Equity, diversity and inclusion: What have we learned and what's next?

Équité, diversité et inclusion : leçons apprises et prochaines étapes



Panel 1: Equity, diversity and inclusion: What have we learned and what's next?

Girma Bitsuamlak, Director, WindEEE Research Institute, WindEEE Meredith McLaren, Chief Executive Officer, CGEN

Monique Albert, Director, BIOSCAN, and COO, the Centre for Biodiversity Genomics (CBG) Daniela Loock, Director Engagement & Knowledge Mobilization, Ocean Networks Canada (ONC)

Moderator

Samantha Kuula , Director of Corporate Services, SNOLAB

Panelists



Land Acknowledgement

The panel members would like to acknowledge that they live, work and play on the traditional territories of: Mississauga of the Credit, Atikameksheng Anishinabek, Dish With One Spoon Treaty Territory, Haudenosaunee, Lūnaapéewak, Chonnonton Nation, Musqueam, Squamish, Tsleil-Waututh Nations, Huron-Wendat, Petun First Nations, Seneca, Lək 🛛 əŋən Peoples, Songhees Nation, Esquimalt Nation, WOSÁNEC Peoples

We recognize that today this gathering place is home to many First Nations, Métis and Inuit peoples and acknowledging them reminds us of our relationships to this land where we learn and work. In the spirit of Truth and Reconciliation, we invite you to take a moment to personally reflect and acknowledge the past and commit to fostering a future built on respect, understanding, and partnership.





Instructions







Introducing SNOLAB

- SNOLAB hosts rare event searches and • measurements. It's located 2 km underground in the active Vale Creighton nickel mine near Sudbury, Ontario, Canada.
- SNOLAB is operated jointly by University of • Alberta, Carleton University, Laurentian University, University of Montreal, and Queen's University.
- SNOLAB operations are funded by the • Province of Ontario, and the Canada Foundation for Innovation.















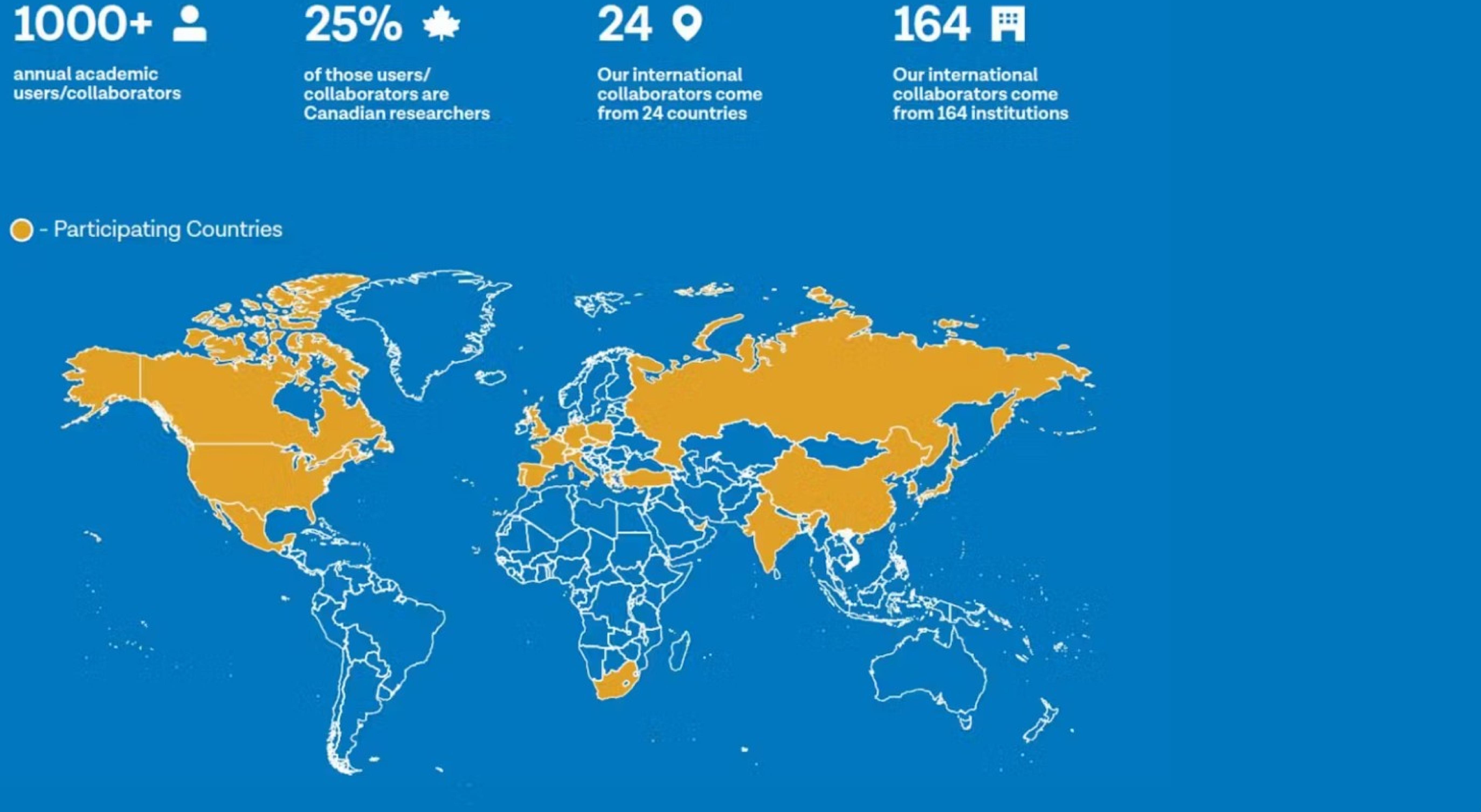


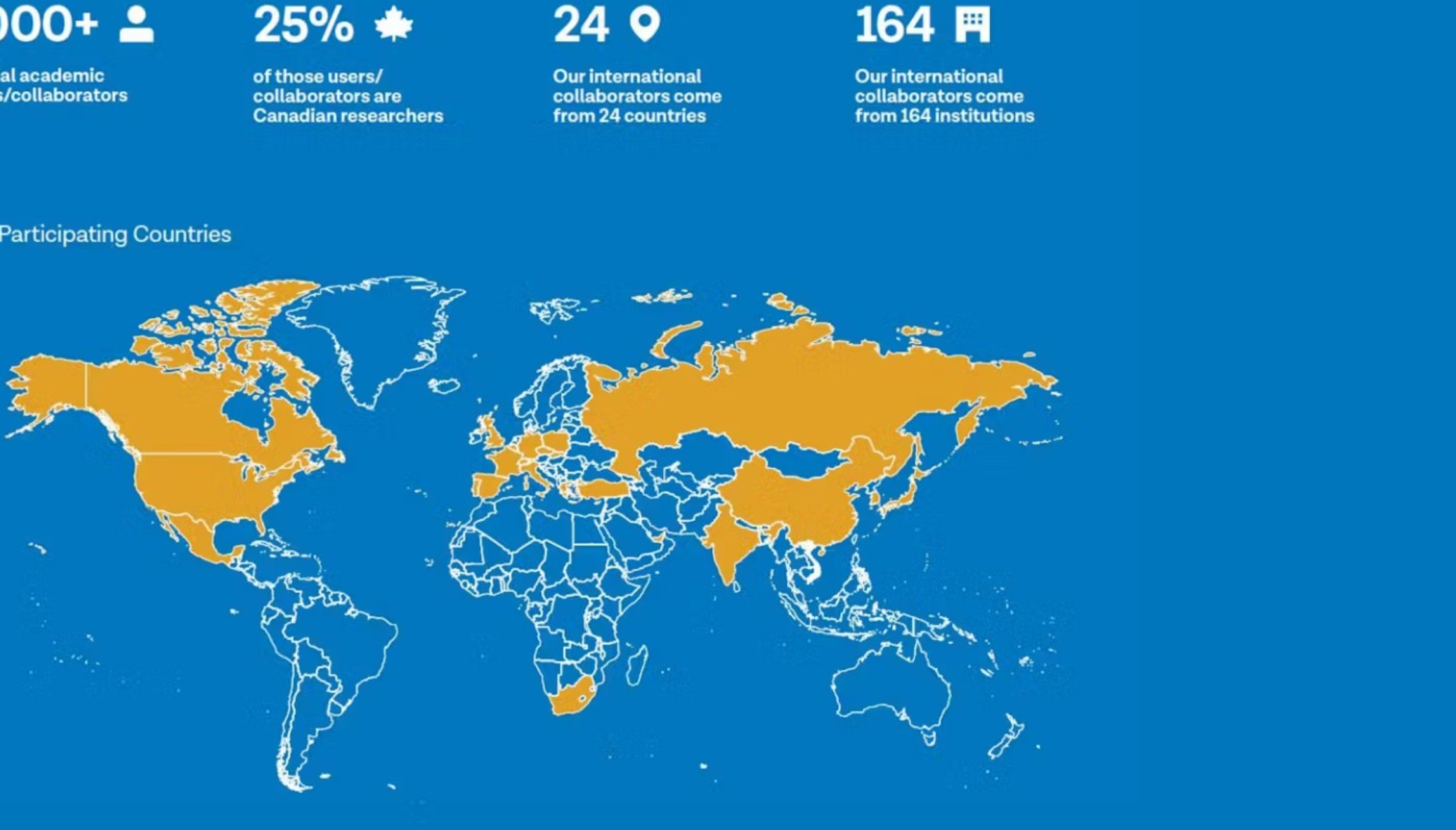


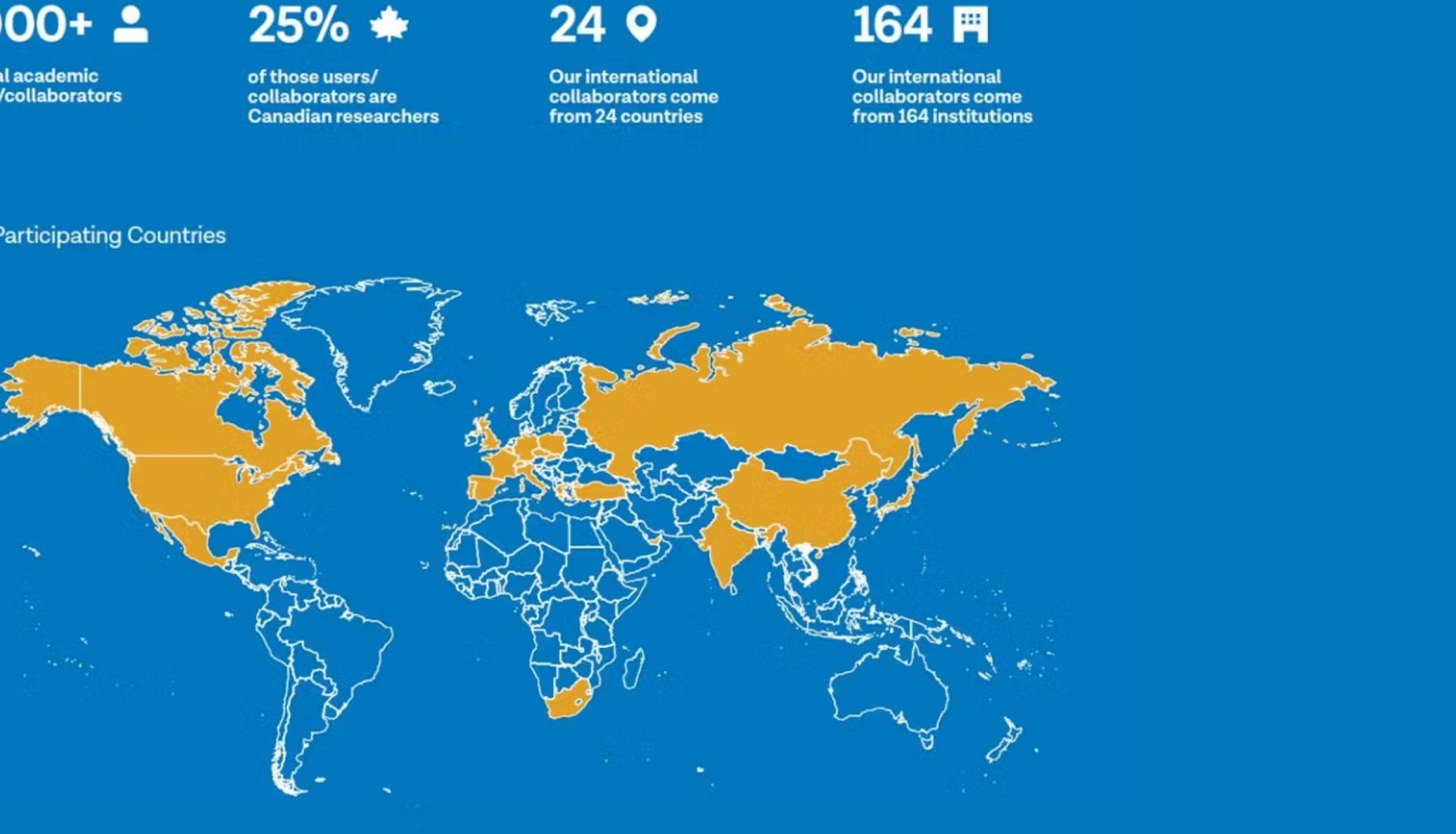
SNOLAB by Numbers

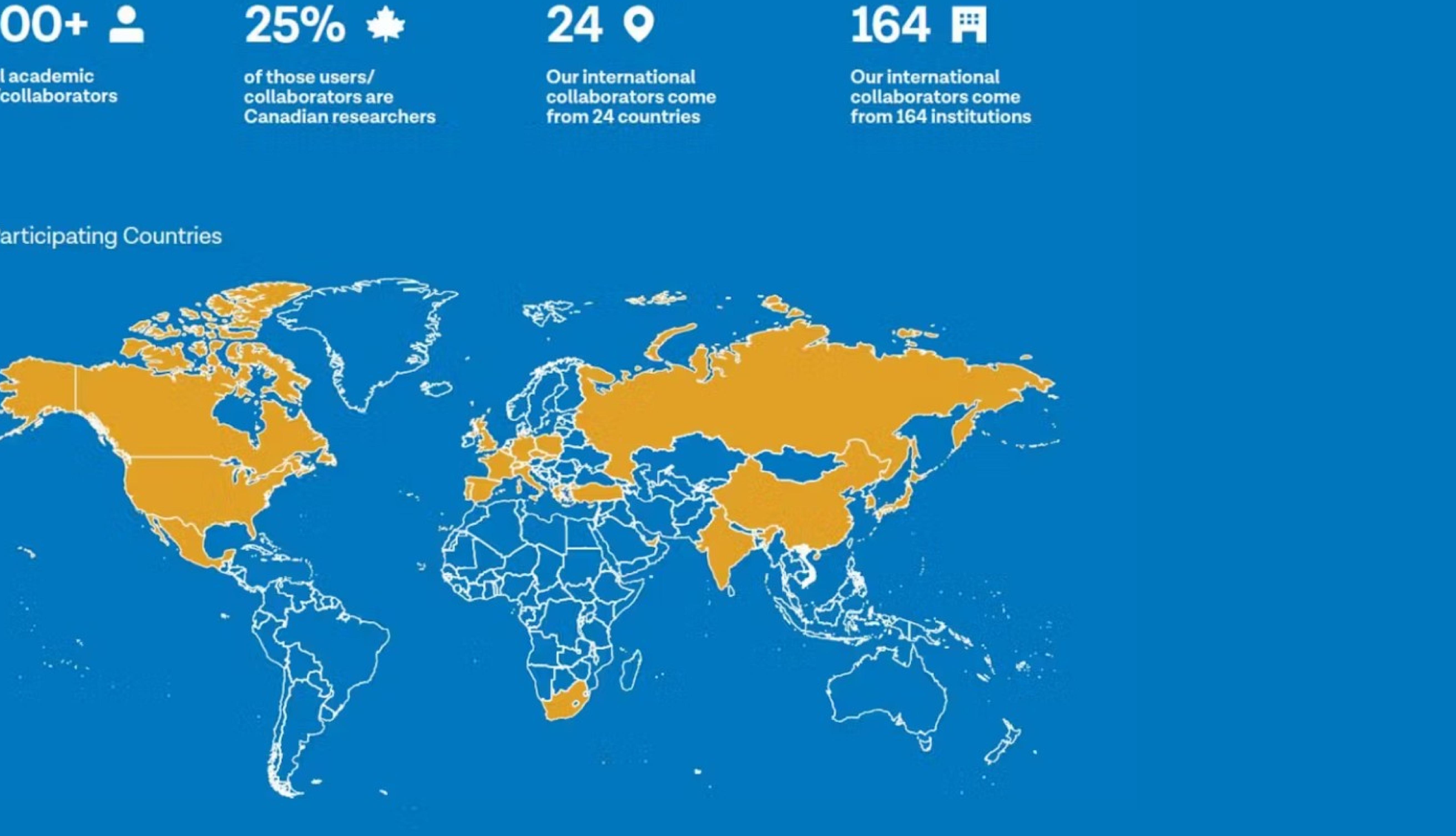
annual academic users/collaborators

















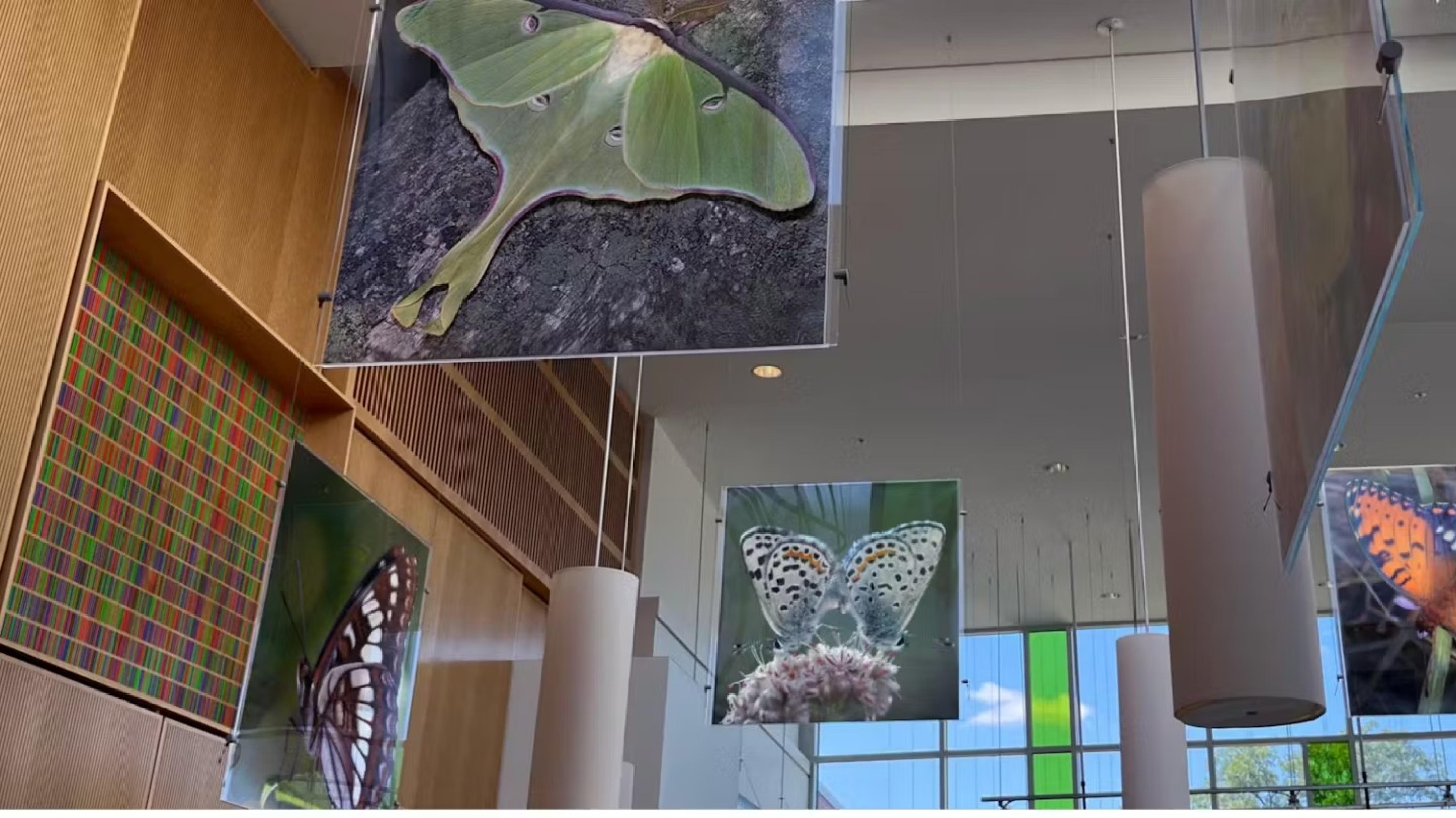
Skilled People

Embed equity, diversity, and inclusivity into everything we do.

- Working towards gender parity and significant representation of equity-deserving groups, both in our staff and Board of Directors
- Create multi-purpose wellness spaces in the surface building and underground labs.
- Create a standing EDI committee that reports directly to the Executive Director.
- Collect self-identification data on our staff.
- Mandatory training.
- Indigenous Knowledge carrier









IMPROVE LIFE.

Centre for Biodiversity Genomics

<section-header><section-header><section-header>





2005: Established as founding unit in the Biodiversity Institute of Ontario

Vision: A world where we read the biosphere with DNA

Centre for Biodiversity Genomics (CBG)

2022: Transitioned to a separate **University Research Centre**

Mission: Foster a global biomonitoring system by providing 3 services: organization, DNA sequencing, and informatics







CBG Delivers Three Services to the Biodiversity Science Community

Sequencing



Informatics

BARCODE OF LIFE DATA SYSTEM

Advancing biodiversity science through DNA-based species identification

DESIGNED TO SUPPORT THE GENERATION & APPLICATION OF DNA BARCODE DA

d-based data storage and analysis platform developed at the Centre for Biodiversity Genomics in Canada. It consists of four main modules, a educational portal, a registry of BINs (putative species), and a data collection and analysis workbench.



nterface that allows for 1.7M public records in ultiple search criteria t limited to, geography, , and depository.



EDUCATION PORTAL

A custom platform for educators and students to explore barcode data and contribute novel barcodes to the BOLD database.



e of Life Data System (BOLD) is an online workbench and database that supports the assembly and pde data. It is a collaborative hub for the scientific community and a public resource for citizens at la

EXPLORE THE DATA



A searchable database of Barcode Index Numbers (BINs), sequence clusters that closely approximate species.



A data collection a environment that : assembly and valid barcodes and othe

70ĸ Plant Species

> NOVEMBER 2017 **UGER NATIONAL PA** SOUTH AFRICA 71 NATIONS 460 DELEGATES

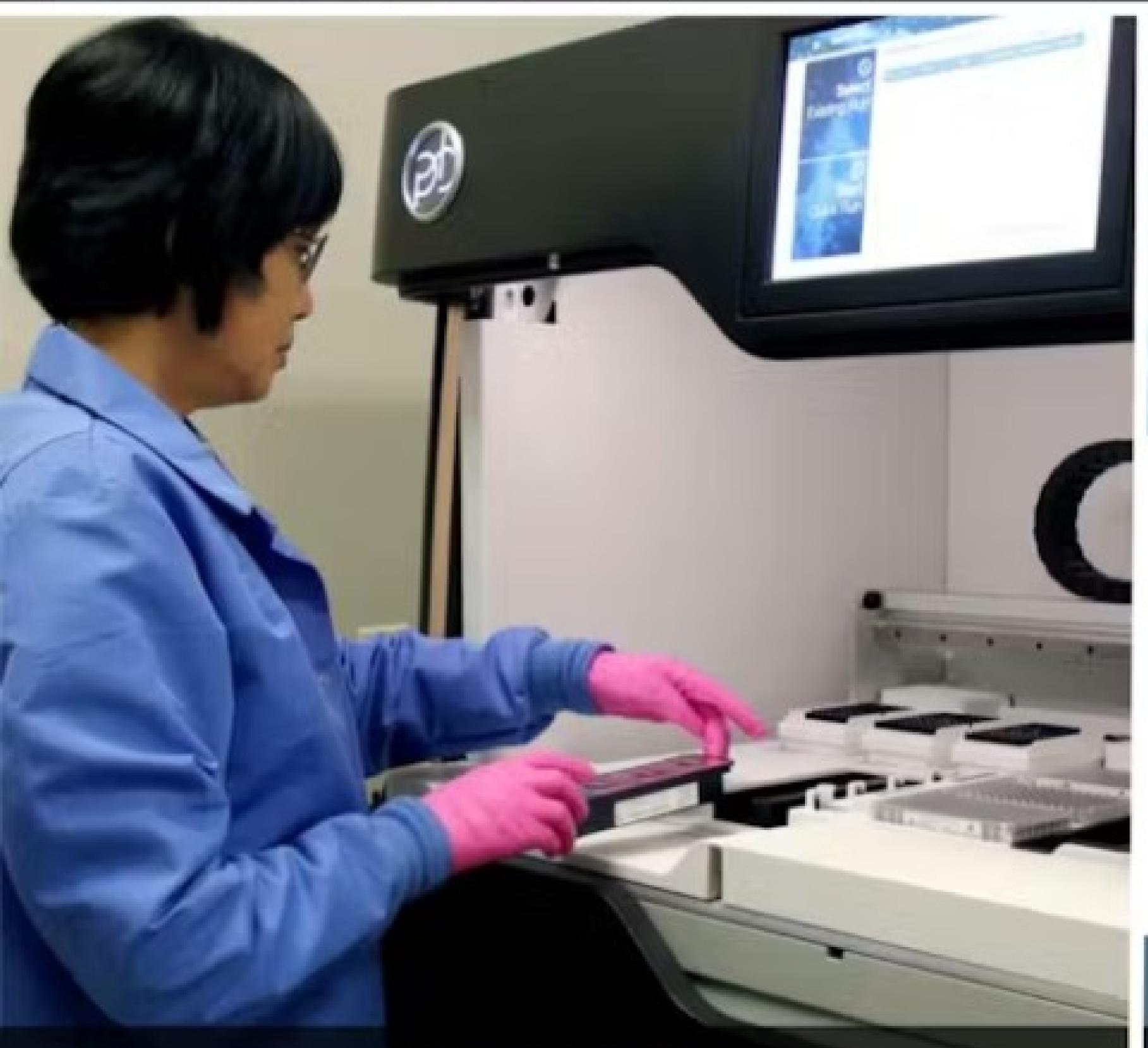
Organization

NOVEMBER 2011 ADELAIDE AUSTRALIA 61 NATIONS 463 DELEGATES

OCTOBER 2013 **43 NATIONS 400 DELEGATES**

JUNE 2019





Genomics

CBG Has Six Research Units



BARCODE OF LIFE DATA SYSTEM

Advanturing biodiversity science through UNA-based species identifications

DESIGNED TO SUPPORT THE GENERATION & APPLICATION OF DNA BARCODE DATA

BOLD IS a climate based state storage and analysis platforms developed at the Centre for Bodiversity Campents in Canada, II consists of four main modules, a data pertit, aneducational portal, a registry of 80% (putative species), and a data collection and analysis workbanch.



A data retrieval interface that planes for BOLD using multiple search criteria including, but this londed in geography.

taximizing and depository



EDUCATION PORTAL

contribute rower barrodes to the BOLD فيحف الأشافية



DATABALES EXAMPLE TAXONOMY WORKBENCH RESOLUCES LOUN Q

A support platform for educators and A searchable database of Revolde index. chosely approximate species.

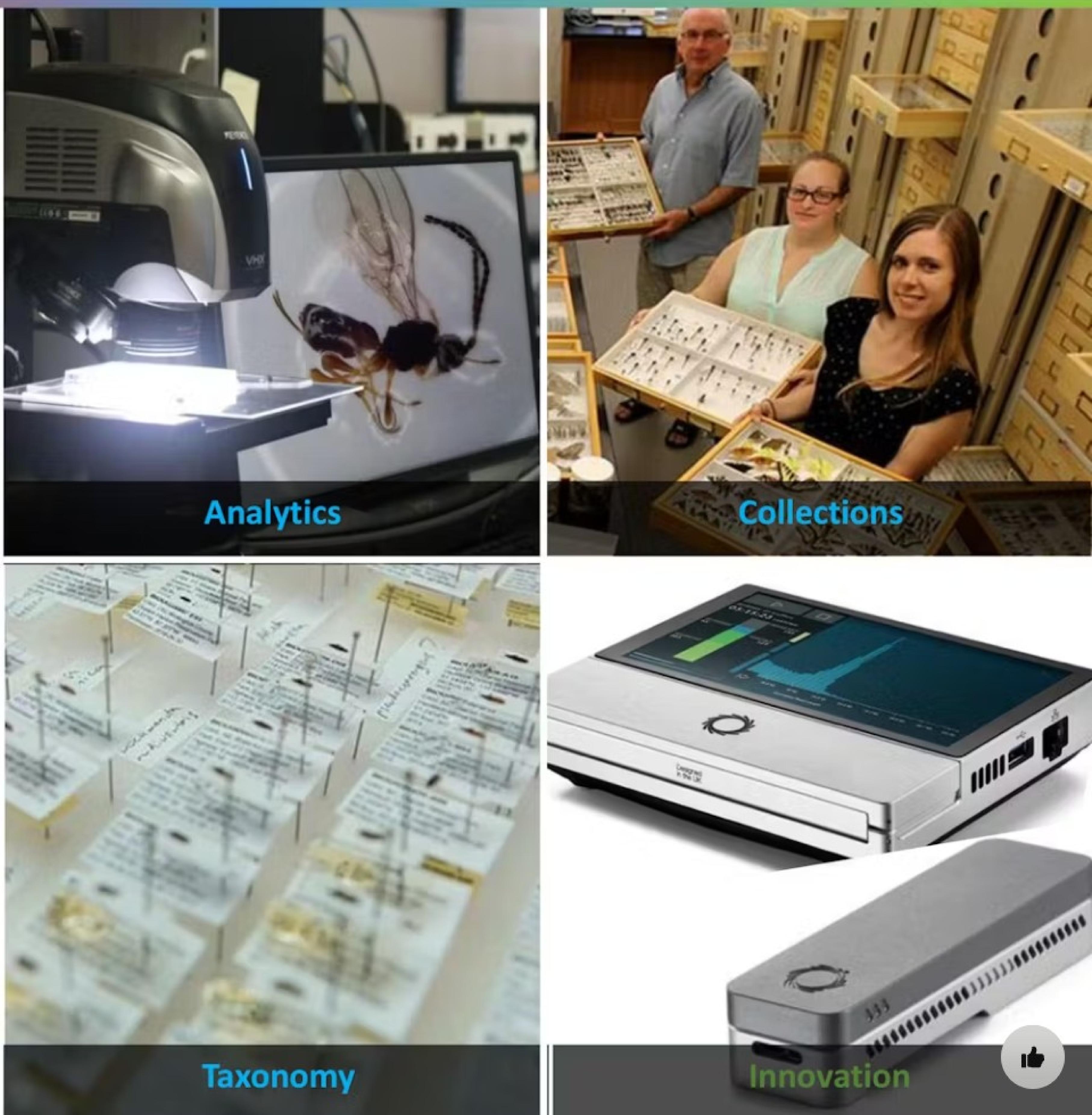


A dista soflection and analysis

envelopment that supports the assembly and validation of Disk barrockes and other sugarrows.



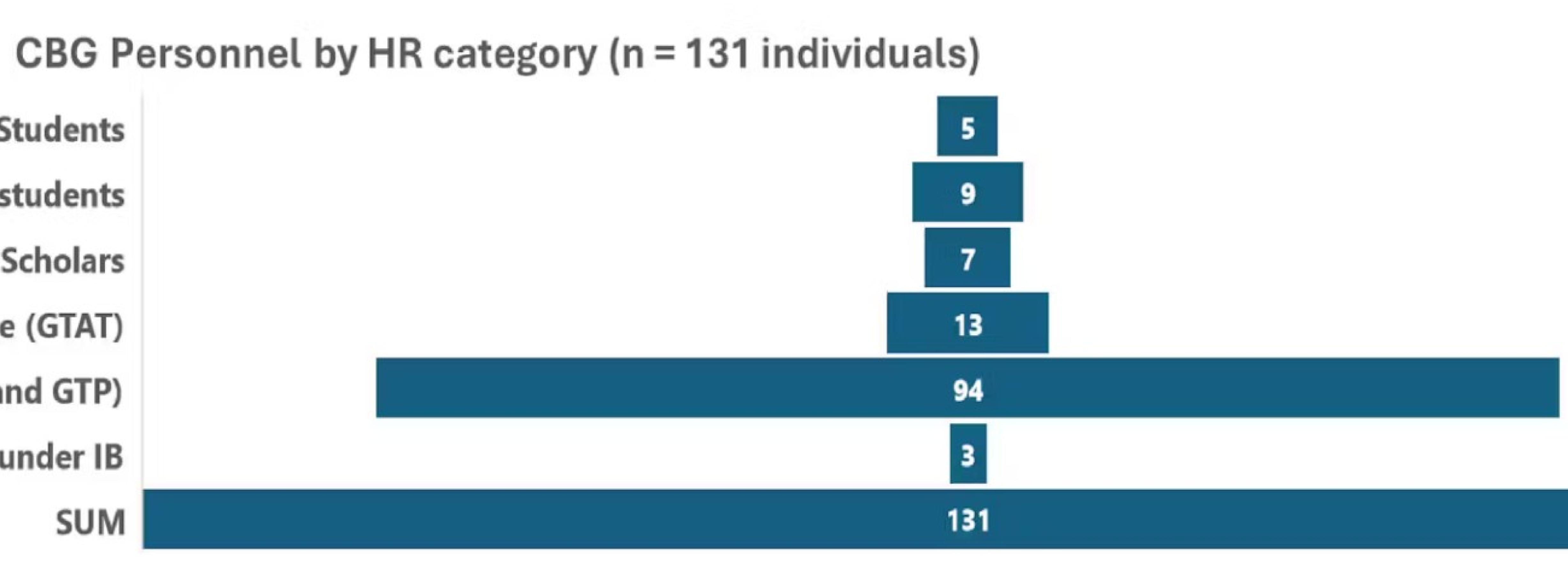
Informatics





- **Grad Students**
- **Undergrad** students
- **Post doctoral Scholars**
- Temporary Part-time (GTAT)
- Temporary Full-time (GTAT and GTP)
- Professors/Associate Professor under IB

CBG: Workforce Composition





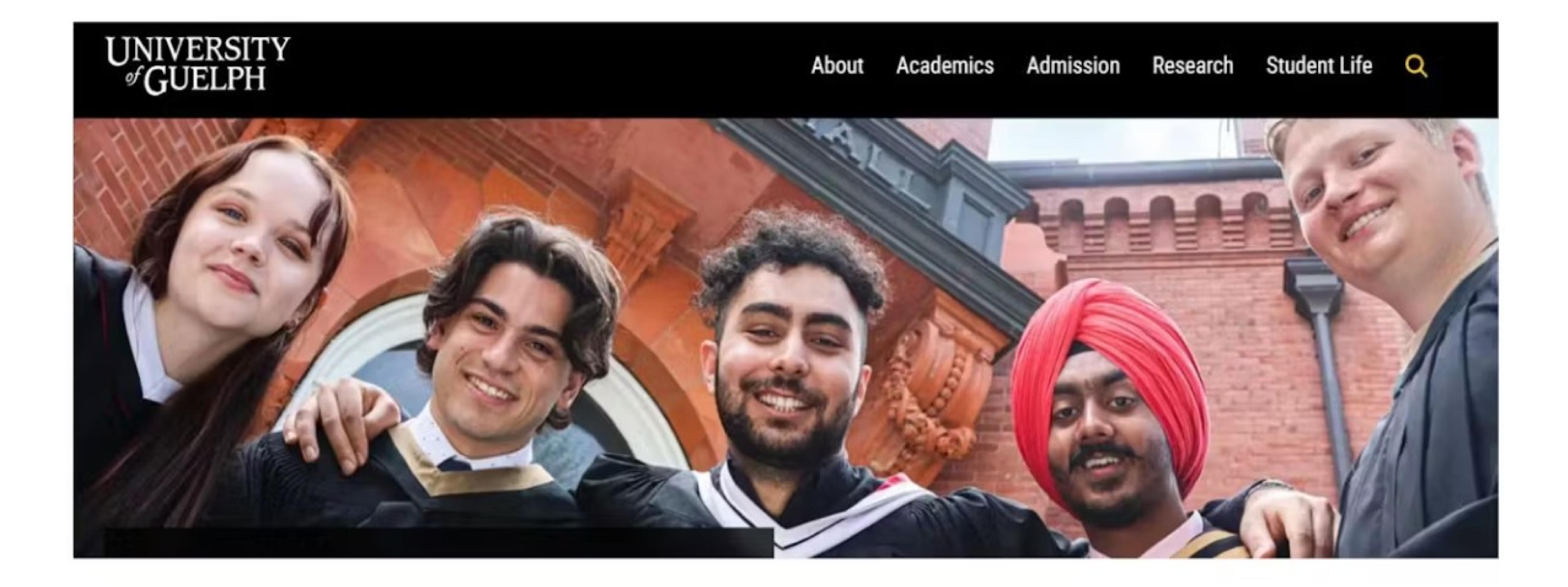


University of Guelph (Host Institution): EDI supports

Office of the President University of Guelph Anti-racism Action Plan

University Secretariat Sexual Violence Policy

Indigenous Initiatives Indigenous Initiatives Strategy: Bi-Naagwad I It Comes Into View



The Office of Diversity & Human Rights The Human Rights Policy Document Code of Ethical Conduct Policy and Advisory Group Accessibility at the University of Guelph Fostering a Sense of Belonging in Times of Crisis and Challenge Positive Space Project Training Module Principles of Belonging: Anti-Oppression and Anti-Racism online training module

(grant)



Training and education Accessibility resources Consultation Enhancement fund **Complaint resolutions**

Statement on EDI

The CBG at the University of Guelph believes that equity. require an organizational culture that embraces the uniqu are themselves representative of Canada's population. recognizes that an inclusive and equitable campus is a imperative. Acknowledging the University's diverse popt every member of our community is foundational pillar of a successful po

The CBG vigorously supports th deserves equitable treatment, and it f organizational capacity is stre backgrounds, perspectives, ar

> The CBG is a diverse, in strives to maintain a policies, and processes.

discriminatory and intimidati identify and address imbalances and parters r

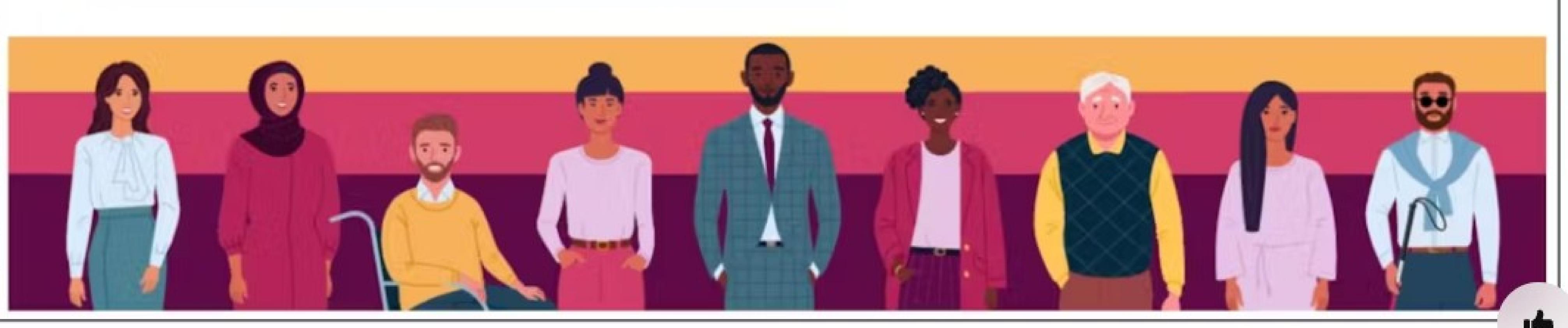
to age, gender identity, disability race sexual other Code-protected grounds. In the spirit the Centre is also committed to respect relationships with Indi

The CBG acts by recognizing and developing initiative hiring, promotion, stakeholder engagement, and knowled It provides support and mentorship to ensure all staff are t ethically and enabled to realize thei

CBG EDI Policy and Framework



Centre for

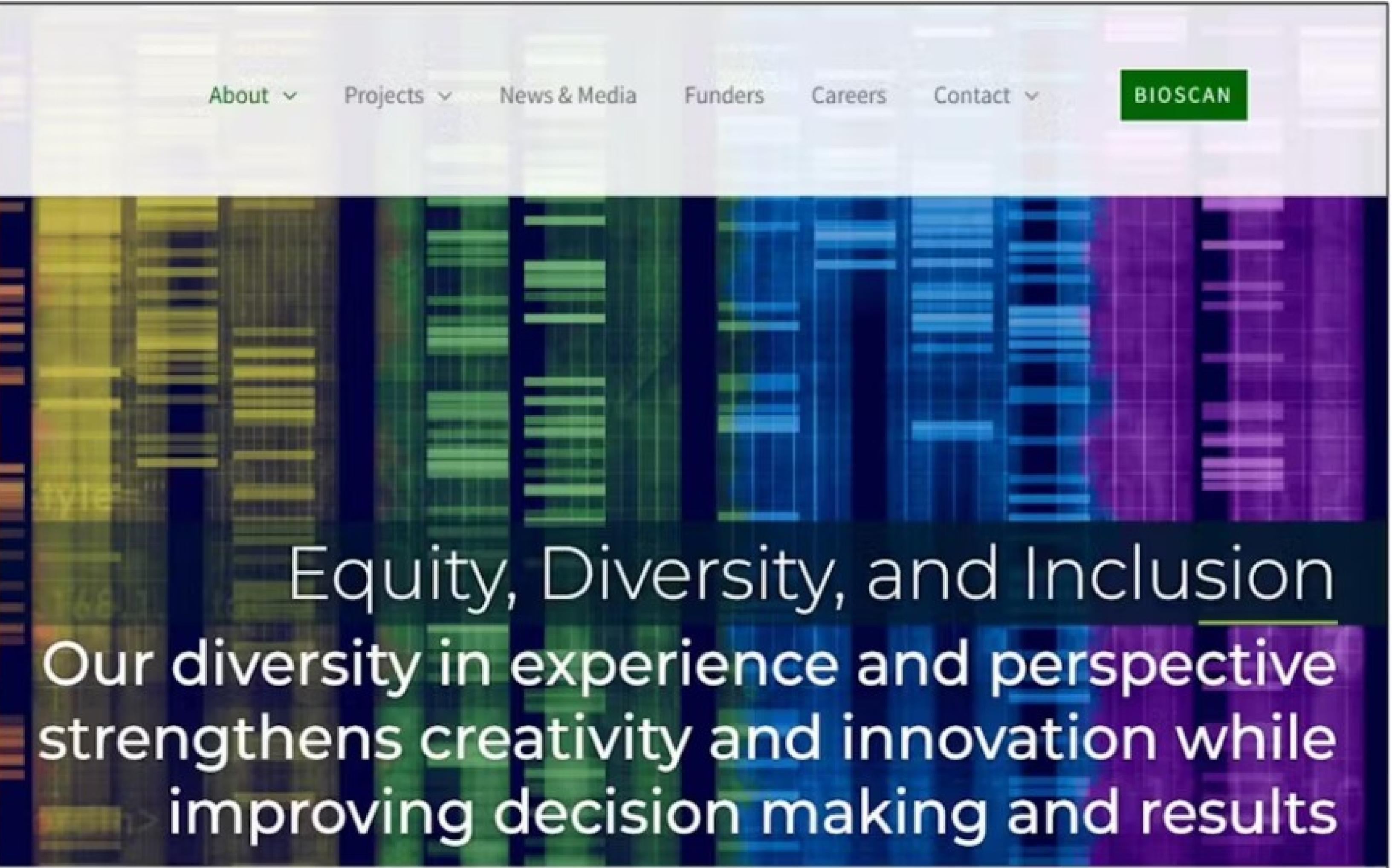


About v Projects v

orientation, and socioeconomic The 50 – 30 Challenge: Your Diversity Advantage

From: Innovation, Science and Economic Development Canada





OBJECTIVES AND ACTIVITIES: oversee the CBG EDI framework

- Learning and education Measurement and reflection Affirmative Action

Launched in Spring 2022 8-10 Members, people leaders from each CBG Unit Meets quarterly

EDI at CBG: The EDI Committee

 Ensure alignment with UoG (host institution) EDI policies ✓ Monitor key metrics (e.g., surveys) Recommend/oversee training opportunities ✓ Recommend/implement EDI actions







Committee Learning and Education

- 1. 50:30 Toolkit
- 2. 50:30 Community of Practice 3. Attend Host Institution virtual courses 4. Other similar organizations
- 5. Review literature
- 6. Consult host institution Office of **Diversity and Human Rights**

CBG EDI Committee: Learning and Education

Workforce Training

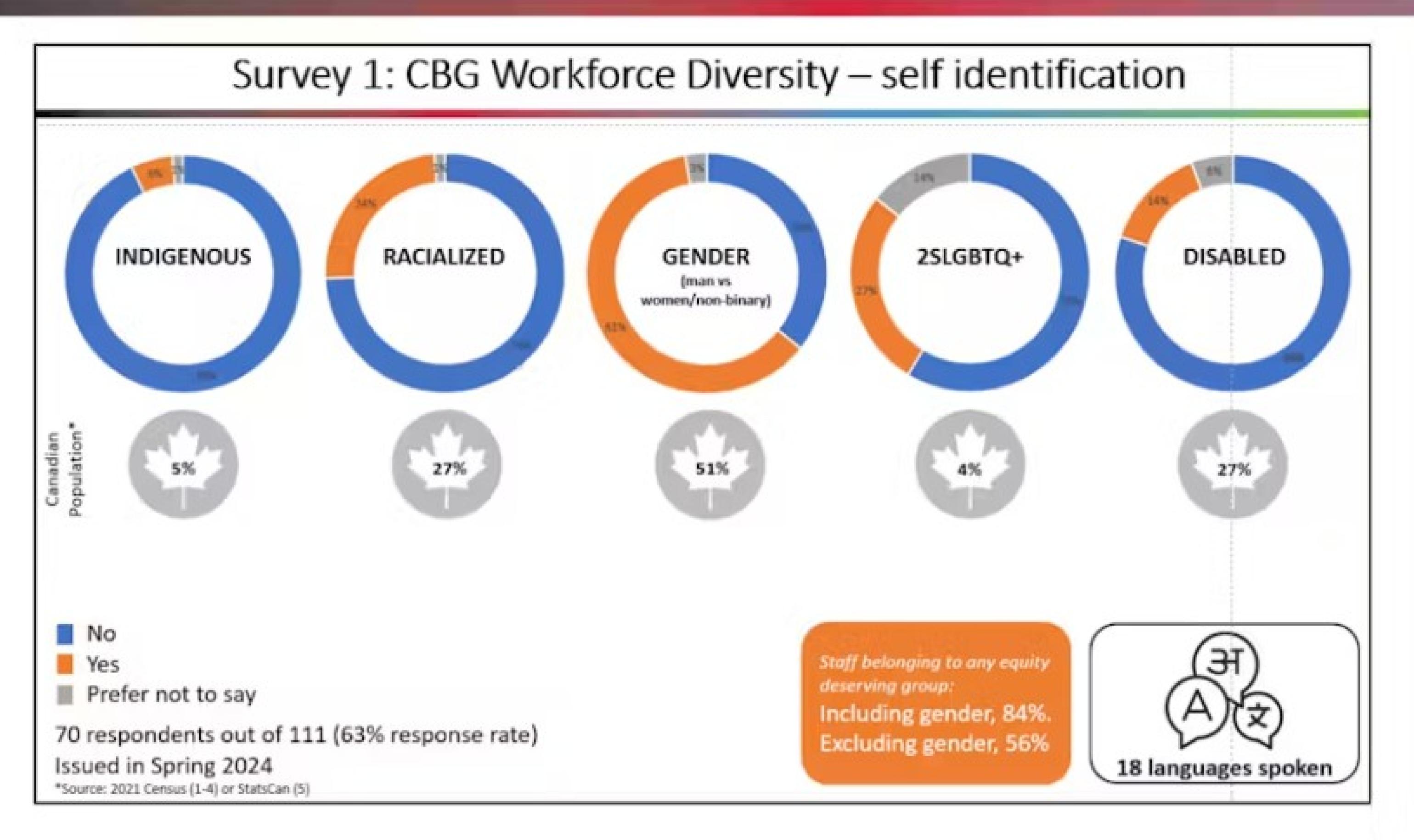
- 1. Added EDI information to Town Halls
- 2. Included 2 fundamentals courses in onboarding process
- 3. Point staff of other training opportunities

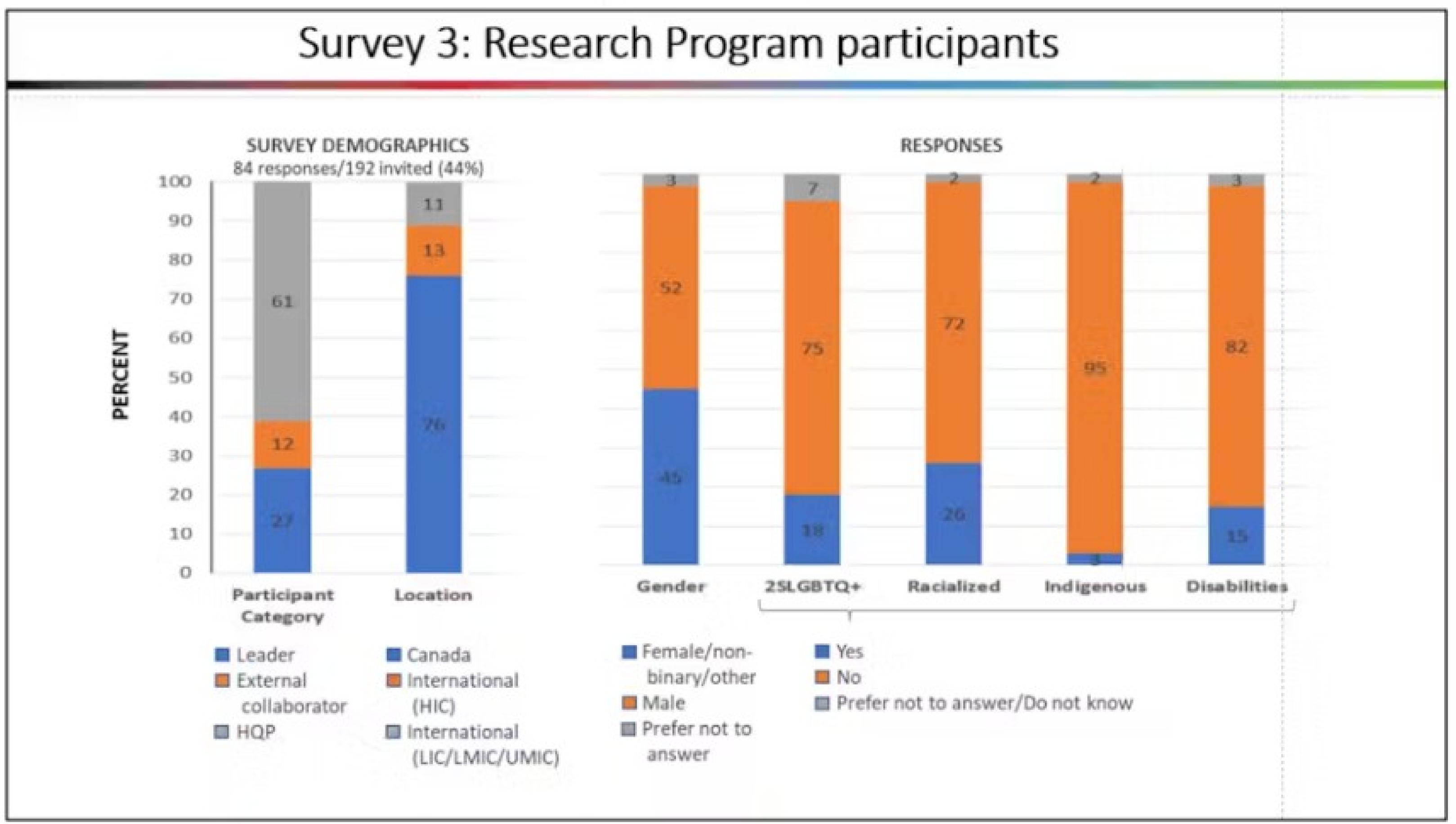


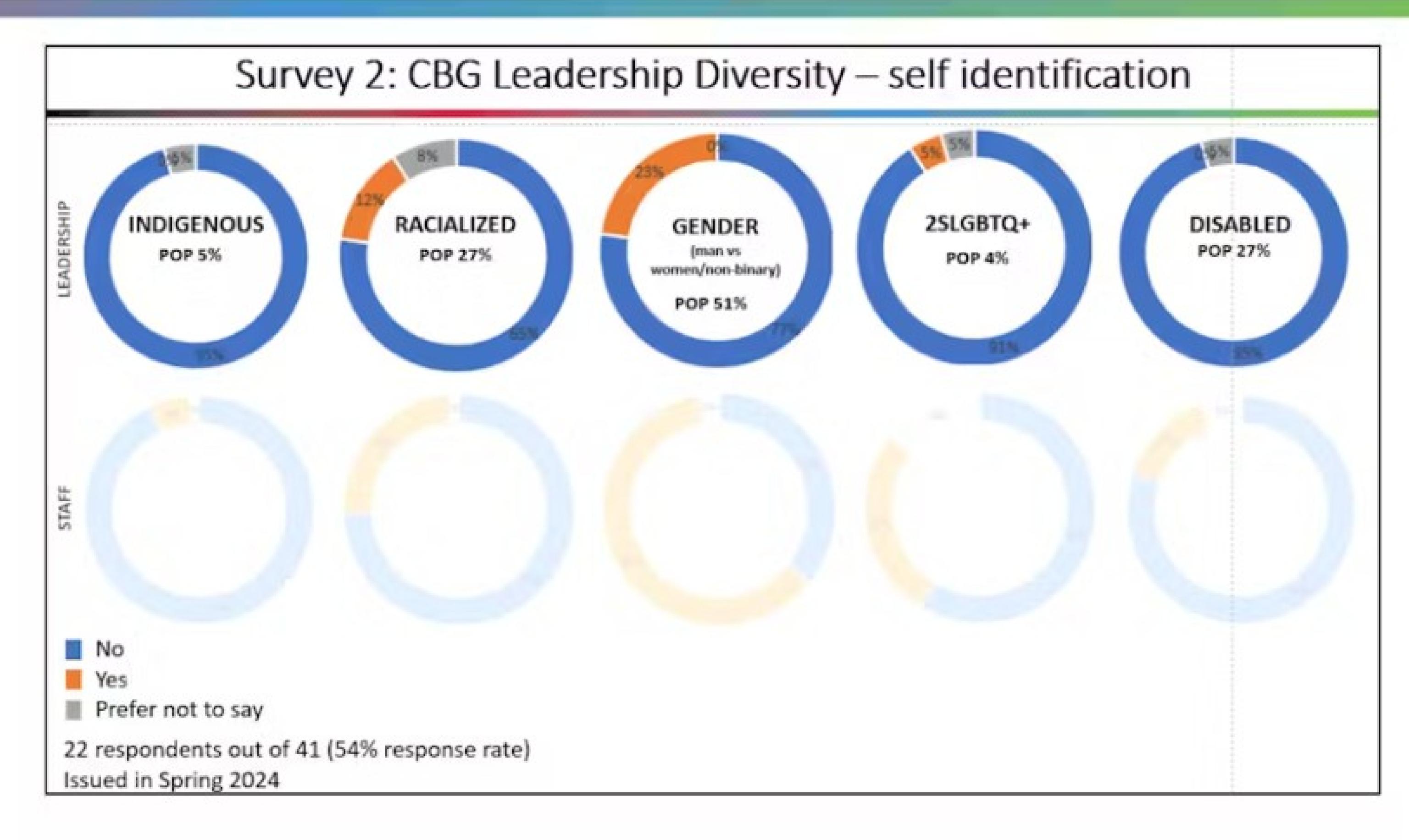




CBG EDI Committee: Measurements (surveys)













Complete

Land Acknowledgements Equitable Hiring policy



CBD EDI Committee: Affirmative Action



Upcoming

- Celebratory events (e.g., cultural, Pride)
- Accessibility audits of CBG assets and implementation of recommendations
- Code of Conduct







CANADA FIRST RESEARCH EXCELLENCE FUND

X/AIDER FOUNDATION





New Frontiers in Research Fund Fonds Nouvelles frontières en recherche



A 10 10 10 10

Polar Knowledge Canada



GenomeCanada



Ministry of Colleges and Universities

GORDON AND BETTY VIORP FOUNDATION



Ontario Genomics



JNIVERSITY &GUELPH

windEEE Research Facilities BLWTL

WindEEE Dome

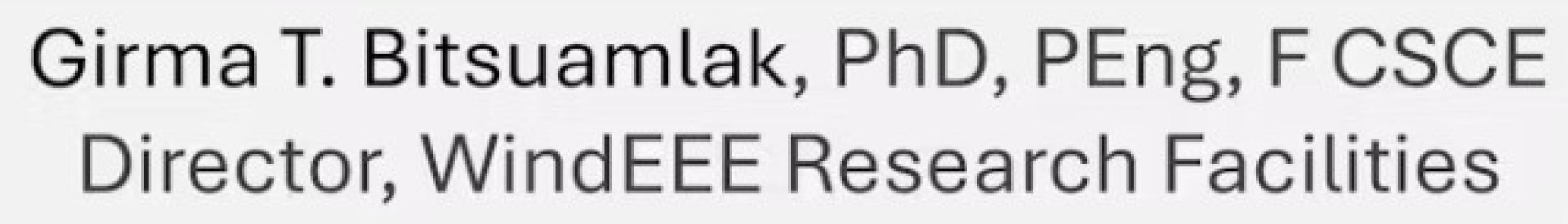


- The first hexagonal wind chamber gives researchers consisting of 106 real-time controlled fans and adoptive flow modifiers,
- Worlds unique facility that generates complex wind systems, e.g. tornadoes, downbursts and hurricanes. Multi—scale testing capability
- (25 m diameter testing chamber) suitable for urban and complex terrain flows.



Boundary Layer Wind Tunnel Lab.

- Named historical by CSCE/ASCE The birthplace of the modern practice of wind engineering.
- For more than 50 years, the group has trained some of the best HQP's in Wind Engineering
- Made countless structures in the world safer & economical including many iconic structures like the CN Tower & the Confederation Bridge.
- Additional fire flare, wind/wave testing capability.



3LP "Three Little Pigs"

- Enables for the first time, the application of realistically simulated time and spatially varying wind loads to full-scale houses, in a controlled manner, up to failure.
- This permits an assessment of the integrity of the overall structure of the building, the load pathways and the performance of individual building components as part of the whole construction



16 highly skilled engineers, technicians, and managers

ARC

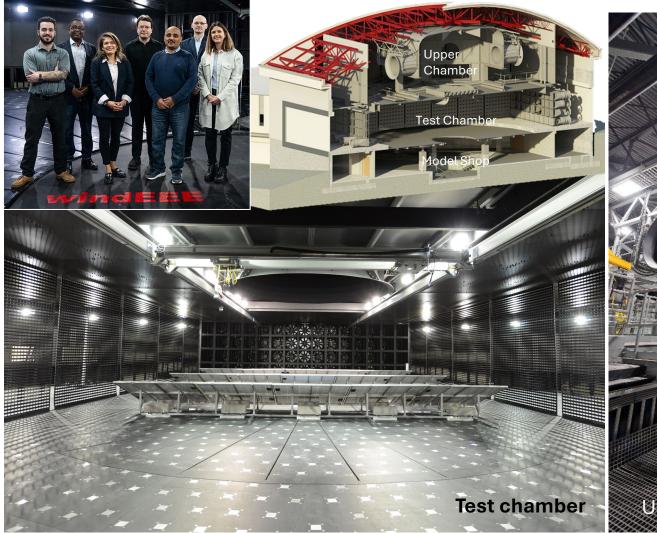
"Advanced Research Computing"

Enables Multi- physics & -scale climate engineering studies Multi-physics: wind driven rain, wind born debris, snow drift, fire and smoke propagation, wind/thermal and energy performance of buildings. Multi-scale - component to

- building to city scales
- CWE, Digital twins
- AI/Machine Learning
- Research software

Digital Research Alliance of Canada

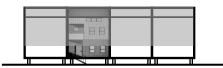
Alliance de recher he numérique du Ca

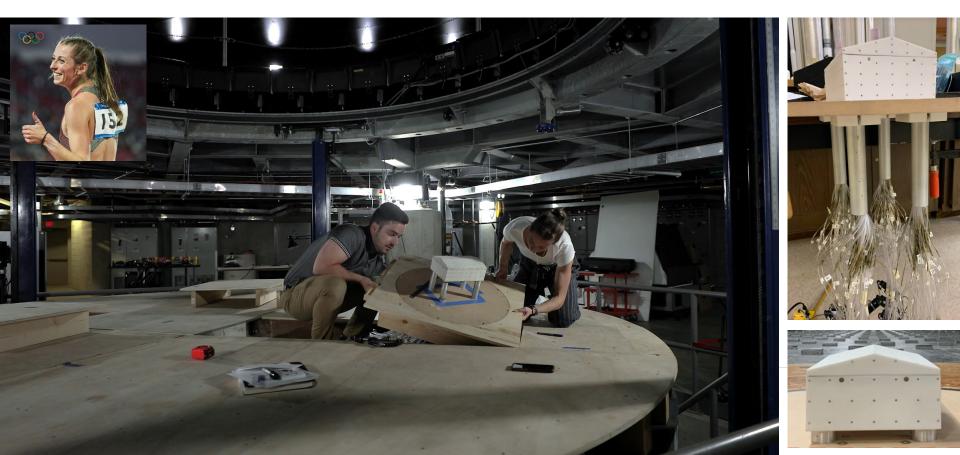


Dome Upper Chamber



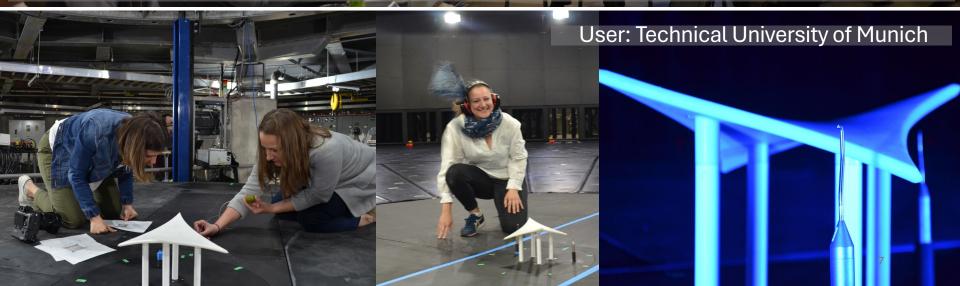
Resiliency of Canada's Northern Architecture: windEEE and BLWTL testing

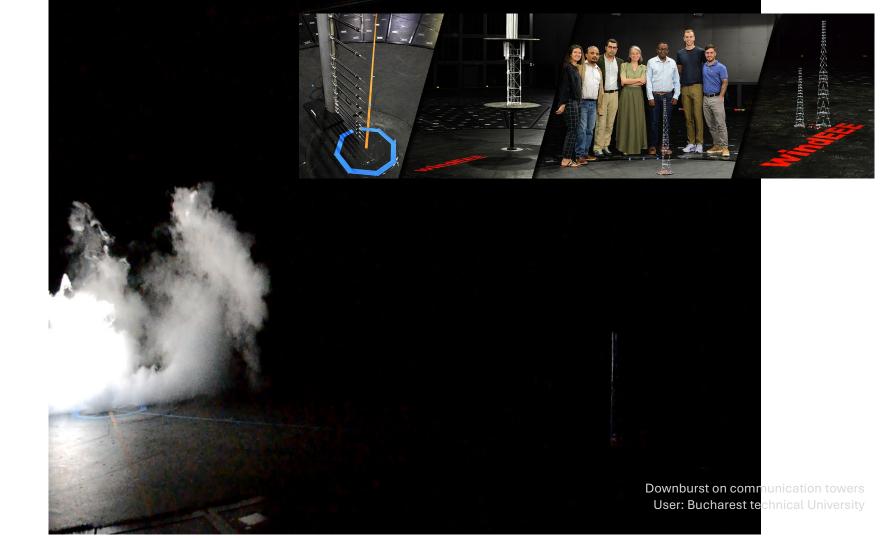






Building Code and Standard development for tornado design Users: NRC and Western





Aeroelastic effects of wind on a standing whale statue Users: Queens U and Edward Burtynsky

Bora/Tornado/Downburst wind loading on solar arrays <u>Users</u>: Zagredb Tech. University, Croatia; University of A Coruña, Spain; von Karman Institute, Belgium.



Training and Outreach at **windEEE**

OCEAN NETWORKS CANADA

2025 Canada Foundation of Innovation - MSIF Workshop Ocean Networks Canada - Our EDI Journey

Daniela Loock - Director Engagement & Knowledge Mobilization 05 February 2025

A UNIVERSITY OF VICTORIA INITIATIVE



Discover the Ocean. Understand the Planet.

Observatory

Data Acquisition Instrument Command & Control

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(1975)	(* 1u	10,01	

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- Matola Nation. Townsperv Territe Interties Bay
- Galgelat First Netto & Simples Section



THE CAPTORN

Okaposiuk Report

Kugluktuk Kitikmest Region

Clayopart Sound and Barkiey Sound HEAD AIR VERTICATION DEPARTMENT AND APPROVE ADVISORS. Stewardship Society, Ta-o-qui-aht Rist Nation, youku/Wath Government and Toqueht Netton, Nuo-chait-nulti Territory

NEPTUNE Observatory Neu-Itali-rulib Territory

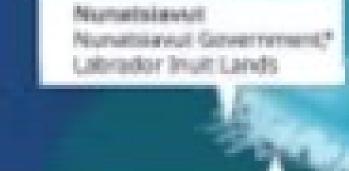
P-ONE Nautrino Array International Collaboration Port Benfrew **Fachemild's First Nation**

Nue-chah-rubh lieritary

Seeke TSouke Fire Netors Cast Seksh Territory

Data Centre

Data Archive Data Enrichment



Natuashish Innu Nation/* Labrador Innu Lands 🖌 Shashatshiu

Innu Nation," Laberador Innu Land

Conne River Mikmaq Algunik Mowingilik Rogory Association (MANROA)* Mikmaiki Tertitory

Marine Institute at Nemorial University.

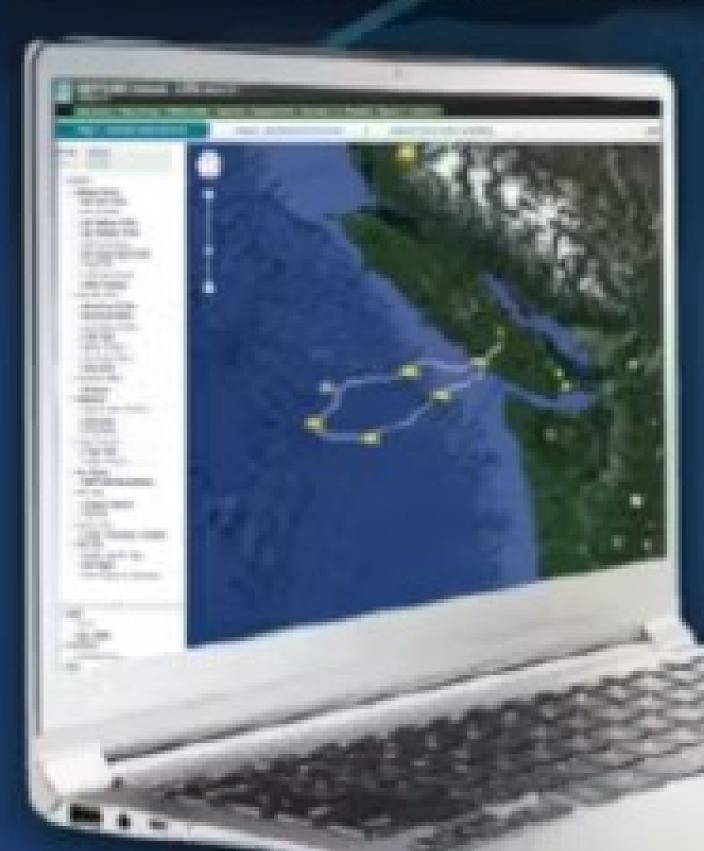
Milking and Beothuk ancestral homeland

Holyrood

Maritima Aboriginal Peoplet Council (S6APC)* Milkmag, Maliseet, and Passamaguoddy territories

Portal

Near-Real Time Ocean Data, All the Time





1. 19 hours 1.

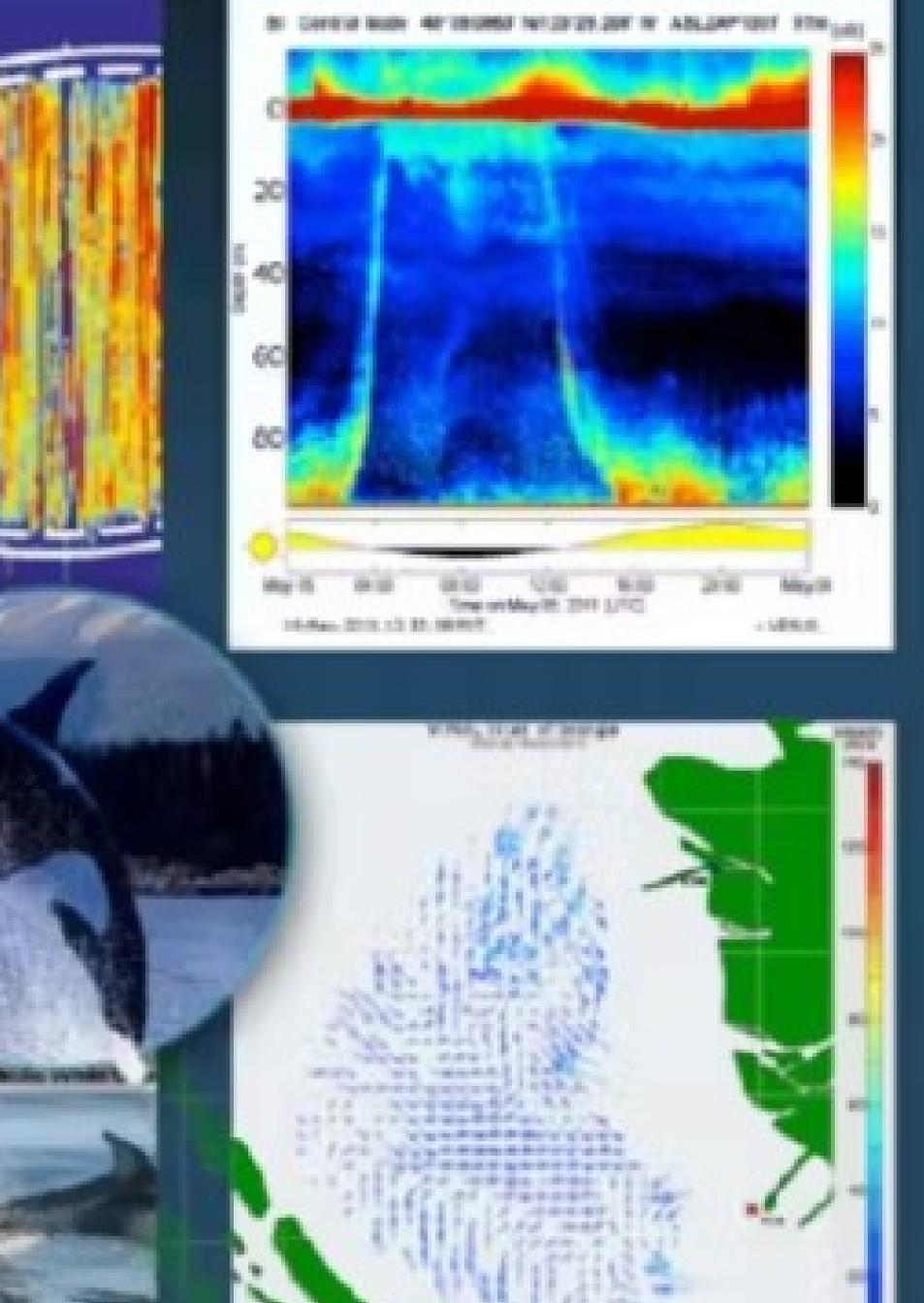


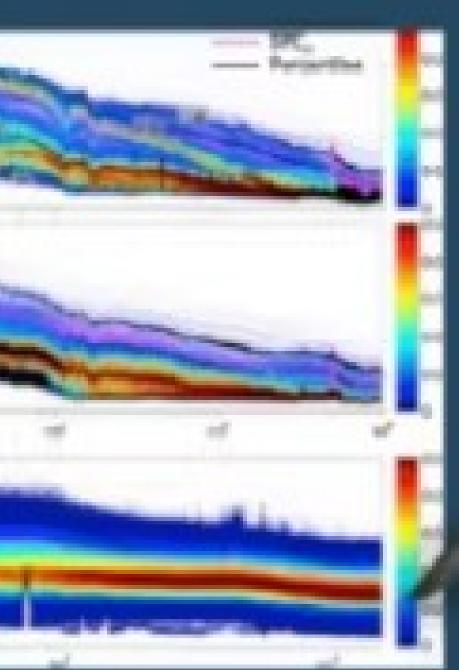


Juan Carlos I Spanish Antantik Station Sportsh National Research Council (CSR)

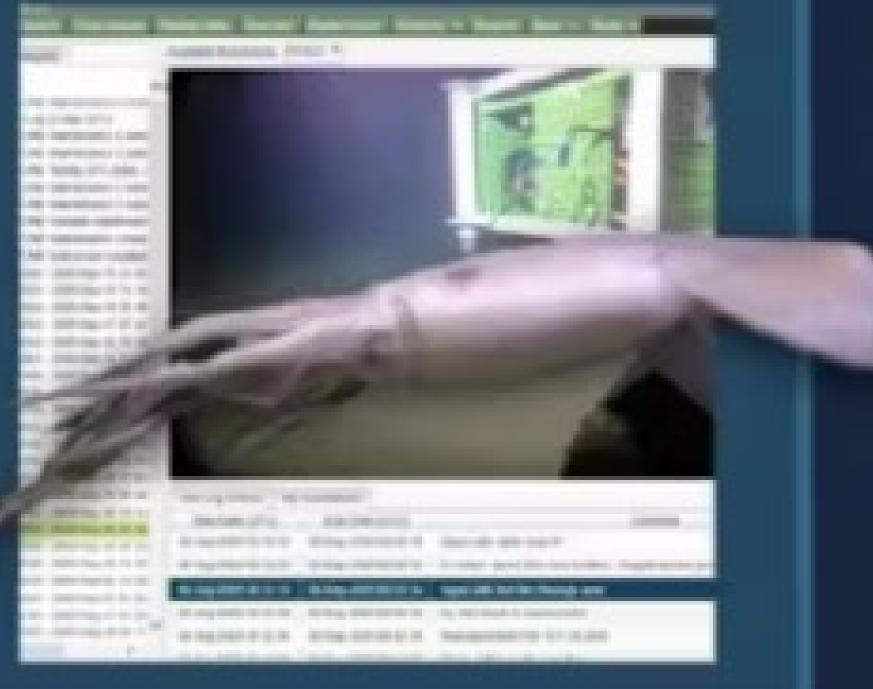


Analytics & Visualization













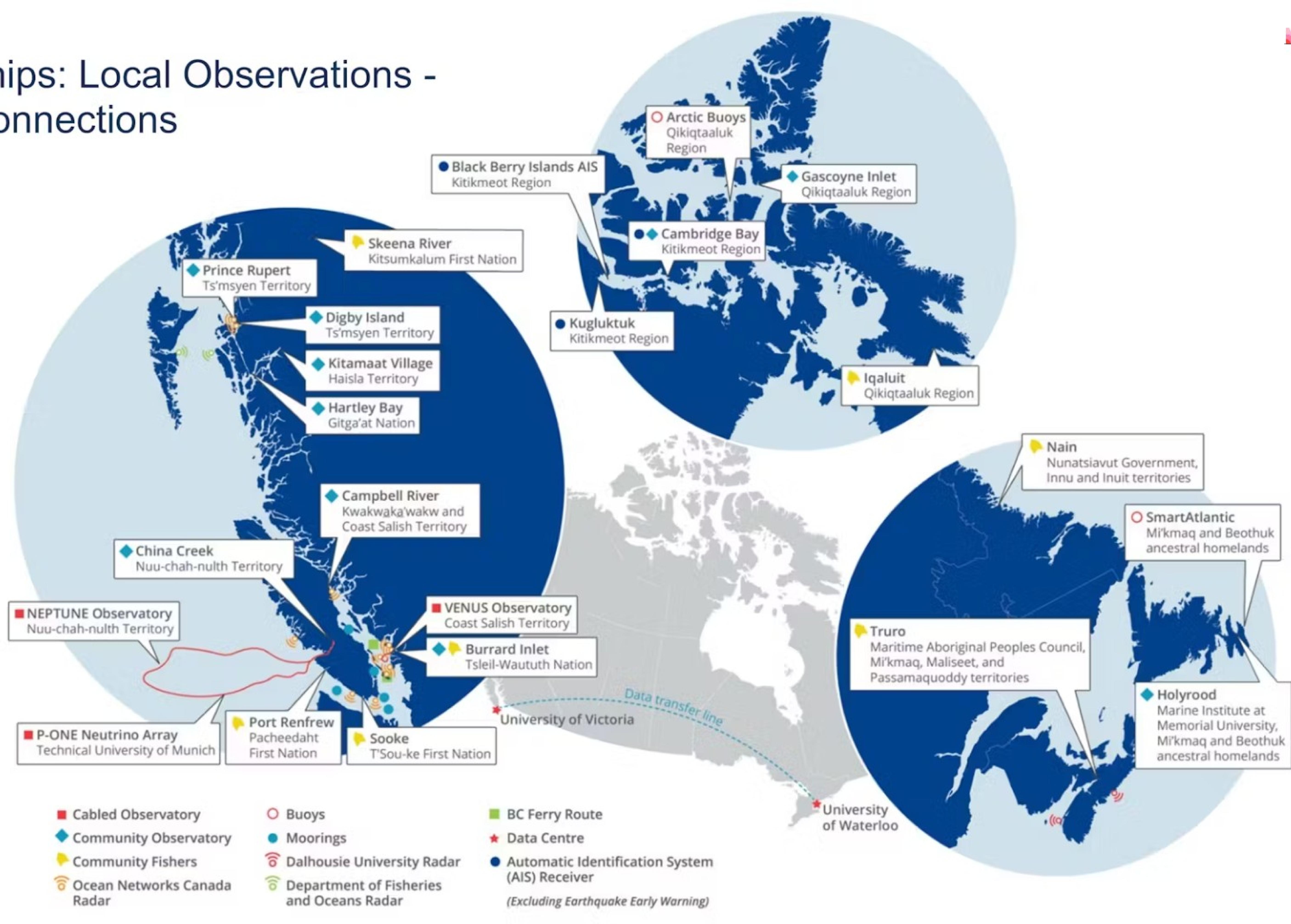


DATA SOURCES

- Major Observatory
- Coastal Community Observatory
- Coastal Observatory
- Geo-Seismic Sensor (ONC)
- Geo-Seismic Sensor (Natural Resources Canada & ONC)
- Neutrino Array
- Community Fishers Mobile Assets
- Subsea Fibre Optic Cable
- O Mooring/Buoy
- 😳 Data Center
- > Mobile Asset
- AIS Reciever
- RADAR (Fisheries and Oceans Canada)
- **BADAR (ONC)**
- RADAR (Dalhousie University)



Partnerships: Local Observations -**Global Connections**





ONC by the numbers

Established in 2006 by University of Victoria

> 930 Instruments

12,400 + Sensors

> 1.5PB Archived Open Data

305+ Data Products

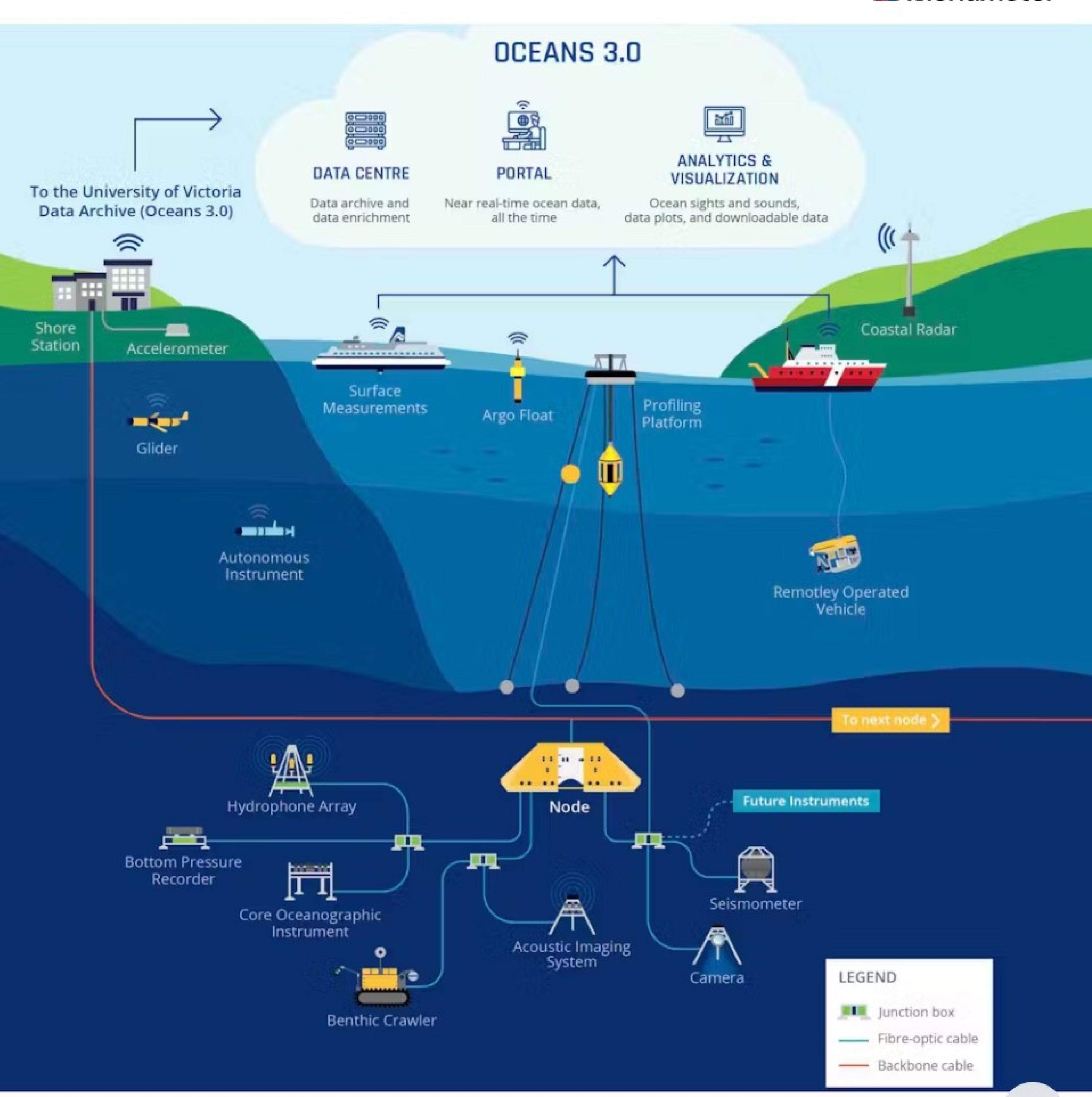
> 30,000 Annual Data Users

~ 170 staff, 10-15 co-op placements

Board of Directors

International Science Advisory Board & Ocean Observatory Council

OCEAN NETWORKS CANADA World Leading Discoveries at a Critical Time



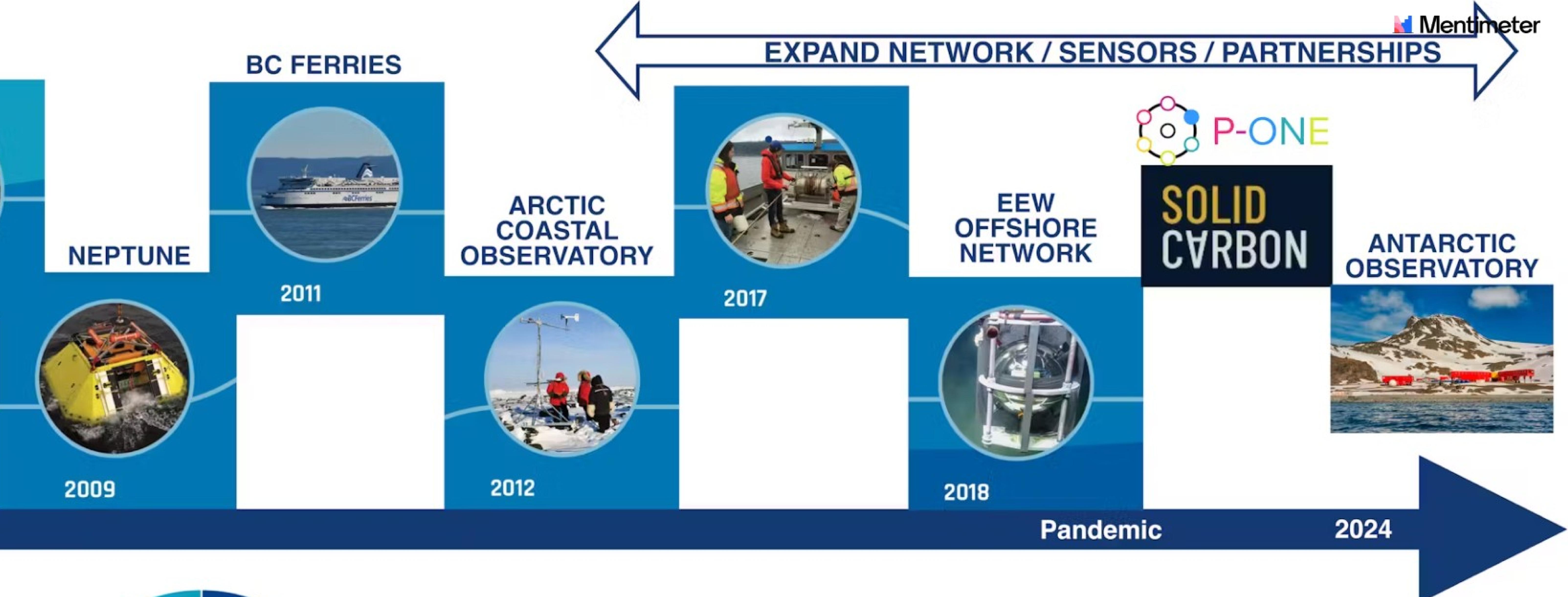






2006





2006



2015-2020

- Co-create Values & Guiding Behaviours
- Establish Learning & Community Engagement Division

2020-2025

- EDI Committees
- 50-30 Challenge
- Commitments

Formalize & Implement EDI

Motivation

Creative solutions require challenging the conventions on how we work.



interactions with our partners.

OCEAN NETWORKS CANADA World Leading Discoveries at a Critical Time

By expanding on who is engaged in setting priorities, designing new initiatives, and determining successes we can shift power dynamics.

We aim to remove barriers to participation internally, for our users and in our

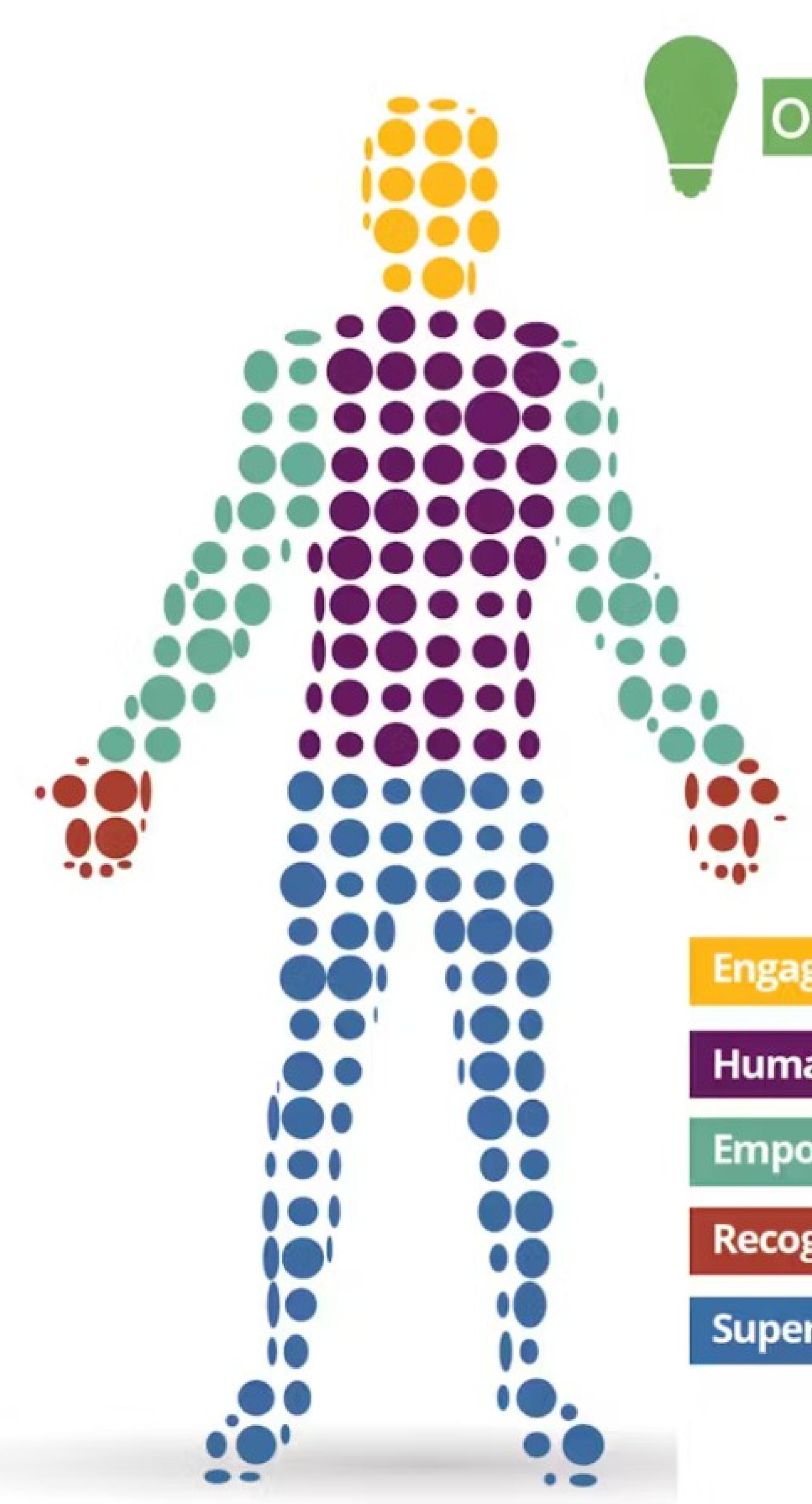




Tools & Initiatives

- Alignment with UVic Equity Action Plan
- Training
- Increased Support to Middle Management
- Hiring Practices
- Flexible Work Arrangements
- Conflict-competent Culture Program
- ONC Program Planning & IDEA Process
- Surveys (Demographics & Engagement)

OCEAN NETWORKS CANADA World Leading Discoveries at a Critical Time





Open-ended questions

Engagement

Human interactions

Empowerment

Recognition

Supervisor and senior leadership



Internal

Demographics Training Compliance ✓ Staff Retention ✓ Staff Engagement Survey

OCEAN NETWORKS CANADA World Leading Discoveries at a Critical Time

Facility & Data Users Demographics Variey of sectors ✓ User Retention √ User Survey

Partners



✓ Variety of Sectors Quality of Partnership ✓ Partner Retention Partner Survey



DCEAN NETWORKS CANADA



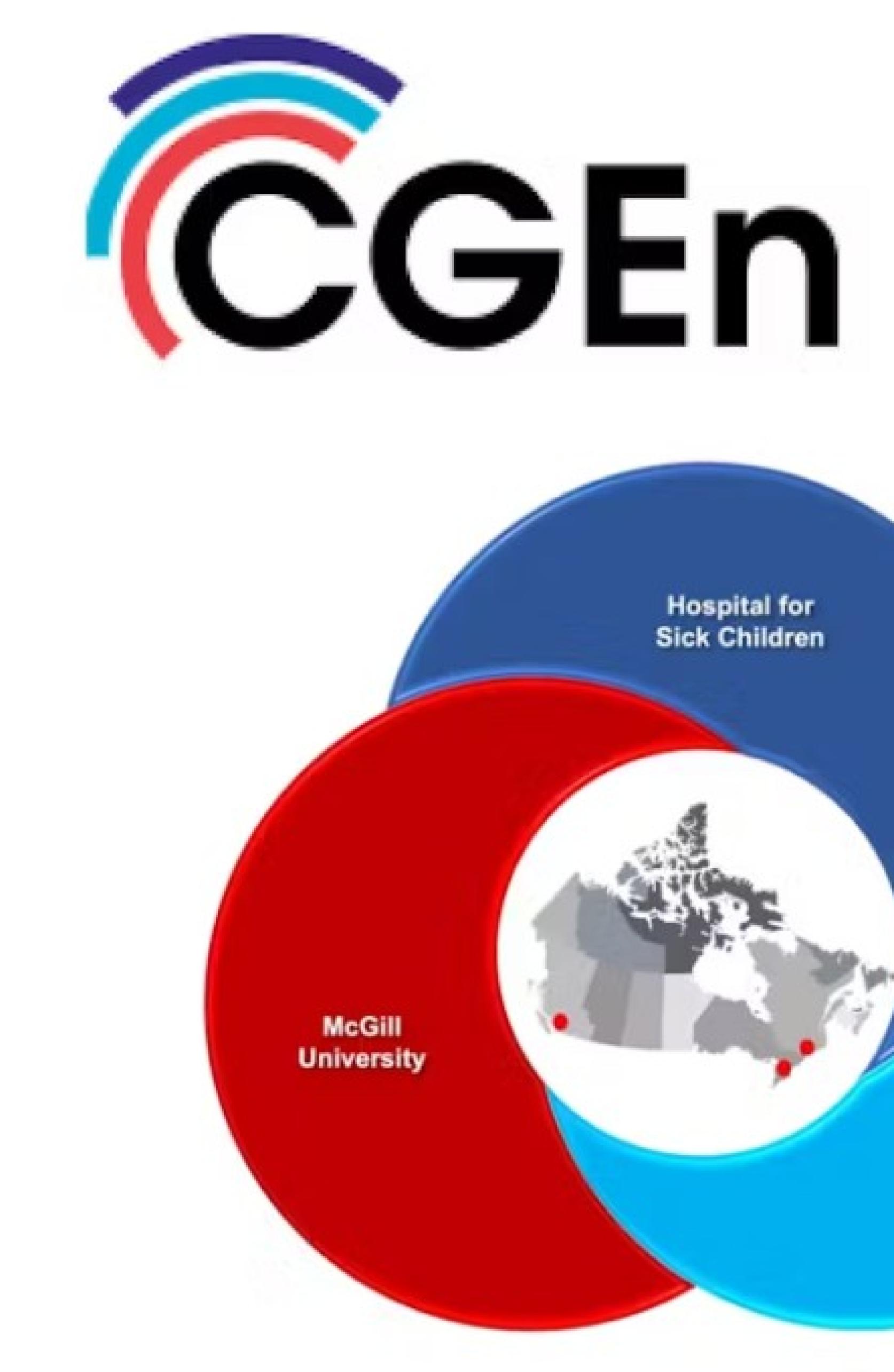
Thank You

Ocean Networks Canada is primarily funded by the Canada Foundation for Innovation, Government of Canada, University of Victoria and Government of British Columbia.











CGEn-Toronto

The Centre for Applied Genomics



CGEn-Montreal

McGill Genome Centre



Canada's national platform for genome sequencing and analysis

Providing genomic services to enable Canadian and international research projects with high-quality data

Supporting and leading projects requiring large-scale genomic data generation

Integrated national platform with nodes in Toronto, Montreal and Vancouver

Funded primarily through the Canada Foundation for Innovation, leveraging investments from the provincial governments of Ontario, Quebec, and British Columbia, Genome Canada, and others

University of British Colombia



CGEn-Vancouver

Canada's Michael Smith **Genome Sciences Centre**



CGEn Users and Staff (2023-24)

1,158 Principal Investigator laboratories supported

Health, conservation/biodiversity, agriculture and other commercial sectors

Academic institutions, government agencies, private sector

• > 16,000 whole genomes sequenced – data equivalent to over 30,000 4k movies!



•

•

~200 staff full-time equivalents

- Employed across 3 institutions
- Consultations, facility oversight, operations
 - Data generation, processing and preparation of experimental data for analysis
 - Administrative staff





CGEn's Approach to IDEA



hired to drive CGEn IDEA activities

representatives from all CGEn nodes)

CGEn IDEA Survey conducted in Spring 2023

Qualitative and quantitative questions



- Manager Inclusion, Diversity, Equity and Accessibility
- Created an IDEA committee (members include)

 - Guide development of CGEn IDEA Strategic Action Plan
 - Have a reference for measuring change over time



CGEn 2023 Survey Results

• Response rate of 50.6%

Intersectional analysis – advancement/growth opportunities

Awareness of institutional policies

Suggested education topics







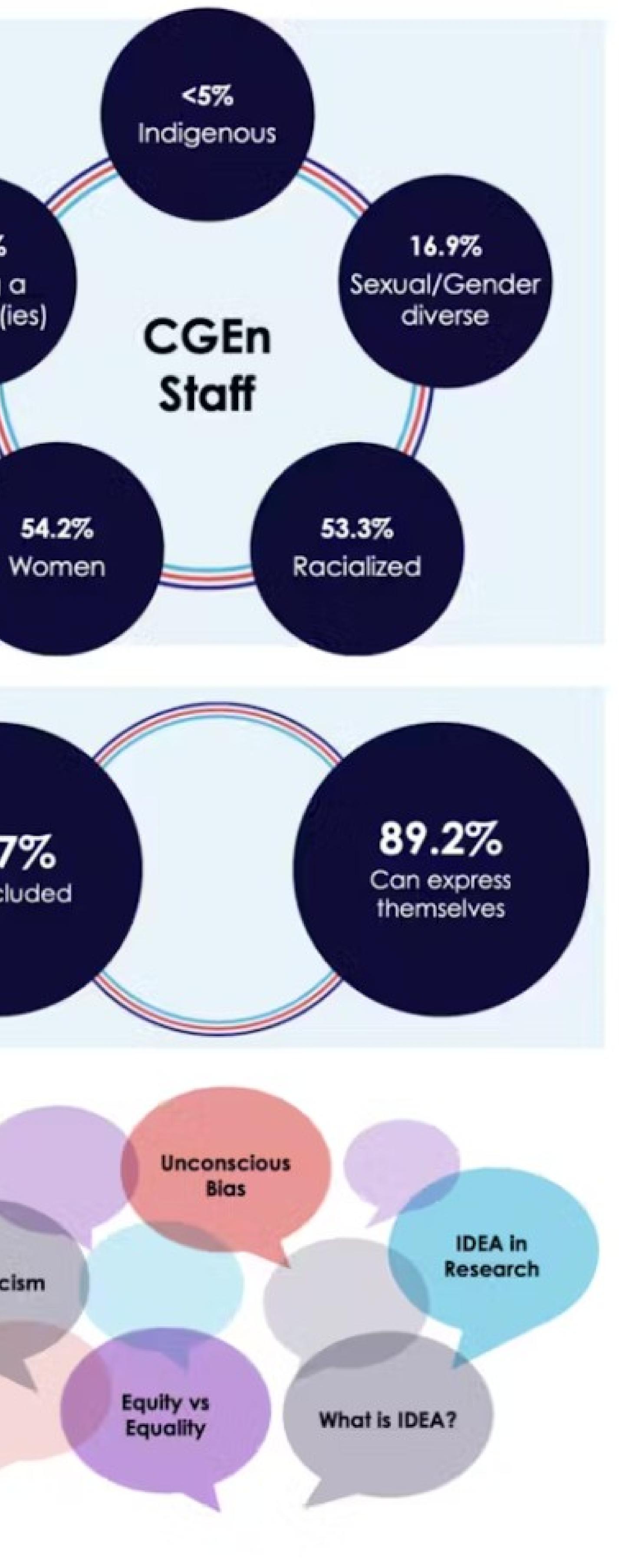


10.8% Having a disability(ies)

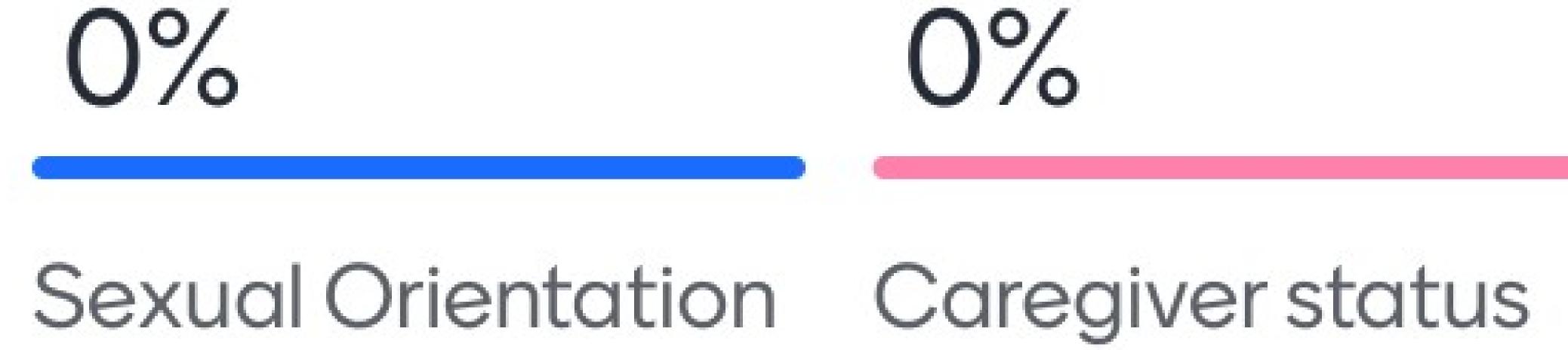
86.7% Feel included

Anti-Racism





What EDI data do you collect at your MSI?



0%

Ethnicity



0%

Gender Identity

Disability status



0%

All of the above

What is holding you or your MSI back from implementing EDI practices?

0 responses



16

Do you believe these EDI practices to be beneficial at your organization?



What EDI challenges and potential solutions have you encountered at your MSI?

Table Discussion

What have been your highest value initiatives?

What is one thing you would like to implement at your MSI?



What do you want to share from your table discussion?





In the pursuit of scientific excellence and innovation, we must recognize that diverse perspectives and inclusive practices are not just beneficial - they are essential. As we stand at the forefront of innovation and discovery, it is imperative that we actively foster an environment where EDI is at the core of our scientific endeavors.

We call on the CFI to take the next step and support all MSIs in establishing processes and understanding best practices for the collection of self-identification data.

