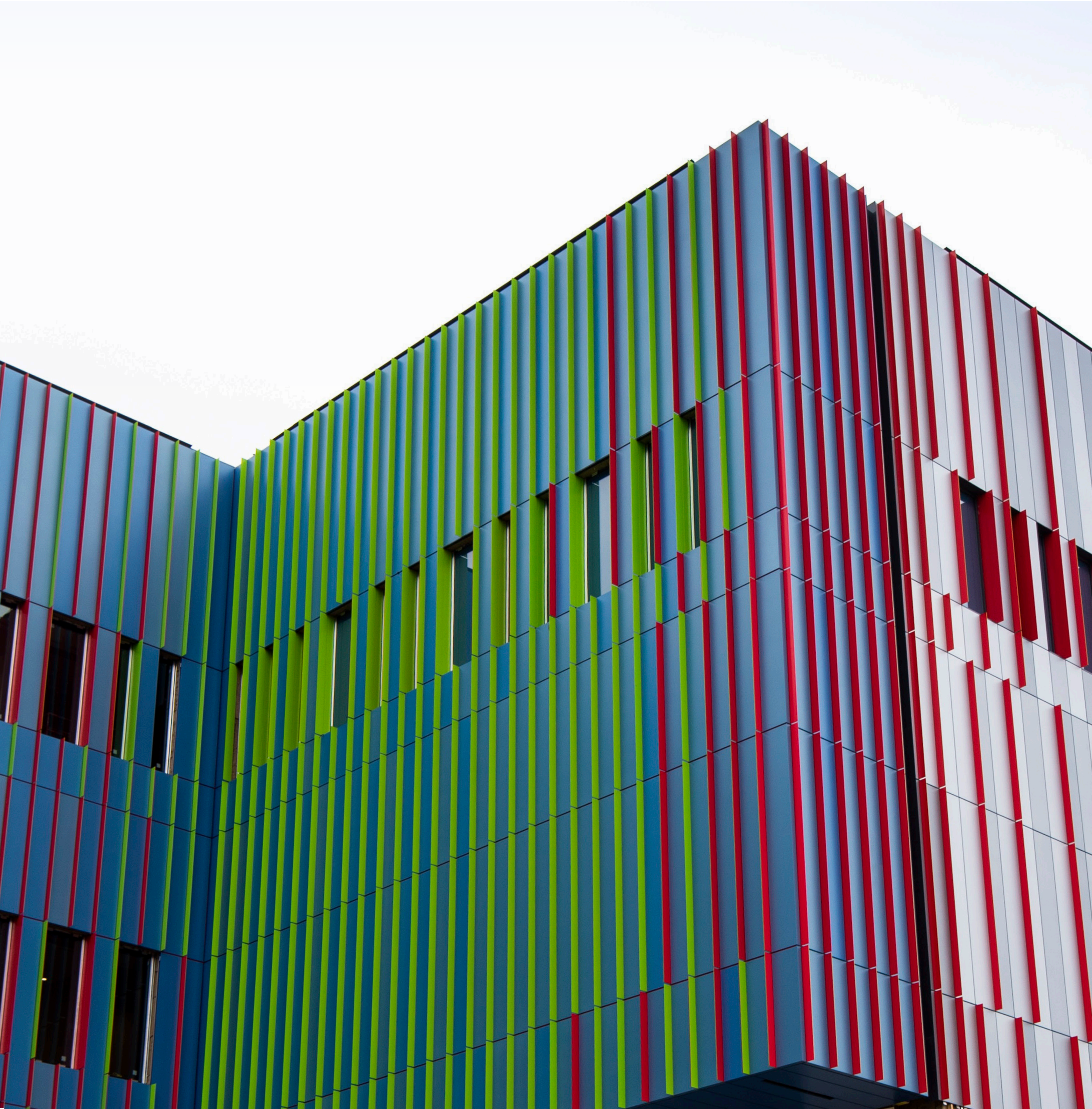
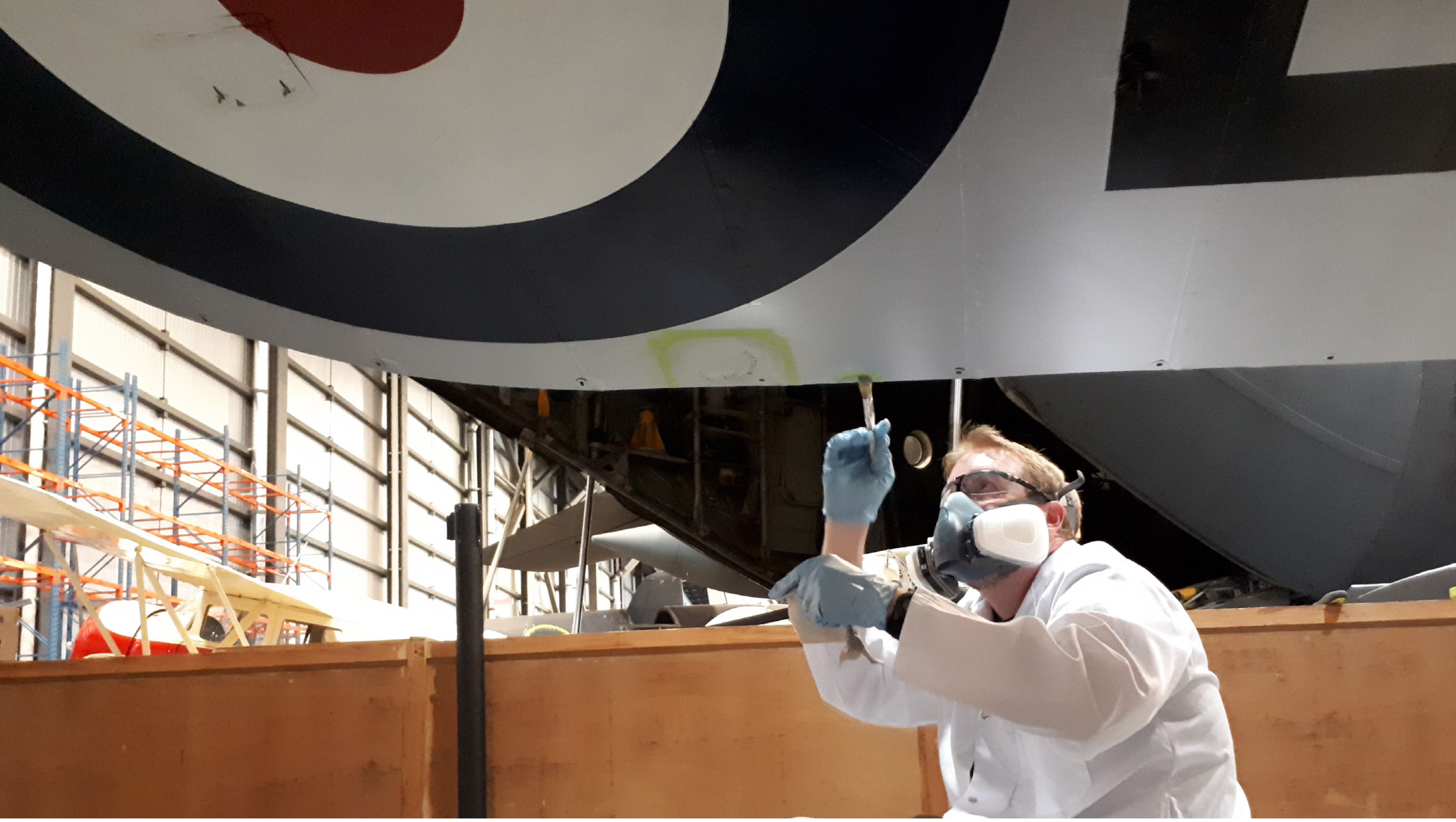
RESEARCH INSTITUTE

Ingenium
Canada's Museums of Science and Innovation
Musées des sciences et de l'innovation du Canada

Canada





THE INGENIUM RESEARCH INSTITUTE

invites Canadians to change how they think about science and technology by cultivating a better understanding of the material culture of our past, present, and future. We explore the many ways that science and technology are embedded in society, culture, and history. Through bold engagement and worldwide collaborations, the Institute is the heart of discovery and innovation, engaging researchers, educators, and the public in new and creative ways.

We welcome scholars, artists, scientists, students, and researchers to join us as we discover, learn, and create new forms of knowledge.

THE INSTITUTE CONSISTS OF:

- An inclusive fellowship program and practicums for university and college students at all levels, allowing us to open our collection to emerging researchers for long- and short-term projects and build skills for the future
- Digital and media labs, collaborative spaces to put research into practice by making use of cutting-edge digital technologies and new media
- An artifact examination room for hands-on research, symposia, and seminars on material culture, open to researchers
- Library and archives with work spaces and resources for researchers
- Extensive online collection with API foundation for application in the Research Institute and for worldwide users
- Opportunities to engage with visitors to our three museums

Engagement
Inclusiveness
Access
Openness
Excellence in collecting
Accuracy
Stewardship

Expertise
National collections
Data
State-of-the-art digital labs
Access to the public
Cross-appointments

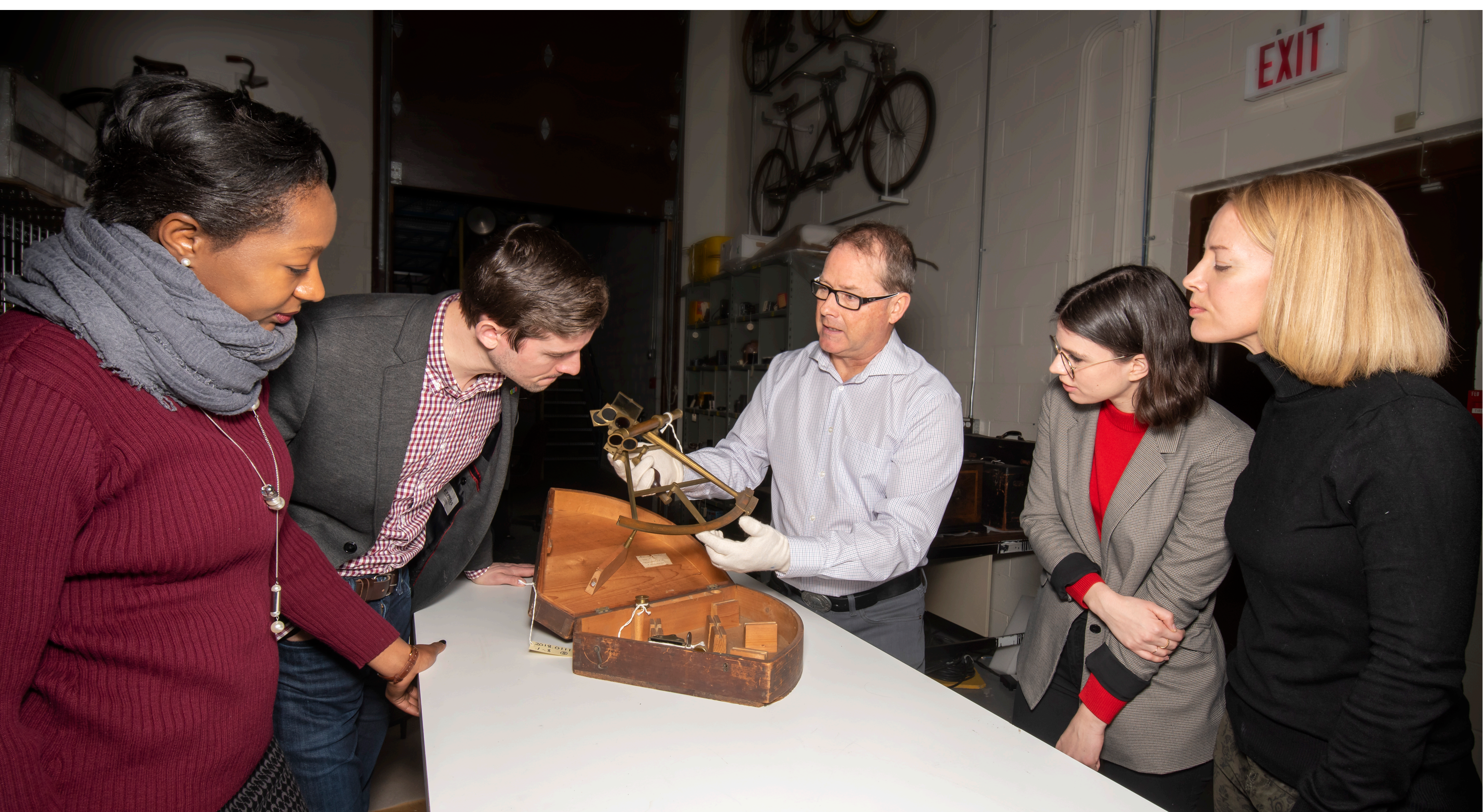
Material culture and history of science and technology
Museum audiences
Science in museums
Citizen science
Digital humanities
Digital heritage
People and collections
Collection risk management
Culture of innovation
Data visualization
Women in STEAM
Indigenous ways of knowing
Conservation and restoration

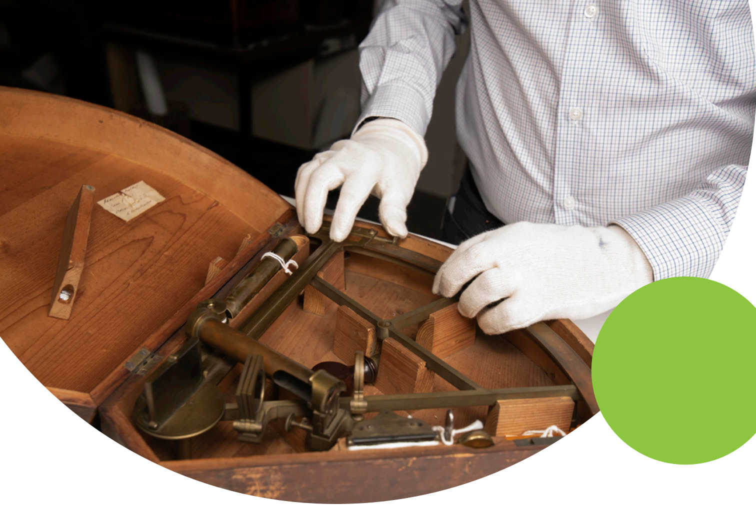
Students
Researchers
Scholars
Research institutions
Fellows
Interns
Postdocs
Artists-in-Residence
Experimenters
Ingenium staff

AREAS OF STRENGTH

We are leaders in Canada and throughout the world in key areas of strength in research:

- **Curatorial and Archival Research Practices:** Material culture is the key to the museum experience. Our national collection, made up of over 2 million artifacts, is the driving force of our research and has positioned us as leaders in museum collections, archival description, and public and oral history.
- **Conservation Expertise:** Making our collections accessible means assessing risks to artifacts and handling a variety of materials and objects from plastics to hazardous chemicals. Our expertise in this area ranges from the conservation and restoration of delicate artifacts to digitization and 3D imaging.
- **Visitor Studies:** Ingenium's three museums and their exhibitions, programs, and digital products are fertile grounds for evaluating and understanding how audiences navigate and learn within these environments. The museums also provide unique opportunities for cross-disciplinary collaborations, with researchers in fields such as child development, disability studies, and human-computer interaction contributing their knowledge and research practices.
- **Science Expertise:** Science is both an area of inquiry and a methodology. We carry out applied scientific research and citizen science research in the context of our museums, working closely with scientists in academia, industry, and government while also letting our visitors be a part of the scientific process.
- **Digital Museums and Practices:** Through our Digital Innovation Lab we create and disseminate new forms of knowledge by applying the most up-to-date technologies to cultural heritage. This collaborative and experimental space allows us to break new ground in digitization, new media, AI, virtual reality, and black-boxed technologies.





DIVERSITY OF PERSPECTIVES

In addition to these strengths, Ingenium is committed to diversifying its approach through the reciprocal exchange of ideas with people of diverse cultural and ethnic backgrounds, as well as exploring gender studies and the role of women in STEM fields, aviation, aerospace, and agriculture. We collaborate with researchers and curators from around the world but are also building strong ties with Indigenous communities around Indigenous science, technology, and Ways of Knowing.

SHARING KNOWLEDGE

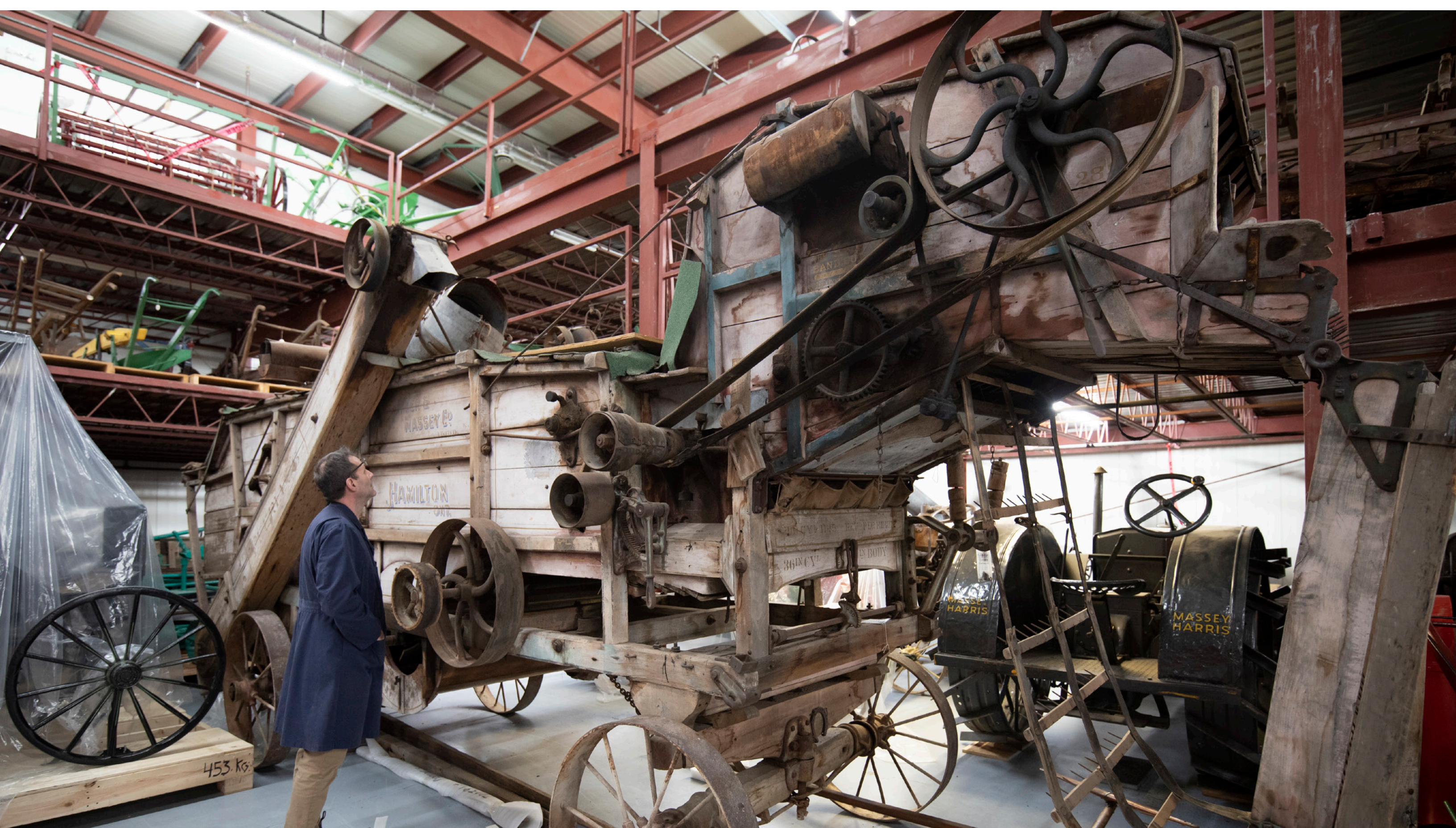
While our knowledge output includes traditional avenues like publications, conferences, and seminars, we are committed to new modes of collaboration and sharing across national and international lines. Experimenting with digital and social media, bringing in experts from around the world, and making our knowledge accessible through online and open heritage initiatives are just a few ways we do this.

COLLABORATIONS, CO-CURATION, AND CITIZEN SCIENCE

Collaboration is the key to achieving our vision. To that end, we welcome close partnerships with universities and colleges, scientists and innovators, scholars and artists. With ties to various communities in the sciences, arts, tech, and industry, we strive to explore the many intersections between science, technology, culture, art, and history.

OUR RESEARCH PRINCIPLES

- **Engagement:** Stimulating inquiry and dialogue among scholars and the general public through collaboration and by sharing new knowledge and new research approaches that are relevant to Canadians.
- **Inclusiveness:** Learning from diverse ways of knowing, including perspectives from groups whose knowledge and expertise is underrepresented in current scholarship.
- **Access:** Identifying and documenting collections to make them accessible to students, researchers, and scholars; setting standards for open access to our collection data and research products.
- **Openness:** Sharing research findings through access to the national collections, exhibitions and programs, evaluations, publications, presentations, teaching, and digital media products.
- **Excellence in Collecting:** Setting standards and identifying priorities for collection acquisitions and disposals.
- **Accuracy:** Ensuring information in public offerings is factually correct and accurately presents scientific and historical consensus or debate.
- **Stewardship:** Determining and implementing appropriate care and treatment of collections that reflect their significance and value.



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