SMART Training Platform

IMPACT REPORT
YEAR ONE

SMART Training Platform

The SMART Training Platform was the successful training platform grant submission to Canadian Institutes of Health Research (CIHR) Healthy Cities Research Initiative. In 2021, we were awarded $4.95 million over 6 years to develop the training platform and train up to 460 students in implementation science and healthy cities and communities.

The project is led by Dr. David Ma from University of Guelph, Dr. Laurette Dube from McGill University and Dr.Miyoung Suh from University of Manitoba. Our team also includes 33 faculty from University of Waterloo, University of Toronto, University of Ottawa, University of Montreal, University of Sherbrooke, Laval University and Dawson College.

The SMART Training Platform was built upon three Canada Smart Cities Challenge projects from the City of Guelph, City of Montreal and the Town The Pas and the Opaskwayak Cree Nation (OCN) in Manitoba. These initiatives all have a shared focus on health, food security and resilient food systems and combine to provide a rich ecosystem of experiential learning opportunities, research projects and access to community collaborators to participating students.

OUR INSTITUTIONS:

ABOUT THE

SMART Training Platform

The SMART Healthy Cities Training Platform will train the next generation of health, social sciences and humanities, engineering and natural science leaders to find ways to make Canadian cities healthier, more livable, and more resilient using food and food systems to improve population health.

TURNING KNOWLEDGE INTO ACTION:
Our program is designed to provide trainees from 10 Canadian institutions with the knowledge and skills to tackle many of the challenges faced in urban environments, creating smart solutions to improve food access, mobility, and health in Canadian communities, including Indigenous Communities. Trainees will engage in implementation science; that is, all aspects of how to move knowledge into action from conception, execution, testing, scale up and evaluation. Experiential learning opportunities will enable trainees to put these skills to use.

SOLVING COMPLEX SOCIETAL PROBLEMS:
The focus of our research efforts is on the central place of food in cities, the use of 'big data' to create smart solutions for urban environments, and bringing together the best knowledge, practices, and tools from different fields of study to solve complex societal problems.

Collaborations

6 Letters of Support

The SMART Training Platform has supported six teams in our first year. From these letters there has been one successful PHAC grant and CIHR Planning Grant: Community Health and the Inclusive Smart City grant.

WEBINAR SERIES

We hosted our first webinar on May 23rd, 2022, with guest speaker Ellen Van Kleef from Wageningen University in the Netherlands. We had 40 attendees from several academic institutions in both Canada and the United States from various academic institutions. The focus of the webinar was understanding and engaging adolescents in improving the healthiness of their food choices.

Watch it here: smart-training.ca
Marketing Poster

WORK SESSIONS

The interactions with Dr.Ellen Van Kleef and her team from Wageningen University were the catalyst to two hosted in-person work sessions.

These work sessions brought together a dynamic group of academics, industry professionals, and SMART trainees to collaborate:

- July 25th, 2022 session: Building A World Community for Food, Nutrition, and Consumer Health Science Research and Practice: Adolescence as an Entry Point for Digital and Human Support for Lifelong Affordable Wellness and Health.

- August 5th, 2022 session: Smart packaging, labelling, choice architecture and regulatory designs for smarter consumers and sustainable supply chains in agri-food sector: Advancing Agent-Based Model (ABM) for decision support to Individuals, Enterprises and Multi-Jurisdictions Governments.

In year two, we will continue to use these sessions and relationships as a catalyst for research and collaboration opportunities amongst various industries.

Getting Connected

Since July 2021, we have established a SMART Training Platform Twitter, LinkedIn, Instagram, and YouTube. These channels are intended to network, connect, and market the various aspects of the platform.

WEBSITE

Our website continues to adapt and evolve as the SMART Training platform grows. With the intention of creating a hub for implementation science research we have created a platform that houses relevant research, webinar recordings, and key groups making impacts in implementation science. Additionally, we highlight the different engaging and educational offerings such as our courses, summer school, and annual conference.

INSTAGRAM

Instagram has 13 followers and an average reach of 22 accounts in the first month

TWITTER

Our Twitter account had 44 followers and an average of 390 impressions per month throughout our first year.

LINKEDIN

LinkedIn was created towards the end of the year. LinkedIn has 19 connections with an average of 28 page views in the first month.

YOUTUBE

Our YouTube was established to house the recording of our first webinar for public viewing. As we continue to host more webinars in the coming years, this will be a hub for recordings that will be directly linked to our website.

Education & Training

The course offerings developed to date:

SUMMER INSTITUTE

The SMART Training Platform's summer institute is an opportunity that brings together trainees, students, and industry professionals together for a week long immersive event.

METHODS CAFÉ

The course will encourage students to think critically and integrate knowledge and practice to solve complex societal problems and find ways to make cities healthier, more liveable, and more resilient.

IMPLEMENTATION DESIGN LAB

Trainees take a transdisciplinary approach and work together to address topics related to Smart Cities and/or Healthy Cities through design thinking in a virtual studio environment.

AGENT BASED MODELING

Agent-based models are computational simulation models, applied in a wide range of disciplines, across the social sciences, used to explore complex problems.

Methods Café Course

At the start of the year, we launched our first course called the Implementation Science and Healthy Cities Methods Café. We had 22 students including Masters, PhD, and post-doctoral fellows from diverse academic backgrounds in the course.

The course exposed students to novel research from various fields —from computer science to health and nutrition, sociology, marketing, and ecology— to explore complex challenges that urban environments face with regards to food access, mobility, and overall population health. Drawing from Canadian (including First Nations) and global contexts, students engaged in implementation science; this is, they learned how to move knowledge into action from early stages of conception to execution, testing, scale up, and evaluation.

Students dove into state-of-the-art implementation science methods that range from effective community engagement to computational science. Overall, the course encouraged students to think critically and integrate knowledge and practice to solve complex societal problems and find ways to make cities healthier, more livable, and more resilient.

Topics:
- What is 'Implementation Science'?
- Systems Thinking
- Healthy Cities and Smart Cities
- Convergence by Design
- Sex and Gender Based Analysis
- Digital Health and Patient Centered Outcomes
- Socio-spatial Epidemiology
- Introduction to Modelling
- Community-based Participatory Research Healthy
- Introduction to Data Science and AI
- Introduction to Health Economics
- Design Methods

PARTICIPATING STUDENTS - IN THEIR WORDS:

"This course is one of the most interesting I have ever taken as a student. It has a very novel and diverse context that is difficult to find in other courses. During the course, I had many opportunities to connect with peers from different disciplines across the country. Strongly recommended!"

"This course was a great opportunity to meet Canadian graduate students from diverse fields, interested in tackling complex, system-wide problems."
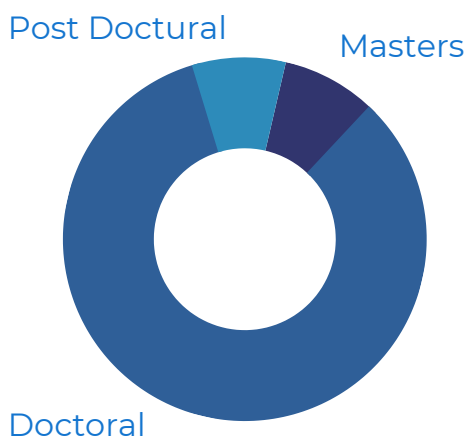
Methods Café Course

94%

There are opportunities to apply course topics and materials to my research

96%

found the course intellectually stimulating

WINTER 2022:

Post Doctural

Masters

Doctoral

"The course highly motivated me as broadened my knowledge of the different methodologies that can be applied to various fields. What I think the course could provide more emphasis on the methodologies that the different researchers used in their investigations."

"This interdisciplinary journey was like a trip around the world to be acquainted with other cultures. Now, I feel like I can approach other disciplines with much more confidence, understanding of their fundamentals and challenges. I highly recommend this course if you want to be a genuine researcher."

"The methods café course gave me the opportunity to expand my knowledge of the different methodologies that can be used to solve intricated or wicked problems within a highly interconnected context. This course is an excellent opportunity to challenge your capacities and connect with wonderful professionals from different fields."

FALL 2022:
This fall semester we welcome our second cohort of SMART Trainees to the Methods Café course.
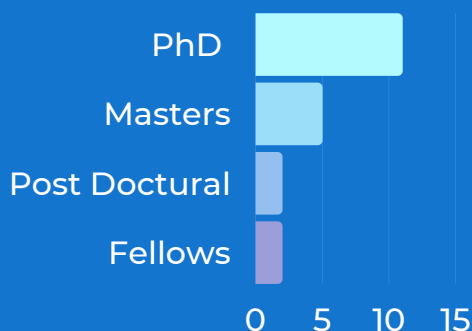
Summer Institute

DIVERSITY OF DISCIPLINES:
- Public Policy
- Agricultural & Resource Economics
- Food & Resource Economics
- Biochemistry & Molecular Biology
- Food & Nutritional Science
- Human Nutrition
- Agricultural Science
- Community
- Health
- Urban Studies
- Public Health

INSTITUTIONAL REACH:
- Dalhousie University
- University of Saskatchewan
- McGill University
- University of British Columbia
- University of Guelph
- University of Montreal
- Queens University
- Simon Fraser
- University of Calgary
- University of Manitoba

19 STUDENTS ATTENDED:

Bar chart showing number of students by level:
- PhD: ~11
- Masters: ~4
- Post Doctural: ~1
- Fellows: ~1

(x-axis: 0, 5, 10, 15)

THE CIRCULAR ECONOMY SUMMER SCHOOL

In summer 2022, we piloted a national circular food economy summer school program that linked a cohort of individuals from across Canada, including graduate students and practitioners from business, civil society, government, and industry in a multidisciplinary setting.

The pilot Circular Economy Summer School was a collaborative effort between the following university partners: AFI, SMART, RIO, and the Our Food Future County of Wellington and City of Guelph Smart Cities initiative. Sixteen graduate students from 10 universities across Canada and in over 11 disciplines and two Research Innovation Office policy fellows participated.

The summer school offered the opportunity for participants to gain a deeper understanding of topics and considerations inherent to the development and maintenance of circular economies. The students spent the week learning about a circular economy through a roundtable panel with businesses and community organizations, presentations from U of G and City of Guelph experts, a tour of sustainable agricultural businesses in the Guelph-Wellington area, and interdisciplinary group work. Groups spent the week developing a pitch for a solution to a challenge in a circular economy business and presented these pitches to U of G and City of Guelph representatives on the last day.

The week began with a Circular Economy Business and Community Roundtable. The topics for discussion were regenerative agriculture, resource exchange, upcycling and collaboration, packaging and plastics and social innovation and financing – and included partners within the local Circular Economy ecosystem.   This discussion formed the basis for interdisciplinary collaboration for the students, who spent the next two days in group work, proposing a pitch for a solution to challenges that came out of the roundtable.

Summer Institute

COMMUNITY PARTNERS:

- Our Food Future Guelph-Wellington
- The SEED
- 10C Shared Space
- Friendlier
- City of Guelph
- County of Wellington

PARTICIPATING STUDENTS - IN THEIR WORDS:

"The interdisciplinary selection of candidates for this program was incredibly valuable. Working with people with different perspectives and experience helped me frame problems and solutions in a different light."

"This program was an amazing experience! The collaborations and interdisciplinary nature of this program made this experience a memorable one and I was able to learn a lot about how circular economies work. Meeting students across disciplines also made this a great experience, promoting fruitful discussions and critical thinking all week long. I strongly suggest such a program as it encourages you to step outside your comfort zone and learn more about the world we live in."

94%
of students strongly agree this experience helped develop peer network and interactions with students in other fields and institutions.

81%
of students would recommend the program to their peers.

What's Coming:

Experiential Learning

The SMART Training platform provides excellent training for the next generation of leaders and researchers.

In the first year we have established partnerships with the City of Guelph and County of Wellington. Acting as a catalyst between student trainees, and current projects, we will immerse students to gain hands on experience in many aspects of implementation science.

Collaboration

A network that will continue to expand and work in collaboration. Leveraging connections to build a hub for implementation science

First Annual Conference

Focusing on the central place of food in cities, we will discuss key topics such as the use of 'big data' to create smart solutions for urban environments, relevant challenges Indigenous communities face, and the many facets of the circular economy in cities of the future. With the goal of expanding the understanding of implementation science, we will explore how to build and support healthy cities through research excellence, capacity building and knowledge mobilization. Additionally, we are excited to welcome the Healthy Cities Research Initiative to present current and future advancements in the healthy cities space.

November 17-18, 2022, Ottawa ON.