackled practical challenges with creativity and care. These collaborations connect faculty expertise and student talent with the needs of our communities, creating solutions that have lasting impact beyond the classroom or lab.

Thank you to everyone who contributed to this year's success. Your work is helping shape a research culture grounded in partnership, driven by purpose, and making a positive difference where it matters most.



## SECTION ONE

# What guides our research

Research at Conestoga is guided by three core pillars to ensure that our work creates real-world learning opportunities for students, drives social and economic impact in our communities, and empowers faculty to collaborate and grow through industry and community engagement.



**Provide students with meaningful experiences solving real-world innovation challenges.**

**Create a meaningful difference in the communities we serve by fostering social innovation and generating economic impact.**

**Provide faculty with opportunities to engage with industry and the community, allowing them to enhance their skills.**

## SECTION TWO

# Research Ethics Board

Behind every research project involving people is a commitment to ethics. Conestoga's Research Ethics Board (REB) ensures that commitment is upheld with care, integrity, and expertise.



Conestoga's REB is a volunteer committee composed of experienced researchers and subject matter experts who review all research involving human participants

Guided by the principles of the Tri-Council Policy Statement (TCPS 2): Ethical Conduct for Research Involving Humans (2022), the REB plays a vital role in ensuring research at the college upholds the values of respect for persons, concern for welfare, and justice.

By applying these core principles, the REB supports both applied research and classroom-based research activities across the college, to foster an ethical and respectful research environment.

## Members

**Erin Patterson, PhD**  
School of Health & Life Sciences  
Chair, Research Ethics Board

**Steve Hendrikse, PhD**  
Professor, School of Applied Computer  
Science & Information Technology  
Vice chair, Research Ethics Board

**Leanne Gosse, PhD**  
Professor, School of Community Services

**Kelsy Gill, JD, Law**  
Instructor, School of Business

**Caitlin Wood, MA**  
Early Childhood Studies Professor, School  
of Community Services

**Jennifer White, PhD**  
Professor, School of Business

**Namrata Dutta, M.Sc.**  
Research data and ethics board  
coordinator, Research Ethics Board

## KEY HIGHLIGHTS

**61** applications  
processed

**9** applications by  
student researchers

**44** applications by  
staff, faculty

**8** applications by  
external researchers

## SECTION THREE

# Our impact

These numbers reflect the growing reach and impact of research at Conestoga through funding, partnerships, and meaningful opportunities for students and faculty.

## Fiscal Year 2025

24

23

22

21

<b>Grant funding received</b>	<b>\$6,403,946.23</b>	\$5,000,881.00	\$2,652,931.00	\$4,206,428.00	\$4,891,170.72
<b>Partner in-kind</b>	<b>\$920,638.66</b>	\$821,891.29	\$590,847.19	\$1,345,000.00	\$1,864,638.94
<b>Partner cash</b>	<b>\$612,709.00</b>	\$277,086.33	\$534,279.00	\$346,313.00	\$326,753.70
<b>Active projects</b>	<b>171</b>	140	99	63	58
<b>Partners engaged</b>	<b>152</b>	116	83	72	69
<b>Students hired</b>	<b>248</b>	206	206	98	92
<b>Research team members</b>	<b>159</b>	67	41	27	28
<b>Research Infosource ranking</b>	<b>TBD</b>	19	17	15	16

## SECTION FOUR

# Powering discovery: Featured research funding

From language revitalization to advanced manufacturing, these investments accelerate big ideas and expand our impact across communities and industries.



## Social Sciences and Humanities Research Council – Reconciliation Network in Response to Call to Action 65

Conestoga, in partnership with the Mississaugas of the Credit First Nation, was awarded **\$1 million** from the National Centre for Truth and Reconciliation and the Social Sciences and Humanities Research Council for an Indigenous-led research project focused on revitalizing the endangered Indigenous language of Anishinaabemowin. Conestoga was the only college in Canada to receive funding through this initiative, making it the largest Indigenous research grant ever awarded to the college.



Social Sciences and Humanities Research Council of Canada

Conseil de recherches en sciences humaines du Canada

## Ontario Research Fund – College Fund: Ontario First Award

Conestoga's SMART Centre received **\$234,408** from the Ontario Research Fund – College Fund to support robotic welding and metallurgical analysis. The funding expands the SMART Centre's capacity in additive manufacturing, large-scale 3D printing, CAD-CAM, non-destructive evaluation, metallurgy, and Industry 4.0 technologies.





## SECTION FIVE

# 2024 Research & Scholarship Symposium

The 2024 Research & Scholarship Symposium showcased the depth and diversity of research at Conestoga. From AI ethics to social innovation, the event brought people together to spark conversation and celebrate curiosity.



## Celebrating research and innovation at the 2024 Research & Scholarship Symposium

**More than 150 employees from across Conestoga gathered at the Conestoga Skilled Trades Campus in October for the second annual Research & Scholarship Symposium, hosted by Research, Innovation & Entrepreneurship.**

The event highlighted faculty and staff research through keynote presentations, project spotlights, poster sessions, and panel discussions.

Georgian College researchers Nicole Norris and Lisa Haripersad delivered the first keynote, sharing insights from the Future of Belonging Project, a collaboration between the YMCA of Simcoe/Muskoka and Georgian's Social Innovation team.

The second keynote, presented by Shabnam Haghzare from the University of Toronto, explored the ethics and biases of artificial intelligence in post-secondary education.

The symposium also featured CNERG presentations, showcasing faculty-led projects funded through Conestoga's New and Emerging Researcher Grant—an internal grant program supporting small and medium-scale applied research projects across the college.



## KEY HIGHLIGHTS

**159**  
faculty engaged in research

**10**  
academic schools engaged in research



## SECTION SIX

# Conestoga New and Emerging Research Grant

The Conestoga New and Emerging Research Grant (CNERG) funds small-scale research projects at Conestoga.

### The purpose of CNERG is to:

Support small-scale research projects and research-related activities

Support the growth of new and emerging areas of research in a variety of disciplines

Support the development of research capacity amongst new and emerging scholars

Enhance areas that are of strategic importance to Conestoga



## FALL PROJECTS

### **Optimal building retrofits toward net-zero energy levels in Canadian climates**

*Mojtaba Ahmadi-Baloutaki, School of Engineering & Technology*

### **How do multinational corporations across different countries incorporate sustainability in their communication strategies, and what variations or consistencies emerge in their approaches to convey a commitment to sustainability?**

*Hajar Alviri, School of Business*

### **Analysis and prediction of land use / land cover changes with the CA-Markov model: a case study of Guelph**

*Mojtaba Naeimi, School of Workforce Development*

### **Clinical site assessment tool supporting the quality of nursing student placements**

*Shawna Lebouthillier, School of Health & Life Sciences*

**Charting mastery: Developing a transformative tool for evaluating nursing student clinical learning outcomes**

*Andrea Miller and Robyn Plunkett, School of Health & Life Sciences*

**Pedestrian data collection at Waterloo campus**

*Adam Holland, School of Engineering & Technology*

**Breaking the invisible chains; human trafficking of international students in Waterloo Region**

*Estatira Shirkhodaee, School of Business*

**Exploring greywater treatment solutions for Ontario: developing adaptable models for diverse applications in buildings**

*Hamid Reza Kariminiaae Hamedaani, School of Engineering & Technology*

**Exploring the impact of international, peer-led study groups on nursing student leadership skills**

*Sara Connelly, Centre for Health Care Research & Innovation*

**Economic inflation as a public health hazard: A data-driven analysis of mental health impacts in the Kitchener-Waterloo-Cambridge region**

*Rohini Arora and Surajit Brojabis, School of Applied Computer Science & Information Technology*

**Understanding job retention challenges faced by immigrants in Canada**

*Ayo Owodunni, School of Business*

## WINTER PROJECTS

**Healthy eating initiatives in post-secondary environments**

*Jennifer Shamblaw, School of Health & Life Sciences, Nicole Detlor, Conestoga Food Research & Innovation Lab, Brittany Lauton, campus manager*

**Race based medicine in nursing: A study of Canadian licensing exam materials**

*Amber Gillespie and Erin Patterson, School of Health & Life Sciences*

**Exploring college food security strategies through a food safety and waste reduction lens**

*Ken Diplock, School of Health & Life Sciences and Nicole Detlor, Conestoga Food Research & Innovation Lab*

**Assessing the effectiveness of green marketing on consumer purchase decision in Canada**

*Geovanni Tapia and Shriram Kadia, School of Business*

**Sustainable procurement supplier ESG evaluation and assessment**

*Michael Quartermain and Marlon Nangle, School of Business and Perian Tebbutt, executive director of Procurement & Contract Services*





## The purpose of CNERG+ is to:

- Support medium to large-scale research activities in areas of research as defined by the tri-councils
- Support projects that engage a new partnership with an industry or community organization, or grow a new and emerging research area
- Support the development of research capacity amongst researchers at any stage
- Enhance areas that are of strategic importance to Conestoga

## SECTION SEVEN

# Conestoga New and Emerging Research Grant+

The Conestoga New and Emerging Research Grant+ (CNERG+) funds medium to large-scale research projects at Conestoga.

## FALL PROJECTS

### **Food stories: A narrative-based approach to analyzing international students, food, and community**

*Suzanne Rintoul and Brooke Pratt, School of Interdisciplinary Studies*

### **Exploration of life goals and successful aging among older adults**

*Linda Sheiban Taucar and Catherine Tong, Centre for Health Care Research & Innovation*

### **Application of wire arc additive manufacturing at Tigercat Industries**

*Tam Nguyen and Jim Galloway, School of Engineering & Technology*

### **Unburdening primary healthcare: An open-source AI clinician partner platform**

*Michael Yingbull, School of Applied Computer Science & Information Technology*

## WINTER PROJECTS

### **Solar panel recycling unit** **Colleen McCann, SMART Centre,**

*John Tielemans, School of Engineering & Technology*

### **AI-matchmaking for facilitating investment attraction**

*Dushyant Puri, SMART Centre*

### **Cellphilming and photovoice: Muslim youth, gender, and mental health in Toronto**

*Mustahid Husain, School of Business*

### **Cargo carousel system**

*Colleen McCann and Dushyant Puri, SMART Centre, Cris Pop, School of Engineering & Technology*



## SECTION EIGHT

# Research students at Conestoga

Students play an essential role in applied research at Conestoga, contributing valuable skills and fresh perspectives to real-world projects. These experiences not only enhance project outcomes for industry and community partners but also prepare students for meaningful careers in the workforce of tomorrow.

## KEY HIGHLIGHT

**248**  
students hired

**“During my time at Conestoga, I had the opportunity to work on several applied research projects as a student researcher.**

These included analyzing X (formerly known as Twitter) data to explore who publicly complains about AMBER alerts, designing surveys, developing grant applications, and investigating interest rate differences for real estate investment trusts.

The experience gave me a well-rounded skill set that's essential in my current role, where I support policy research and government relations for a not-for-profit organization.

Through this work, I refined my ability to conduct detailed research, manage projects, and work independently—skills that are especially important in today's increasingly virtual work environments.

I also gained experience in grant writing, which now plays a key part in my job as I identify funding opportunities to support advocacy and programming. My time at Conestoga gave me both the confidence and practical foundation to contribute meaningfully to the business community.”

**Jason Kalbfeisch, Public Service, 2021**  
Advocacy and policy coordinator,  
Guelph Chamber of Commerce

**“My experience as a student health care project assistant at the Centre for Health Care Research & Innovation (CHCRI) played a major role in preparing me for my current role as a physiotherapy assistant in a long-term care home.**

Working with the CHCRI team, I gained hands-on experience in evidence-based practice, interdisciplinary collaboration, and communication—skills I now use every day.

As part of my role, I conducted literature reviews that helped me develop a research-informed approach to physiotherapy. This deepened my understanding of rehabilitation strategies and improved the care I provide.

Collaborating with nurses, activity aides, and personal support workers strengthened my teamwork skills, which are essential in my current position.

Resources like CRADLE+ also helped me better understand how to support individuals living with dementia —knowledge I draw on regularly. CHCRI provided a supportive, welcoming environment that truly prepared me for real-world health care practice.”

**Aayush Bahuguna, Health Care Administration Management, 2024**  
Physiotherapy assistant,  
Back in Motion Rehab

## SECTION NINE

# Featured research projects

Real problems with creative solutions. These featured projects show what research at Conestoga is all about.



## CFRIL collaboration improves poultry welfare tools

### CONESTOGA FOOD RESEARCH & INNOVATION LAB

Focused on advancing animal welfare, Cargill Limited and Cascades partnered with the Conestoga Food Research & Innovation Lab (CFRIL) to create enriched environments for broiler chickens.

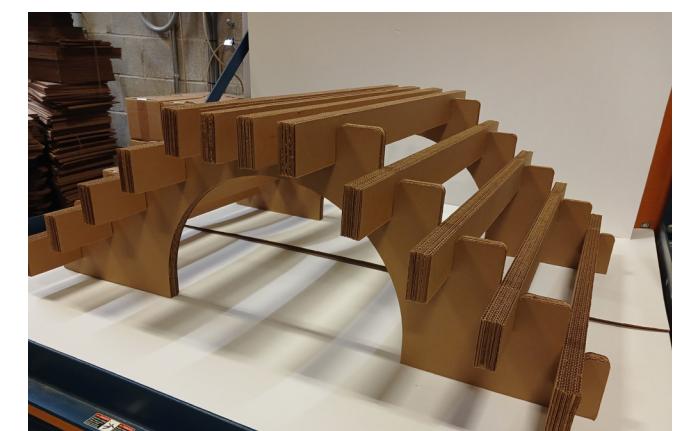
The focus of the enrichment is to encourage the natural behaviours of chickens in the wild, such as roosting, sheltering, foraging, scratching, pecking, dustbathing, play and interactive social behaviours. Recognizing the importance of these behaviours for poultry welfare and farming practices, the research team explored the use of recyclable and compostable materials to build objects that focused on sheltering and perching behaviours.

Due to the complexity and creativity required for this project, Jeff Mills, sales manager at Cascades and part-time professor in the Packaging Engineering Technician program at Conestoga, knew that bringing this challenge to the CFRIL team would bring a unique perspective from both the researchers and students.

The project also engaged packaging faculty Steve Gardner as a student mentor through the design process, and was supported by CFRIL researcher Tracy Butt.

The project employed five student researchers from the Packaging Engineering Technician program, all of whom have since graduated and are working in packaging technology roles. "The students came up with really imaginative designs," Mills said.

Since the enrichment objects were designed to encourage chickens to interact with them naturally, the chickens' behaviour was the key



measure of success. "What we ended up seeing was the chickens enjoyed using the objects, which meant the object was attractive to them," said Cargill's veterinarian, Dr. Taylor. "Even when a human approached them, they didn't want to move."

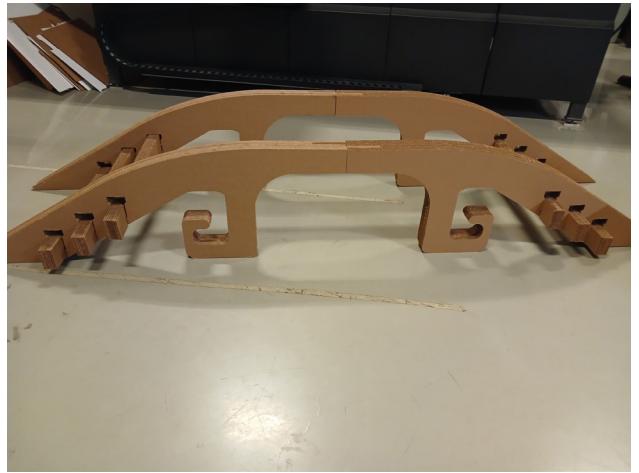
The team used these observations as feedback for the designs, refining the objects the chickens preferred based on input from Dr. Taylor and the farmers while redesigning or discarding those the chickens ignored.

Cargill's General Manager of Agriculture, Dave Johnson, credits the students' ability to be adaptable during the project to produce effective designs for the broilers.

"We could see the students taking Dr. Taylor's feedback and applying it in real-time to the designs," he said. "At one point, they combined two designs into one that featured elements of both."

But it wasn't just about designing new elements for the broilers; disposal considerations were equally important.

Currently, chickens spend around six to seven weeks in their barn environment. Once the chickens are removed, the entire barn is thoroughly cleaned out before the next group arrives.



The original idea to use corrugated material to make the enrichment objects came from a farmer during a meeting with Cargill. Biosecurity is a critical consideration for anything entering the barn due to the threat of diseases such as avian flu, which can have devastating impacts on a flock.

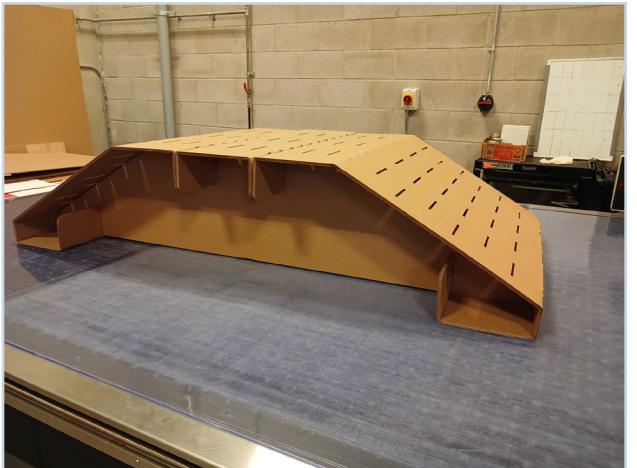
Recyclable, compostable materials reduce biosecurity risks by eliminating the need for cleaning and sanitizing, unlike steel or plastic.

"Anything that has to be cleaned between each flock increases risk," said Dr. Taylor. "Having a single-use object adds that extra layer of biosecurity."

By using compostable and recyclable corrugated materials for the enrichment objects, the research team had to find the perfect balance between durability and the ability of the shelters to break down naturally after use.

"They really needed to last exactly six or seven weeks," Butt said. "We had some structures that didn't make it past five weeks in the barn and some that didn't degrade in the compost pile. It really was a balancing act in the design."

The safety and well-being of the chickens were carefully considered during the development of the shelter prototypes. Special attention was given to ensuring the structures could support the chickens' increasing weight and remain intact throughout their time in the barn.



"Adding this new element to the chicken's habitat that isn't normally there could pose significant risks to the chickens, so every object is evaluated to make sure it is safe and suitable," said Dr. Taylor.

The students and researchers developed a pre-barn test where objects were tested to ensure they could withstand the needs of the broilers as they grew.

While the designs and outcomes are still being evaluated by Cargill and their customer, the project was recently presented by Cargill at an international poultry meeting, where Dr. Taylor says the approach and results were well-received by the audience.

*We acknowledge the support of the Natural Sciences and Engineering Research Council of Canada (NSERC).*





## L<sup>s</sup>HALLMAN *foundation*

### Growing together: Inviting Indigenous ways of knowing and being into the early years

**HEATHER MACDONALD ·Δ⁹b⁹x**  
SWEETGRASS WOMAN

Generously funded by the Lyle S. Hallman Foundation, this project seeks to integrate Indigenous knowledge systems into early childhood education through the creation of teaching gardens.

These gardens serve as spaces where children, families, and early years educators can engage with Indigenous teachings on land stewardship, language, culture and the spiritual significance of plants.

The initiative aligns with the principles of How Does Learning Happen? Ontario's Pedagogy for the Early Years by promoting a relationship-based, play-centered approach to learning. It aims to build confidence and capacity among early childhood educators to respectfully integrate Indigenous ways of knowing into their programming, while simultaneously enhancing the learning environment for children by connecting them to Mother Earth.



Central to the project is the collaboration with Indigenous Elders and Knowledge Keepers, who guide the process of garden creation and offer invaluable insights into the cultivation and ceremonial importance of traditional plants.

The impact of the project will be felt across the Waterloo Region, benefiting not only children but also educators and families. Through active participation in gardening and storytelling, children will develop a deeper understanding of Indigenous history, culture and language, fostering a sense of respect and responsibility for the land.

For early years educators, the project provides an opportunity to engage in meaningful professional development, integrating Indigenous knowledge into their curricula and practices in a thoughtful, culturally responsive manner.

The college's ongoing commitment to reconciliation, equity and the revitalization of Indigenous knowledge ensures that this project will have a lasting impact on both the local community and the broader early childhood education sector.



## SECTION TEN

# Innovation across our research centres and institutes

Each of Conestoga's research centres and institutes bring unique strengths to the challenges they tackle. These highlights reflect the breadth of knowledge, partnerships, and innovation happening across the Conestoga research ecosystem.

# Inside the Canadian Institute for Safety, Wellness & Performance

The Canadian Institute for Safety, Wellness & Performance (CISWP) supports the development of productive, sustainable workplaces through collaborative, transdisciplinary research. By generating knowledge and creating evidence-informed tools and services, the institute helps improve safety, wellness and performance across Canada's workforce.

## Dr. Amin Yazdani, CSP

*Director, Canadian Institute for Safety, Wellness & Performance*

Dr. Amin Yazdani, CSP, is the executive director of the Canadian Institute for Safety, Wellness & Performance. Dr. Yazdani's research focuses on developing innovative solutions to prevent musculoskeletal disorders and work disabilities. He employs field-to-lab-to-field research methodology to advance work and health research, creating practical solutions to enhance workplace safety, performance and productivity.

He has led the development of several Canadian standards and guidelines aimed at making workplaces safer and more inclusive. Dr. Yazdani chairs multiple Canadian Standard Technical Development committees. His significant contributions have earned him numerous awards and recognitions, including the prestigious Young Leader Award from the Standards Council of Canada.

## CATALYST FOR IMPACT

CISWP was awarded \$834,550 from the Canadian Foundation for Innovation and the Ontario Research Fund to advance research focused on improving health and safety in the skilled trades.

This investment will support the development of innovative solutions to address workplace hazards and injuries, contributing to a safer, more sustainable skilled trades workforce.

The funding supports CISWP's newest initiative, the Centre for Ontario's Network of Skilled Trade Researchers, Unions, Contractors and Tradespeople (CONSTRUCT).

CONSTRUCT facilitates collaboration between a wide range of stakeholders in the skilled trades to assess challenges and opportunities related to job conditions, workload and equipment, driving improvements in safety and performance across the industry.



**Ontario** 

## RESEARCH WITH REACH

### Supporting safe integration for internationally trained tradespeople

CISWP, in collaboration with Conestoga's Custom Training Solutions and JVS Toronto, developed a research-informed health and safety training course tailored for internationally trained skilled trades professionals. Designed to support successful integration into Ontario's workforce, the course addresses essential safety standards while also considering the language and cultural needs of diverse learners.

Both online and in-person delivery methods were designed to improve accessibility and retention. By combining applied research with inclusive training design, this initiative helped ensure that internationally trained professionals are prepared to contribute safely and confidently in Ontario's skilled trades sector.

## INNOVATION IN ACTION

### Supporting paramedic health through fatigue risk management

CISWP partnered with paramedic services across Canada to improve the health, safety and performance of the paramedic workforce. A central focus is Canada's first fatigue risk management standard for first responders (CSA Z1615:22), which provides a framework for reducing fatigue-related risks.

To support implementation, CISWP conducted pilot studies and launched a one-year cohort study to assess how workload, shift arrangements and personal factors affect fatigue. The findings will inform a Fatigue Management System Dashboard (FMSD) to forecast risk and guide shift design. This research will support evidence-based decisions that improve safety, productivity, and recovery—strengthening both paramedic well-being and service delivery.



**MEASURE  
OF IMPACT**  
**32**  
partners engaged

# Inside the Centre for Commercialization

The Centre for Commercialization (C4C) supports entrepreneurs and small- to medium-sized enterprises in unlocking the full potential of their intellectual property (IP). Through a full suite of services, C4C helps businesses strengthen their IP strategies and maximize commercialization outcomes.



## Dr. Alla Darwish

*Director, Centre for Commercialization*

Dr. Alla Darwish is the director of Conestoga's Centre for Commercialization. He holds a PhD in chemistry from the University of Waterloo and an MBA from the Lazaridis School of Business and Economics. With experience in scaling operations, licensing and acquisitions, he has contributed to numerous successful startups and brings deep expertise in IP strategy, due diligence and market research.

He has 12 patents and a strong track record in commercialization and fundraising, including series A and B rounds and IPOs. Before joining Conestoga, he advanced IP and commercialization processes at Ontario Tech University and played a key role in negotiating the largest patent acquisition of the university's history.





## RESEARCH WITH REACH

**"C4C has been an incredible part of our Beck's Broth support system, and we would not be in the IP application process without them!"**

Not only did they diligently sit down with us and help us devise a strategy, but they also assisted us with the IP filing process. Great people to work with."

**Domenique Mastronardi,  
COO, Beck's Broth**

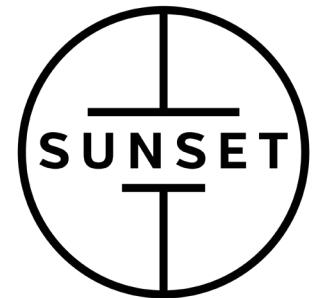


## INNOVATION IN ACTION

Supporting IP strategy and innovation with SUNSET renewable

SUNSET Renewable created an early prototype that deconstructs solar panels in a custom 20-foot shipping container. Prior to working with the Centre for Commercialization, SUNSET Renewable had no guidance on IP, but knew creating an IP strategy is crucial for business success.

C4C worked with SUNSET Renewable to understand the scope of their business and innovation potential and provided guidance and education on the IP process. C4C performed a whitepaper analysis on solar panel deconstruction technologies and provided them with a de-risked blueprint for a prototype. SUNSET Renewable submitted a U.S. provisional patent application for their innovative solar panel deconstruction technology.



## MEASURE OF IMPACT

**116**  
companies supported

# Inside the Centre for Health Care Research & Innovation

The Centre for Health Care Research & Innovation (CHCRI) conducts applied research that strengthens the health-care system and improves health outcomes. Drawing on clinical, industry and academic expertise, CHCRI collaborates with partners, faculty and students across the sector.



## Linda Sheiban Taucar, RN, M.Sc.

*Director, Centre for Health Care Research & Innovation*

Linda Sheiban Taucar, RN, M.Sc., is the director of the Centre for Health Care Research & Innovation at Conestoga. A registered nurse with over a decade at the college, she previously served as associate director of Health Sciences Research and Schlegel Associate Research Chair at the Canadian Institute for Seniors Care.

Linda holds degrees in health studies, gerontology, and nursing, and brings a unique blend of clinical and research expertise to her role. Her research interests include seniors care, digital health, and health-care provider transition to practice. She has taught in Conestoga's nursing and personal support worker programs and co-authored a leading Canadian gerontological nursing textbook.



## CATALYST FOR IMPACT

The Centre for Health Care Research & Innovation launched a research program examining the training and transition to practice experiences of internationally educated nurses (IENs).

In partnership with the School of Health & Life Sciences and local health-care organizations, the team conducted 47 interviews with IENs, faculty and support staff.

Findings were presented at the Metropolis Conference, attended by policy-makers and the federal Minister of Immigration, with further dissemination planned through the Registered Nurses Association of Ontario.

A Canadian Institutes of Health Research Planning & Dissemination grant will support the next phase of this work, which aims to inform workforce development and integration strategies.

## INNOVATION IN ACTION

### Building Intergenerational Connections between Seniors and Students.

The Centre for Health Care Research & Innovation received funding from the Government of Canada's New Horizons for Seniors Program to deliver intergenerational programming that fostered meaningful connections between students and seniors. The initiative aimed to build a sense of belonging, reduce stigma around aging, and provide mentorship opportunities through shared learning and creative expression.

Three program cycles were delivered over the past year, each running for eight weeks with weekly in-person or virtual sessions. Participants engaged in dialogue and art-based activities to encourage empathy, understanding and community building. In total, 43 students and 24 seniors participated. Each cycle concluded with a celebration event and art showcase to highlight the connections built through the program.

Funded by the  
Government  
of Canada



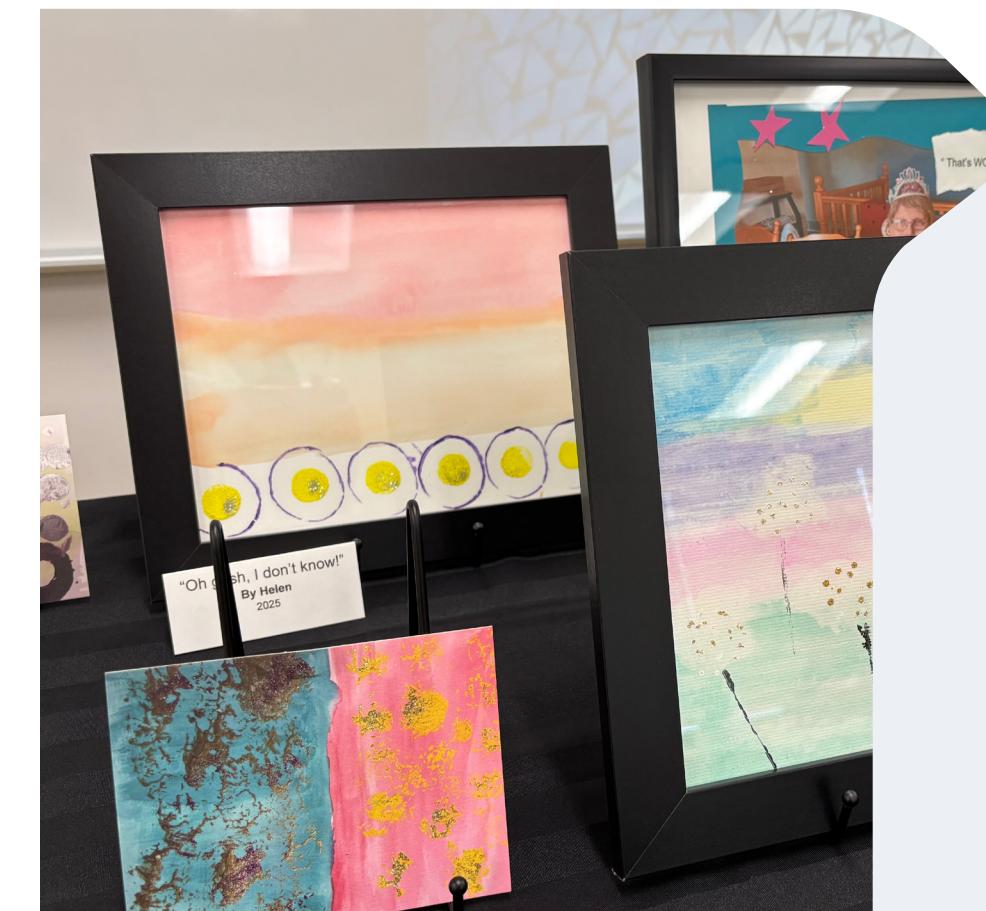

## RESEARCH WITH REACH



"Our collaborative partnership with the Centre for Health Care Research & Innovation has been integral to developing evidence-informed, interactive and accessible online education on continence care and making it available to care partners and learners across North America.

Together, our strengths in continence care and education empower learners and care partners to apply best practices and strategies that enhance dignified, holistic care and promote effective teamwork and resource use. Through this education and partnership, we're able to better advocate for optimal health and hygiene in continence care, challenge stigma, and contribute to a more inclusive, innovative, and sustainable care environment."

**Katharine Burt,**  
Clinical key account manager, Essity



## MEASURE OF IMPACT

**10,162**  
registrations for CHCRI's  
Canadian Remote  
Access for Dementia  
Learning Experiences

# Inside the Conestoga Entrepreneurship Collective

The Conestoga Entrepreneurship Collective (CEC) empowers members of the college community to explore their entrepreneurship potential and participate in the innovation economy. Programming supports new venture founders, freelancers and high-tech B2B sales professionals.



## Rose Mastnak, MBA

*Director, Conestoga Entrepreneurship Collective*

Rose Mastnak is the director and founder of the CEC, where she leads strategy and a growing team dedicated to expanding entrepreneurship opportunities for students and alumni. Since joining Conestoga in 2014, Rose has taught marketing, advertising and entrepreneurship, and previously worked in senior marketing roles at international advertising agencies.

An entrepreneur herself, she has founded three ventures and is passionate about increasing access to entrepreneurship training in underserved communities. Rose holds a BA from York University, an MBA from Simon Fraser University, and a graduate certificate in entrepreneurship and innovation from Stanford University.



## CATALYST FOR IMPACT

Conestoga has joined the Experience Ventures network, powered by the Hunter Hub for Entrepreneurial Thinking at the University of Calgary.

This program enables college and university students to make an impact alongside real-world innovators through entrepreneurial thinking placements. The CEC will carry out this initiative within the college, focusing on enhancing innovative work-integrated learning (I-WIL) opportunities. This program aims to foster entrepreneurial thinking through project-based WIL experiences, helping students develop transferable skills that are in high demand. As of March 31, 2025, CEC has implemented 99 I-WIL experience placements, providing valuable hands-on learning opportunities for students.

**Funded by:**  
 Federal Economic Development  
 Agency for Southern Ontario

**Financé par :**  
 Agence fédérale de développement  
 économique pour le Sud de l'Ontario

## RESEARCH WITH REACH

In collaboration with Communitech, the Kitchener-based regional innovation centre, the CEC will receive up to \$1.75 million in funding through the Scale-Up Platform—an initiative supported by the Government of Canada through the Federal Economic Development Agency for Southern Ontario.

This partnership will enable the CEC to incubate 300 tech ventures over the next four years, delivering critical support to entrepreneurs as they grow and scale their businesses. Through the program, participants will benefit from capital, talent, markets and mentorship, positioning them for long-term success and contributing to Waterloo region's innovation ecosystem.

*This project is funded by the Government of Canada through the Federal Economic Development Agency for Southern Ontario (FedDev Ontario).*

## MEASURE OF IMPACT

**Over \$2.3 million**  
 in funding secured to support entrepreneurship programming in the CEC

# Inside the Conestoga Food Research & Innovation Lab

The Conestoga Food Research & Innovation Lab (CFRIL) supports the food, packaging and culinary sectors through applied research and technical expertise. Leveraging advanced facilities, CFRIL helps industry partners develop and commercialize products with services such as formula development, shelf-life testing, and pilot plant scale-up.



**Nicole Detlor, M.Sc., P.Eng.**  
*Director, Conestoga Food Research & Innovation Lab*

Nicole Detlor, M.Sc., P.Eng., is the director of the Conestoga Food Research & Innovation Lab, where she connects industry partners with the lab's technical expertise and guides its strategic direction. She holds bachelor's and master's degrees in engineering from the University of Guelph, with a focus on food processing and control systems, and has been a registered professional engineer since 2006.

Nicole brings over 20 years of experience in innovation, product development, quality, and regulatory in the food industry. Her previous roles include leading product lifecycle implementation at Dawn Foods and contributing to major food safety reformulation efforts at Maple Leaf Consumer Foods. She has also commercialized award-winning products and worked with technologies such as high-pressure and radio frequency processing.



## CATALYST FOR IMPACT

In October 2024, CFRIL hosted a sustainability symposium focused on the bakery industry.

The event brought together local food processors, ingredient suppliers, and government representatives, and featured speakers including CFRIL researcher Tracy Butt, research student Taylor Jarvis, Packaging Engineering faculty member Jean-François Guillerez, and Cher Mereweather, director of the Canada Plastics Pact.

The symposium was the culmination of a project funded by Dawn Foods Canada's Corporate Giving Program. The project aimed to identify the sustainability needs of the bakery sector and develop practical resources to support improvement. As a key outcome, CFRIL produced a series of one-page reference guides covering topics such as sustainable packaging and food waste reduction. The event was also featured in the November 2024 issue of Bakers Journal.



## RESEARCH WITH REACH

"As a small food business owner, ensuring the quality and safety of our products is paramount. That's why we turned to CFRIL for shelf-life testing, their team of experts guided us through the entire testing process, from setting up the study to analyzing the data. The insights we gained were invaluable, allowing us to confidently determine the optimal shelf life of our products and ensure they meet our high standards of freshness and taste."

Thanks to CFRIL, we now have the peace of mind of knowing that our customers are receiving the highest quality products possible. I highly recommend their services to any food business looking to enhance product quality and safety."

**Amanda Luthra, founder, Chilly Paste Co.**

## INNOVATION IN ACTION

### Reducing food waste and enhancing recovery at the Cambridge Food Bank

The Conestoga Food Research & Innovation Lab partnered with the Cambridge Food Bank to optimize food recovery processes and reduce food waste. The project included a comprehensive audit to measure environmental, financial, and nutritional impacts, and guided improvements to kitchen operations and recipe development using surplus food.

Culinary students helped formalize recipe documentation and provided nutrition fact panels for preserves. A web-based reporting tool was introduced to streamline volunteer input and improve data tracking. The work from this project is already helping guide future initiatives and strengthen the food bank's long-term approach to sustainability and community wellness.



## MEASURE OF IMPACT

**56** partners engaged



# Inside the Conestoga Social Innovation Lab

The Conestoga Social Innovation Lab (CSIL) fosters partnerships between Conestoga applied researchers and cooperatives, non-profits, social enterprises and change-makers. These collaborations focus on solving real-world challenges and creating measurable societal impact.



## Dr. Anthony Piscitelli

*Director, Conestoga Social Innovation Lab*

Dr. Anthony Piscitelli is the director of the Conestoga Social Innovation Lab and a professor and program coordinator in the School of Interdisciplinary Studies. He holds a PhD in geography and a master's in political science from Wilfrid Laurier University, along with multiple governance certifications.

Dr. Piscitelli currently serves as chair of the board for Your Neighbourhood Credit Union. He is leading a SSHRC-funded project exploring how board members of cooperatives in Canada make decisions. His research interests include board governance, public opinion and social finance, built on 15 years of experience in government and the non-profit sector.



## CATALYST FOR IMPACT

The Conestoga Social Innovation Lab is leading a \$90,200 Insight Grant from the Social Sciences and Humanities Research Council to explore decision-making practices on cooperative boards.

The project brings together co-applicants from seven post-secondary institutions and collaborators from four non-profit organizations across Canada. This collaborative research aims to deepen understanding of how governance structures and board dynamics influence decision-making in cooperatives, with potential implications for strengthening democratic practices and organizational effectiveness in the sector.

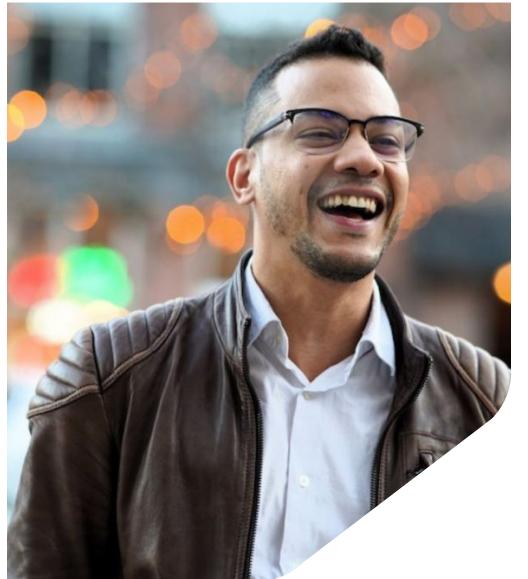
*This project draws on research supported by the Social Sciences and Humanities Research Council.*



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada

Canada



## RESEARCH WITH REACH

“Working with Conestoga allows us to rapidly build a viable, secure software platform that helps students maximize their financial literacy and prepare for long-term financial wellness. Their support is playing a key role in helping us turn our vision into reality.”

**Robin Gray,  
CEO and co-founder, KarlaRent**

## INNOVATION IN ACTION

### Baseline Ourboro study explores shared equity housing model

The Baseline Ourboro Impact Study is a multiyear research initiative focused on shared equity housing. The project explores whether individuals who participate in shared equity homeownership models experience meaningful improvements in quality of life compared to traditional renters.

In its first phase, the research team conducted a baseline survey to identify key categories of renters to monitor over time. These groups will be compared to Ourboro clients to assess outcomes such as financial stability, housing security and overall well-being. The study will provide valuable insights into how shared equity models can support more inclusive and sustainable pathways to homeownership.

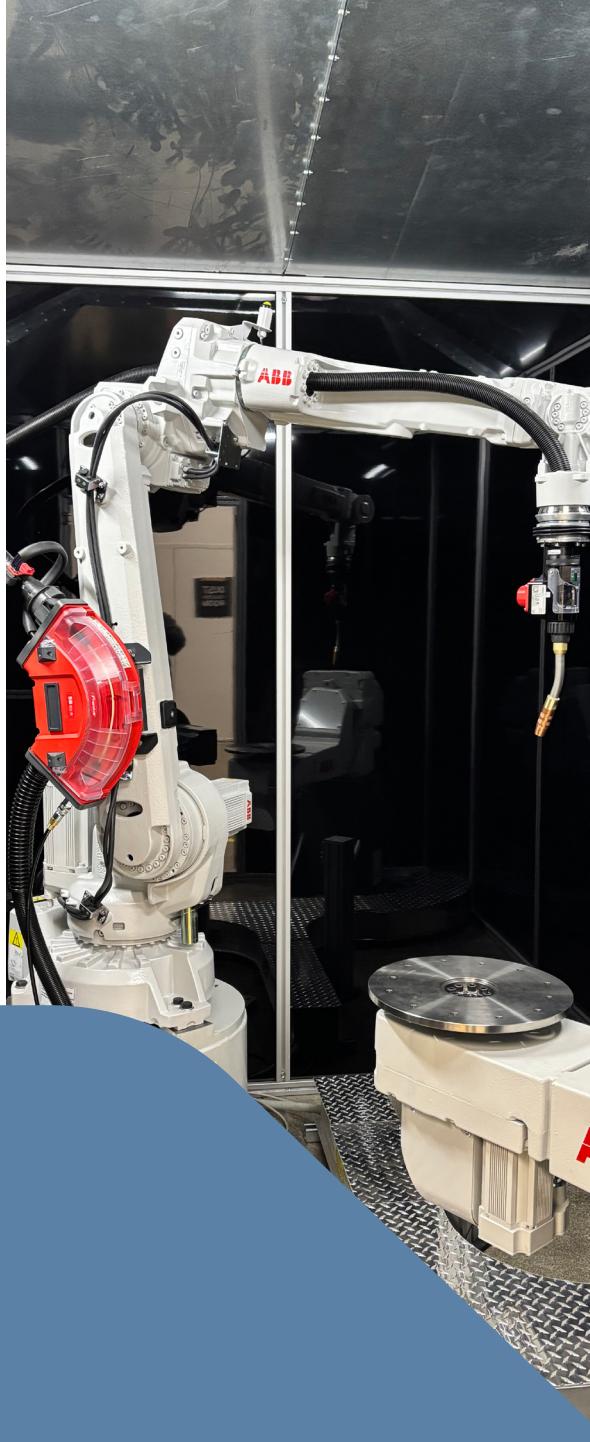


## MEASURE OF IMPACT

**\$91,150**  
in funding from  
NSERC and SSHRC

# Inside the SMART Centre

The SMART Centre is Waterloo Region's innovation hub, supporting small- and medium-sized enterprises across sectors such as manufacturing, IT, health and zero-emissions industries. Through applied research, technical services and specialized training, the centre delivers tailored solutions that help businesses turn ideas into real-world impact.



## Jeff Dukes, P.Eng.

SMART Centre

Jeff Dukes, P.Eng., is the director of Conestoga's SMART Centre, located in Cambridge. He holds a B.Sc. in mechanical engineering with a focus on product design from Lake Superior State University and is licensed by Professional Engineers Ontario. Jeff brings over 20 years of experience in the automotive, consumer products, and defense industries.

He has held senior roles at DURA Automotive, Dimplex North America, and Colt Canada, where he led engineering efforts for both domestic and NATO military clients. His work has contributed to successful product launches in North American and international markets, earning him multiple patents.

## CATALYST FOR IMPACT

The SMART Centre expanded its capabilities with the addition of a new robotic welding cell, funded through the Ontario Research Fund - Ontario First Award and the Natural Sciences and Engineering Research Council (NSERC) Applied Research and Instruments grant.

This advanced welding technology supports rapid prototyping, custom manufacturing, and the repair of metal components across a range of industries. Applications include producing lightweight parts for aerospace, enhancing automotive components, and extending the life of industrial machinery.

The robotic welding cell enables high-precision, cost-effective solutions for complex manufacturing challenges and also supports applied research into new alloys and material development. Its versatility makes it a valuable resource for industry partners seeking innovative approaches to metal fabrication and performance optimization. With this addition, the SMART Centre continues to advance its role in supporting manufacturing innovation across sectors such as aerospace, automotive and energy.

*We acknowledge the support of the Natural Sciences and Engineering Research Council of Canada (NSERC).*





## INNOVATION IN ACTION

### Innovative energy management for electric vehicle charging and storage at Conestoga's SMART Centre

The SMART Centre installed an electric vehicle (EV) charging station paired with a supercapacitor battery energy storage system (BESS), advancing Conestoga's commitment to sustainable energy. The BESS includes a high-capacity battery managed by a system that monitors voltage, temperature and performance, while integrating with power controls for optimized charging cycles.



Developed in two phases, the project added centralized data collection, IT system integration, and a browser-based interface for real-time monitoring. A learning algorithm will further enhance efficiency by analyzing usage patterns to reduce energy costs and extend battery life, supporting the development of intelligent EV infrastructure.

We acknowledge the support of the Natural Sciences and Engineering Research Council of Canada (NSERC).



## RESEARCH WITH REACH

"The SMART Centre research team demonstrated exceptional expertise and capability in executing applied research projects. The project scope and deliverables were collaboratively defined, and their team successfully met all objectives within the established budget and timeline.

As part of the project, the research team developed a visualization dashboard that enables real-time monitoring of critical factory operations. This tool enhances operational efficiency by providing actionable insights, allowing for proactive intervention to prevent potential issues before they escalate."

**M. Furkan Orhan,**  
purchasing manager/project coordinator, Fountain Food and Beverages Ltd. and Dairy Fountain Inc.



## MEASURE OF IMPACT

**40**  
active projects

# Thank you to our funders

Thank you for your continued support. Your contributions have been key to advancing research, innovation, and entrepreneurship at Conestoga.

Because of your generosity, students have access to hands-on experiences that prepare them for the future, and our teams are equipped with the tools and resources needed to explore bold ideas and meaningful solutions.

Your partnership helps us attract great talent, maintain top-notch facilities, and create a collaborative environment where innovation can thrive. We're proud of what we've accomplished together and look forward to building on this momentum in the year ahead.

## CONTACT

To learn more about research at Conestoga visit [research.conestogac.on.ca](http://research.conestogac.on.ca) to explore our research initiatives, projects, research centres, and learn how to get started as a partner with Conestoga Research, Innovation & Entrepreneurship.

