

YEAR IN REVIEW 2024/2025



LAND ACKNOWLEDGMENT

Humber Polytechnic is located within the traditional and treaty lands of the Mississaugas of the Credit. Known as Adoobiigok [A-doe-bee-goke], the “Place of the Alders” in Michi Saagiig [Mi-Chee Saw-Geeg] language, the region is uniquely situated along Humber River Watershed, which historically provided an integral connection for Anishinaabe [Ah-nish-nah-bay], Haudenosaunee [Hoeden-no-shownee], and Wendat [Wine-Dot] peoples between the Ontario Lakeshore and the Lake Simcoe/Georgian Bay regions. Now home to people of numerous nations, Adoobiigok continues to provide a vital source of interconnection for all.

[> LISTEN TO AN AUDIO RECORDING OF HUMBER POLYTECHNIC'S LAND ACKNOWLEDGMENT](#)

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*This report covers the period of April 1, 2024, through March 31, 2025.

PRESIDENT’S FOREWORD



Each year, I am inspired by the many ways Humber’s research and innovation ecosystem brings our polytechnic mission to life—boldly, thoughtfully, and with purpose. This year is no exception.

Together, we’ve built incredible momentum. Over the last year, Humber climbed ten spots to rank fifth among Canada’s Top 50 Research Colleges, leading the GTA as the top research college. We’re also the number one institution in the country for research income growth, a reflection of the dedication of our faculty, staff, and students, and the trust placed in us by our partners to lead research that drives meaningful impact.

As Canada faces a productivity crisis and growing global competition, applied research has never been more vital. It’s how we solve complex challenges, fuel innovation, and create opportunities for future generations. That’s why Humber’s bold new strategic vision, Building Brilliance, strengthens our commitment to being the partner of choice for industry and community leaders tackling their most pressing problems,

and the launchpad for students and entrepreneurs finding their edge.

At Humber, we believe applied research is about solving real-world problems and shaping a better future for everyone on our campuses and in the communities we serve. That belief guides our more than 180 collaborative research projects, led by 87 faculty researchers and over 220 student research assistants. These partnerships span industry, government, and community organizations, and are grounded in shared purpose, mutual respect, and a deep commitment to equity and inclusion.

Our leadership in the national Labs4 initiative is one example of what’s possible when colleges and polytechnics work together to turn ideas into action. As Ontario’s hub lead, Humber is helping close the gap between research and commercialization while accelerating innovation with hands-on training, mentorship, and applied research opportunities for researchers and entrepreneurs alike.

This year also marked new milestones in community-focused innovation. Our partnership with the Toronto Police Service led to a student-designed hate crimes awareness campaign, now reaching diverse communities in more than 20 languages. Our B²C Lab now operates at four locations across the GTA, including the CN Tower, and collaborates with the City of Calgary to pioneer how next-generation broadcast technology can enhance emergency response, education, and connectivity across Canada.

In keeping with our commitment to inclusive research development, Humber’s Applied Research Program, certified by the UK-based Staff and Educational Development Association (SEDA), empowers faculty and staff to lead research that is rooted in community and globally informed.

As our community continues to build brilliance, research, innovation, and the entrepreneurial mindset remain central to Humber’s future. They shape how we teach, learn, and lead. They connect us to our communities. And they give our students the opportunity to find their edge, make an impact today, and prepare for the challenges of tomorrow.

Thank you to everyone who made this remarkable year possible. I am proud of what we’ve accomplished—and excited for what lies ahead.

—President and CEO,
Dr. Ann Marie Vaughan

In 2024, Humber Polytechnic unveiled its ambitious vision for “**Building Brilliance to 2030 and Beyond**,” focusing on reimagining learning, fostering deeper partnerships and driving impact. Aligned with this vision, the Office of Research & Innovation (ORI) supports the faculty and researchers who are pioneering innovative projects that push the boundaries of education and industry collaboration.

RESEARCH HIGHLIGHTS

**HUMBER POLYTECHNIC
ROCKETED TO FIFTH SPOT
IN RESEARCH INFOSOURCE’S
RANKING OF CANADA’S TOP
50 RESEARCH COLLEGES**

—HUMBER TODAY MEDIA RELEASE,
DECEMBER 5, 2024



RANKED TOP FIVE
ACROSS CANADA



SOARED TEN (10) SPOTS
IN A SINGLE YEAR



EARNED FIRST PLACE
IN THE GTA

**HUMBER SECURED TOP
PLACES ACROSS INCOME
AND GROWTH CATEGORIES
(AMONG LARGE TIER*
INSTITUTIONS)**

—RESEARCH INFOSOURCE INC./
TOP 50 RESEARCH COLLEGE RANKINGS



“BY INVESTING IN RESEARCH ACROSS OUR POST-SECONDARY INSTITUTIONS, OUR GOVERNMENT IS INVESTING IN A PROSPEROUS FUTURE FOR ONTARIO [...] THE TOP-RANKING RESEARCH BEING DONE AT HUMBER WILL NOT ONLY DRIVE INNOVATION, CREATE GOOD-PAYING JOBS, AND ADVANCE ONTARIO’S KEY INDUSTRIES, BUT IT WILL ALSO IMPROVE THE LIVES OF ALL ONTARIANS. CONGRATULATIONS TO HUMBER POLYTECHNIC ON THIS MONUMENTAL RECOGNITION.”

—Nolan Quinn, Minister of
Colleges, Universities, Research
Excellence and Security

SPOTLIGHT ON TOTAL GRANTING COUNCIL RESEARCH INCOME OVER FIVE (5) YEARS

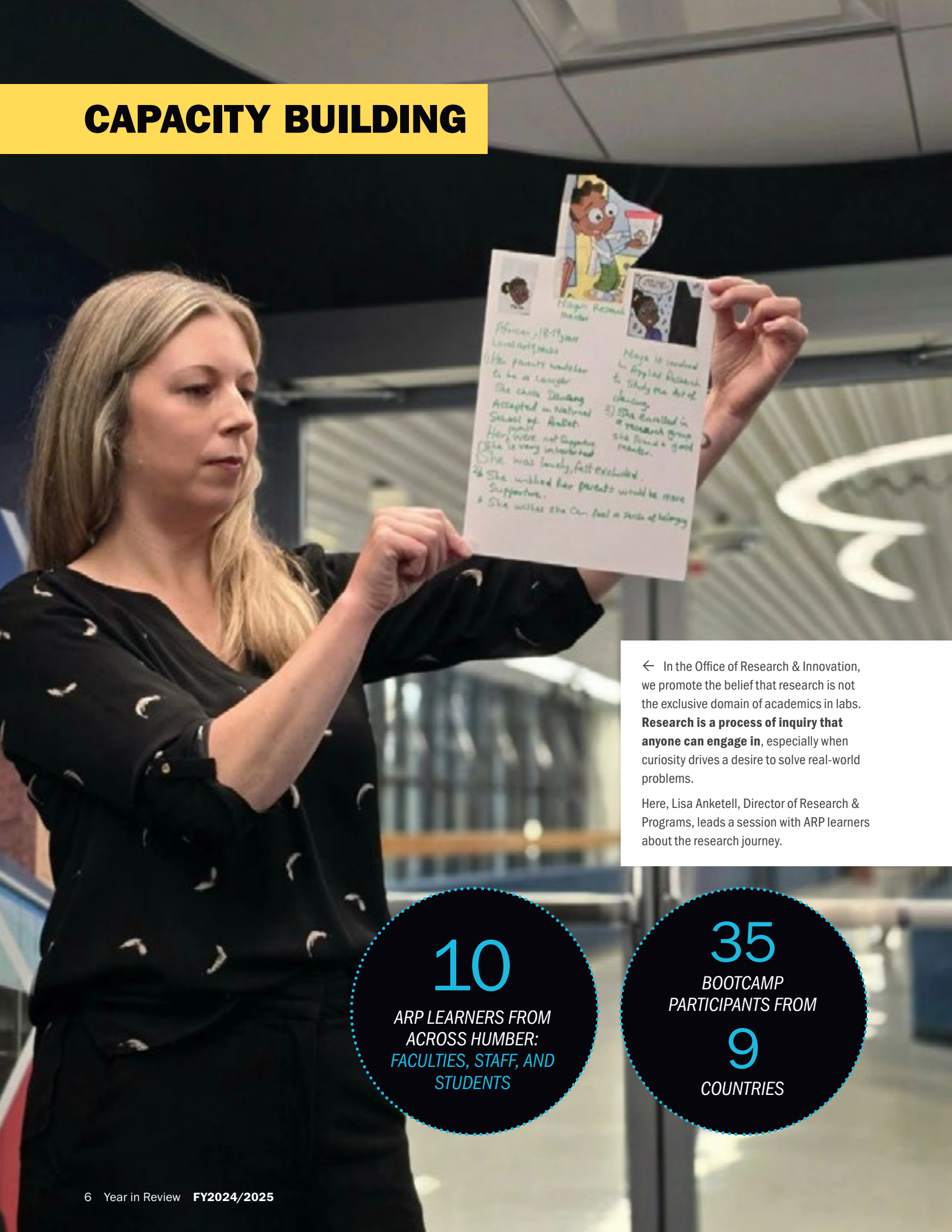
In its 2024 report, InfoSource featured **Total Granting Council Research Income** for the period of 2019–2023, as measured by all grants received from NSERC, SSHRC, CIHR, and CFI.

Humber ranked **#1** for Total Granting Council Research Income **Growth** with an **840%** increase.



*Large Tier indicates \$250M or more of total college income based on a rolling average of the past 5 years (InfoSource).

CAPACITY BUILDING



← In the Office of Research & Innovation, we promote the belief that research is not the exclusive domain of academics in labs. **Research is a process of inquiry that anyone can engage in**, especially when curiosity drives a desire to solve real-world problems.

Here, Lisa Anketell, Director of Research & Programs, leads a session with ARP learners about the research journey.

10

ARP LEARNERS FROM ACROSS HUMBER: FACULTIES, STAFF, AND STUDENTS

35

BOOTCAMP PARTICIPANTS FROM

9

COUNTRIES

APPLIED RESEARCH PROGRAM (ARP/SEDA)

The Applied Research Program (ARP) at Humber exemplifies how research can be inclusive and accessible. It supports faculty new to research, staff exploring their research identity, and students as research assistants. ARP transforms research from an intimidating pursuit into a collaborative journey grounded in diverse perspectives.

Through the ARP, professional learners engage in a structured process that mirrors the natural phases of research: 1) understanding the problem, 2) taking action, and 3) creating impact. This approach reflects how curiosity evolves into real-world solutions (For more information see [SPARK 11, Special Issue](#)).

What is SEDA?

The Staff and Educational Development Association (SEDA) is a UK-based accrediting body that certifies professional development in higher education. Known for its values-driven approach, SEDA emphasizes inclusive learning, ethical practice, and applied research skills. Humber's ARP is SEDA-certified, enabling participants to earn two respected credentials that validate their research capabilities and empower them to lead impactful, community-focused projects.

Benefits and Impacts of ARP/SEDA

- ARP makes research approachable for all, challenging the notion that it's only for experts.
- Blends Methods and Interaction: A 7-week full-time experience combining workshops, mentorship, and hands-on projects.
- Led by Experts: Program design and delivery were shaped by the organizing committee, facilitators, and mentors.
- Real-World Focus: Curriculum emphasizes curiosity, collaboration, and practical application.
- SEDA Certification: Includes two SEDA credentials (Foundations & Advanced), offering international recognition in applied research.

RESEARCH BOOTCAMP

The overwhelming success of our first Research Bootcamp in summer 2023 paved the way for another exciting round. The second annual Research Bootcamp was held at Humber's Lakeshore campus in July 2024, welcoming a vibrant group of international learners. As the flagship event launching Global Summer School, Research Bootcamp aimed to empower participants by strengthening their research capacity, boosting self-awareness and confidence, and nurturing a curious, growth-oriented mindset that will enrich their academic journey at Humber and beyond.

"RESEARCH IS AN EXCITING JOURNEY OF DISCOVERY! IT'S ABOUT DIVING DEEP INTO QUESTIONS, EXPLORING THE UNKNOWN, AND UNCOVERING INSIGHTS THAT CAN CHANGE HOW WE SEE THE WORLD... RESEARCH IS THE KEY TO INNOVATION, GROWTH, AND MAKING A REAL IMPACT IN THE WORLD AROUND US."

—Fatima Momin, Researcher, ARP Learner

GET FUNDED, RESEARCH GRANT RESOURCE

ORI hosted engaging Lunch n' Learns and a Showcase exhibit on Research Funding opportunities at Humber, such as Tri-Council funding (NSERC, SSHRC, CIHR), federal/provincial grants, and specialized options like NSERC's Mobilize Fund and Humber's Brilliant Catalyst, all supporting innovative research. To new and seasoned researchers, ORI offers insights into accessing resources. By showcasing collaborative funding avenues and student involvement in applied research that brings real-world solutions into the classroom, "Get Funded" aligns with Building Brilliance themes: Forging Deeper Partnerships; Driving Impact; and Reimagining Learning.



PARTNERS & COLLABORATORS

← Humber is proud to support Ontario’s Commercialization Mandate Policy Framework (CMPF) by helping move ideas from research labs into the real world. Through hands-on collaboration and IP development, **we create economic and social value for our partners and our communities.**

This image shows work by Humber Industrial and Interaction Design students, envisioning the car of the future using LeddarVision™ advanced driver assistance technology. Read more about this project on page 11.

“COLLABORATING WITH HUMBER POLYTECHNIC HAS BEEN A REWARDING EXPERIENCE, AND THESE STUDENTS HAVE SHOWN THEY HAVE WHAT IT TAKES TO CONTRIBUTE MEANINGFULLY TO THE FUTURE OF OUR INDUSTRY.”

— Pierre Olivier, Chief Technology Officer at LeddarTech

HUMBER WORKS WITH PARTNERS AND COLLABORATORS ACROSS INDUSTRIES AND IN PRIVATE AND PUBLIC SECTORS

At Humber, research partnerships are central to how we create impact. These collaborations—built on trust, shared purpose, and mutual respect—connect students, faculty, industry, government, non-profits, and community organizations to solve real-world challenges and spark innovation.

Applied research at Humber is a collaborative process that brings together many voices and ideas. By working with external partners, we enhance the educational experience for students, create new professional opportunities for faculty, and contribute to meaningful outcomes for society.

The Office of Research & Innovation connects people, ideas, and resources to support real innovation and community impact across this research ecosystem, including the five Centres of Innovation. Our partners span sectors such as healthcare, education, digital technology, environmental sustainability, business, social innovation, advanced manufacturing, creative arts, and engineering.

PARTNERSHIPS IN ACTION

These projects exemplify Humber’s commitment to community-driven innovation, industry partnership, and applied research that addresses real-world challenges. From empowering internationally trained professionals and advancing Indigenous environmental justice, to pioneering smart city mobility and transforming aerospace maintenance, each initiative reflects Humber’s vision of inclusive, interdisciplinary problem-solving.

Empowering Global Talent

Leading not-for-profit, ACCES Employment, is collaborating on the SSHRC CCSIF-funded Global Talent Advancement Framework (GT6). This project addresses the urgent need to integrate internationally trained professionals into Canada’s workforce. By developing a six-tier bridging program, ACCES aims to improve socioeconomic outcomes for skilled newcomers and support inclusive economic growth through targeted knowledge transfer and policy development.

Environmental Justice with Fort William First Nation

Fort William First Nation is partnering with Humber and the University of Toronto on “Caring for the Thunderbird’s Nest,”

an NSERC CCSIF-funded project using geophysical and machine learning tools to assess pollution exposure linked to a leukemia cluster in young children. This community-led initiative prioritizes cultural safety, knowledge co-creation, and Indigenous student mentorship in environmental research.

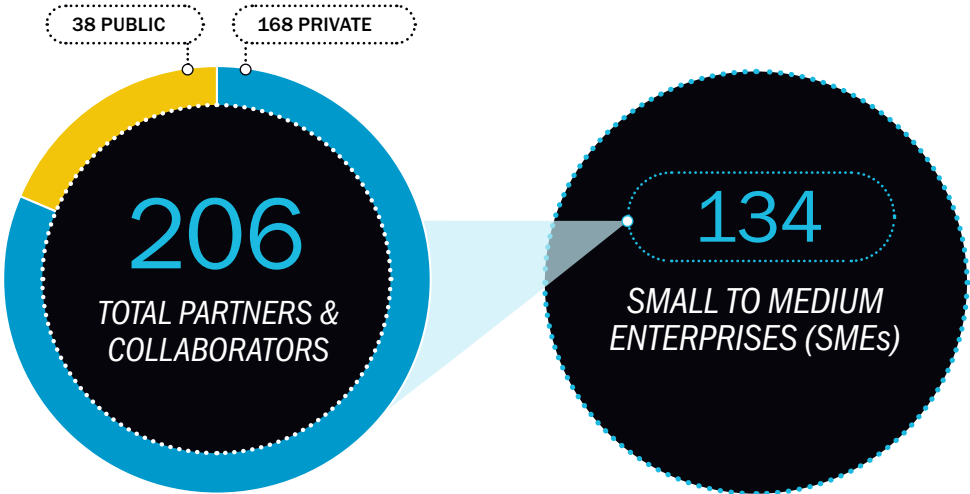
Advancing Smart City Mobility

LocoMobi World Inc., a smart city mobility SME, is working with Humber on Phase 2 of an NSERC ARD-funded project to enhance its autonomous parking robot, Mobi. Using LiDAR mapping and edge technologies, the project aims to deliver a commercial-ready MVP that integrates automation, safety, and innovation into Canada’s evolving parking infrastructure.

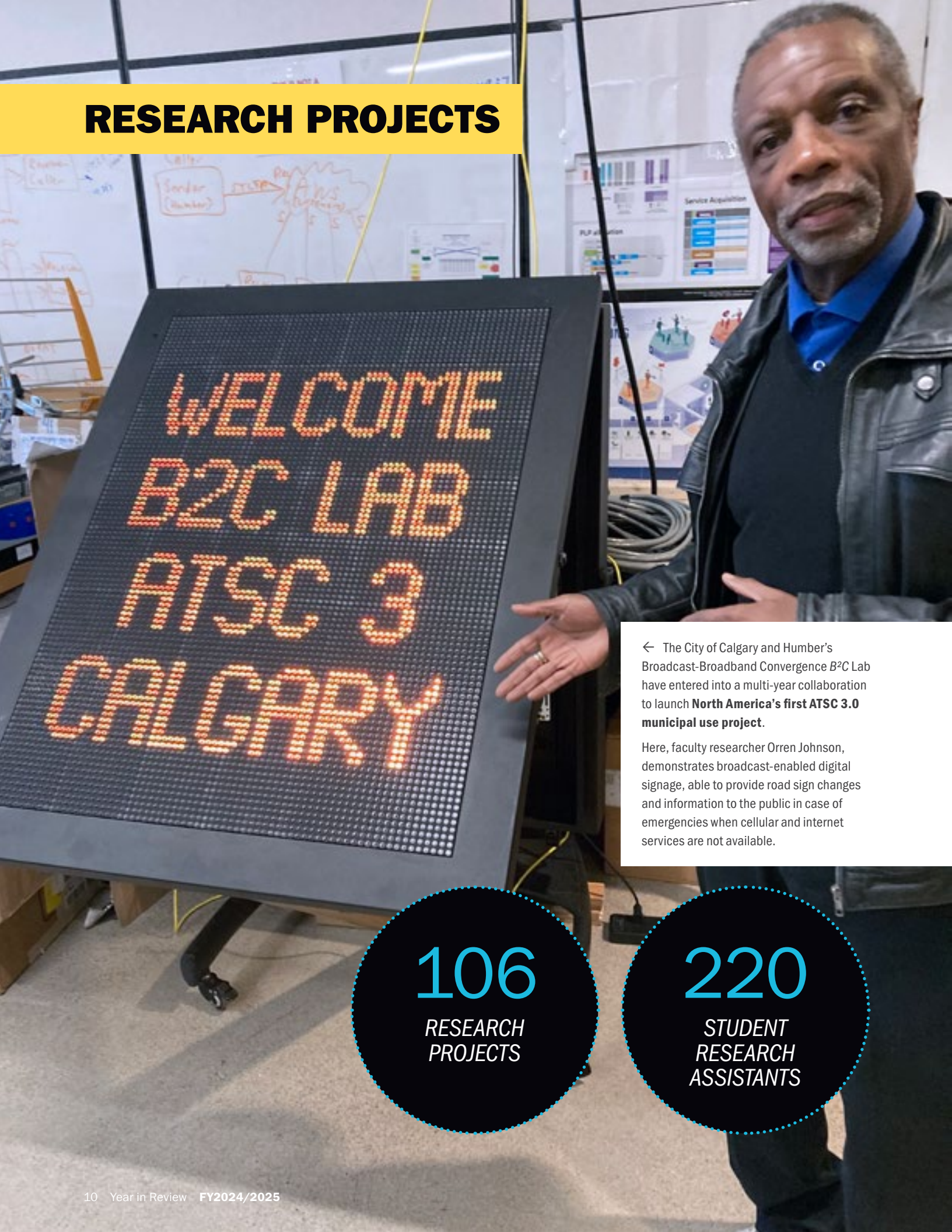
Transforming Aircraft Maintenance

Mitsubishi Heavy Industries – Regional Jet (MHIRJ) is collaborating with Humber on an NSERC ARD-funded project to develop a mobile digital platform for aircraft maintenance. The app will allow technicians to access data and manuals offline, streamlining workflows and improving safety. This innovation supports MHIRJ’s shift to a service-based model and strengthens its leadership in aerospace engineering.

See [ORI’s Partners webpage](#) for more about our Partners and Collaborators.



RESEARCH PROJECTS



← The City of Calgary and Humber's Broadcast-Broadband Convergence B²C Lab have entered into a multi-year collaboration to launch **North America's first ATSC 3.0 municipal use project.**

Here, faculty researcher Orren Johnson, demonstrates broadcast-enabled digital signage, able to provide road sign changes and information to the public in case of emergencies when cellular and internet services are not available.

106
RESEARCH
PROJECTS

220
STUDENT
RESEARCH
ASSISTANTS

HUMBER SECURES OVER \$1.3 MILLION IN RESEARCH FUNDING TO TACKLE COMPLEX SOCIETAL CHALLENGES

Grants from SSHRC and NSERC will support projects in forensic DNA testing, international student well-being, and wearable technology. This funding enhances collaboration with industry and community partners while offering hands-on learning for students. These initiatives reflect Humber's commitment to applied research that addresses real-world problems and fosters innovation, inclusion, and community impact.

HUMBER LEADS ONTARIO HUB IN NATIONAL LABS4 INITIATIVE

Humber is leading the Ontario Regional Hub of Labs4, a national initiative aimed at closing Canada's research-to-commercialization gap and driving economic and social impact. Funded by NSERC and Mitacs, as well as institutional partners, Labs4 brings together 38 post-secondary institutions to support researcher-entrepreneurs with hands-on training, mentorship, and applied research, accelerating innovation through an inclusive, community-rooted approach.

BIG BOOSTS AT THE B²C LAB

The B²C Lab and the City of Calgary are collaborating on North America's first municipal ATSC 3.0 project, enhancing emergency response, education, and connectivity through resilient broadcast technology.

The B²C Lab began broadcasting ATSC 3.0 live on the CN Tower by integrating into Rogers Sports & Media and Corus Entertainment's commercial infrastructure. The Lab now has four ATSC 3.0 experimental transmission sites across Toronto. The CN Tower site extends their reach to be able to test more than 25 per cent of Canada's marketplace.

RAISING AWARENESS THROUGH CREATIVE COLLABORATION

Humber partnered with the Toronto Police Service (TPS) to raise awareness of hate crimes through a hands-on creative advertising project. Students developed impactful campaigns, including the award-winning "Hate the Hate: Report the Crime" pamphlet, now available in 22 languages. This cross-departmental initiative exemplifies Humber's commitment to experiential learning, community engagement, and social impact.

REVOLUTIONIZING MOBILITY: HUMBER POLYTECHNIC & LEDDARTECH

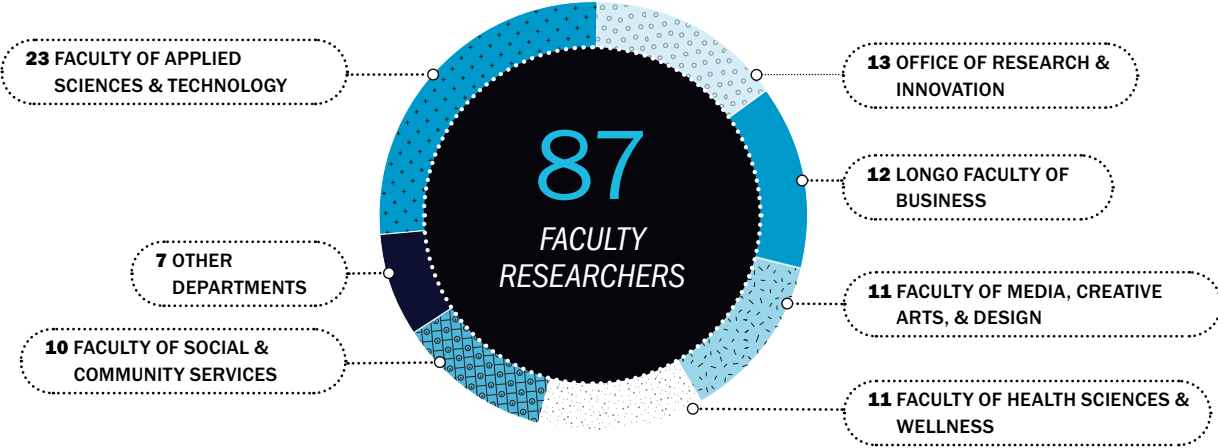
Humber partnered with LeddarTech to challenge Industrial and Interaction Design students to envision the car of the future using LeddarVision™ advanced driver assistance technology.

Students developed and refined vehicle concepts that integrated real-time hazard detection and user-centered interfaces. Graduates reflected on the project as a valuable opportunity to build skills in research, prototyping, and communication. The partnership with LeddarTech highlighted the power of academic-industry collaboration to drive innovation and prepare students for future-focused careers.

See ORI's Current Project webpage for more about Research Projects.

"CONDUCTING USER RESEARCH IN AN UNFAMILIAR FIELD FURTHER DEVELOPED MY RESEARCH SKILLS AND EMPHASIZED THE IMPORTANCE OF USING THEORETICAL KNOWLEDGE AS A FLEXIBLE FOUNDATION FOR PRACTICAL APPLICATION."

— Eve Mills, Graduate, Bachelor of Industrial Design Program



humber.ca/research-innovation

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