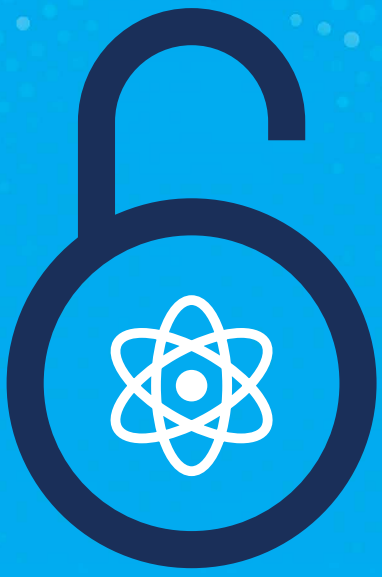
SOiC
SOUTHWESTERN ONTARIO
ISOTOPE COALITION



Unlocking our isotope opportunity

Review of regional opportunities

SOIC
SOUTHWESTERN ONTARIO
ISOTOPE COALITION

Regional partners

- A.I. VALI Inc.
- Brightshores Health System
- Bruce County
- Bruce Power
- BWXT Medical
- Canadian Nuclear Isotope Council
- City of Owen Sound
- Fermi Solutions
- Framatome
- Gamzook'aamin aakoziwin
- Gateway Centre of Excellence in Rural Health
- Georgian College
- Grey County
- Huron County
- Huron Health System
- Isowater
- Kinectrics
- McMaster University
- Municipality of Brockton
- Municipality of Kincardine
- Nuclear Innovation Institute
- Promation
- Region of Waterloo
- STEVCON Packaging & Logistics Ltd.
- Town of Goderich
- Town of Hanover
- Town of Minto
- Town of Saugeen Shores
- Township of Ashfield-Colborne-Wawanosh
- Township of Georgian Bluffs
- Township of North Huron
- University of Western Ontario
- Western Ontario Wardens Caucus Inc.

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STAFF ACCESS CARD

Introductory message from the Co-Chairs

Canada has long been a global leader in the research, development and production of medical isotopes, contributing to life-saving treatments, advancing cancer care and improving health outcomes for patients around the world. Building on this legacy, the Southwestern Ontario Isotope Coalition (SOIC) is working to ensure that Ontario remains at the forefront of this vital sector by championing a regionally driven, nationally aligned approach to innovation, collaboration and growth.

As this review will demonstrate, the SOIC is focused on unlocking the full potential of the isotope sector in southwestern Ontario. By aligning with national priorities and supporting the growth of a resilient and future-ready isotope ecosystem, the Coalition is helping to fuel long-term economic development, job creation and scientific leadership for the region and the country.

With the global demand of medical isotopes continuing to rise, southwestern Ontario is uniquely positioned to lead. Through the continued efforts of the SOIC and its partners, we are not only building a stronger regional foundation, but we are also helping Canada maintain its role as a global trailblazer in medical innovation.

Together, through collaboration, shared purpose and a commitment to long-term success, we can ensure that the isotope sector thrives, all while supporting better health outcomes for people across Canada and around the world for generations to come.

Jessica Linthorne
President & CEO, Nuclear Innovation Institute

Theron Solomon
Councillor, Chippewas Of Nawash Unceded First Nation

Ian Boddy
Mayor, City of Owen Sound

James Scongack
Chair, Canadian Nuclear Isotope Council

NUCLEAR INNOVATION INSTITUTE™

CNIC CANADIAN NUCLEAR ISOTOPE COUNCIL

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The southwestern Ontario region & isotope ecosystem

The SOIC is a collaborative network composed of key partners from across 15 upper-and single-tier municipalities in southwestern Ontario, Canada. Representing a broad spectrum of the isotope value chain, the Coalition includes partners from the public and private sectors, First Nations communities, and academic institutions across the region.

This geographically concentrated region is home to a robust and mature isotope ecosystem. Anchored by Bruce Power, the world's largest nuclear power plant, the southwestern Ontario isotope ecosystem benefits from:

- Supportive municipal governments that champion innovation and investment
- Strong partnerships with Indigenous communities that prioritize inclusive growth
- World-class academic institutions and research facilities
- Thriving coalitions and innovation hubs

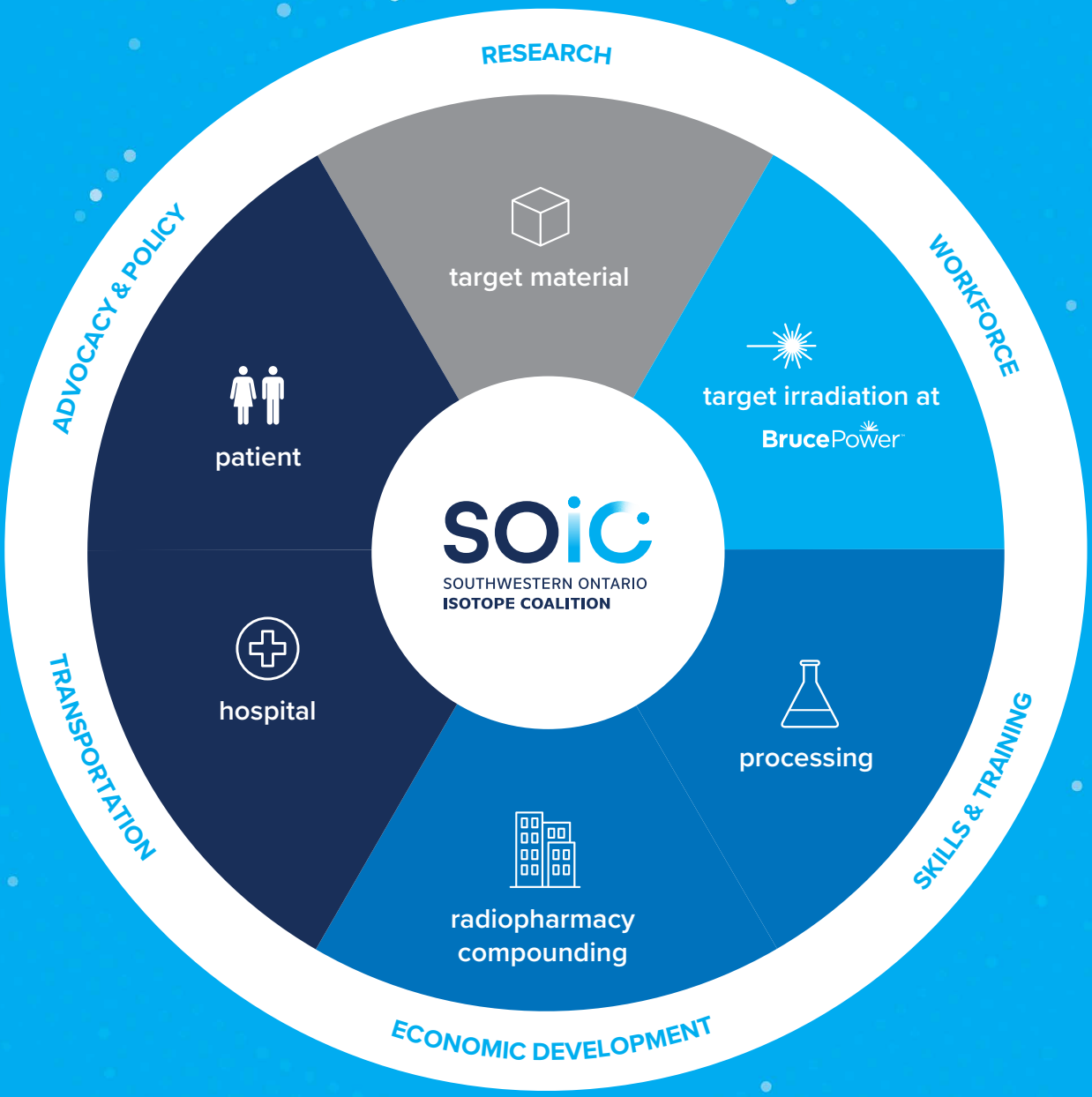
With these strategic advantages, southwestern Ontario is uniquely positioned to become a centre of excellence in isotope innovation, production and commercialization.

The southwestern Ontario region has demonstrated significant innovation and growth across various facets of the isotope supply chain over the years. Notably, two key medical isotopes—Cobalt-60 and Lutetium-177—are produced at Bruce Power.

Cobalt-60 has been produced at Bruce Power site since 1986 and plays a vital role in global healthcare. It is utilized in cancer treatment and is responsible for sterilizing approximately 40% of the world's single-use medical equipment.

More recently, Bruce Power has advanced its capabilities with the implementation of the Isotope Production System (IPS). This innovative system was created in partnership with Kinectrics and Framatome (known as Isogen) and has been commercially producing Lutetium-177 since 2022. Lutetium-177 is a critical isotope used worldwide in the treatment of prostate cancer and neuroendocrine tumors.

These innovations and collaborations underscore southwestern Ontario's proven commitment to doubling Canada's isotope production by 2030, while creating shared benefit across the region.


RESEARCH
WORKFORCE
SKILLS & TRAINING
ECONOMIC DEVELOPMENT
TRANSPORTATION
ADVOCACY & POLICY
target material
target irradiation at BrucePower
processing
radiopharmacy compounding
hospital
patient
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Indigenous partnerships

Most SOIC partners are located within the Territory of the Saugeen Ojibway Nation (SON), a region that plays a vital role in Canada's medical isotope landscape. In 2019, the SON and Bruce Power entered into the New Isotope Collaboration and Marketing Agreement, forming a groundbreaking partnership to jointly market the medical isotope Lutetium-177. Production of this life-saving isotope began at Bruce Power in 2022 and has since doubled.

This collaboration, known as Gamzook'aamin Aakoziwin—meaning "We are teaming up to fight the sickness"—is a powerful example of how reconciliation and innovation can work hand-in-hand. Not only does it contribute to the global fight against cancer, but it also aims to generate meaningful and lasting economic opportunities for the Saugeen Ojibway Nation and its people.

Looking ahead, the success of this partnership stands as a model for how inclusive, respectful collaborations can drive both social and scientific progress. As the demand for medical isotopes grows, the continued leadership and participation of Indigenous communities like the SON will be key to building a more equitable and resilient isotope ecosystem in Canada and beyond.

As isotope production expands, this model shows how respectful, inclusive partnerships can drive both international health outcomes and local economic development. We can continue to build on this success by:

- Embedding Indigenous partnerships in economic development strategies;
- Supporting Indigenous capacity and leadership in emerging industries; and
- Encouraging collaboration that prioritizes shared benefit and long-term impact.

Review of opportunities for the SOIC

Established in June 2023, the Southwestern Ontario Isotope Coalition is a strategic alliance formed to position the region as a leading hub for isotope research, development and production. Founded through a partnership between the City of Owen Sound, the Nuclear Innovation Institute (NII), the Canadian Nuclear Isotope Council (CNIC), and the Gamzook'aamin Aakoziwin Partnership, the Coalition brings together partners from public, private, First Nations and academic sectors to foster a collaborative and innovation-driven ecosystem.

As part of its mandate, the SOIC has conducted this review of regional opportunities to identify barriers and opportunities for growth within the regional isotope ecosystem. This project underscores challenges such as infrastructure limitations, workforce development gaps and the need for targeted investment. It also outlines a strategic roadmap focused on attracting capital, expanding research and production capacity, developing skilled talent pipelines and advancing cross-sector partnerships.

Data collection & methodology overview

The review of regional opportunities used a collaborative, two-phase approach to gather insights from SOIC members. Participants were grouped into three sector-specific working groups—Education, Healthcare and Research; Industry; and Municipal Government—to ensure targeted discussions and relevant findings.

In phase one, customized surveys were distributed, with all groups ranking five national barriers identified in the CNIC's Isotopes for Hope report.

In phase two, facilitated discussions with 28 partners—representing 85% of the SOIC's membership—allowed participants to expand on survey results, share real-world challenges and propose actionable solutions.

This approach provided SOIC with grounded, sector-informed recommendations aligned with national priorities, reinforcing the Coalition's commitment to regional collaboration and data-driven decision-making in advancing the isotope sector.

Key findings

EDUCATION, HEALTHCARE RESEARCH WORKING GROUP

The Working Group identified their top three barriers limiting the region's isotope potential:

1. Economic constraints
2. Market adoption challenges
3. Logistical barriers

healthcare & research obstacles include insufficient funding, limited access in rural hospitals, regulatory delays and a lack of physician awareness about nuclear medicine. The group emphasized the need for streamlined approval processes for radiopharmaceuticals, particularly those proven effective abroad, to improve access and utilization. Economic disparities were also highlighted, particularly the limited access to cancer diagnostics and treatments in rural areas, which could be addressed through innovative solutions like a mobile PET scanner.

On the logistical side, there is a pressing need to modernize infrastructure and localize the isotope supply chain to improve efficiency and accessibility.

Additionally, post-secondary institutions require better access to workforce data and industry collaboration to strengthen nuclear medicine education and career development, supporting long-term innovation and growth in the sector.

INDUSTRY WORKING GROUP

The Industry Working Group, made up of private sector leaders and technical experts, identified three primary barriers hindering sector growth:

1. Market adoption challenges
2. Labour and training gaps
3. Logistical barriers

Key issues include limited domestic access to specialized manufacturing equipment, a shortage of nuclear-trained professionals and a lack of awareness about isotope-specific careers among educational institutions.

These challenges contribute to increased reliance on international suppliers and a limited talent pipeline. To address them, the group recommends investing in regional infrastructure like hot cells and shielded isolators, expanding sector-specific workforce training and micro-credential programs, and enhancing outreach efforts to raise career awareness among students.

These strategic actions aim to strengthen local capabilities, foster innovation and position southwestern Ontario as a global leader in isotope production and nuclear medicine.

MUNICIPAL WORKING GROUP

The Municipal Working Group, composed of municipal leaders, county wardens and economic development professionals, identified the following top barriers to growth:

1. Market adoption challenges
2. Logistical barriers
3. Labour and training gaps

Key concerns include limited public awareness, difficulty attracting skilled talent and the lack of coordinated communication between municipalities and the isotope industry.

To address these challenges, the group recommends enhancing public education, securing political support through a resolution from the Western Ontario Wardens' Caucus, conducting economic impact research and improving cross-sector collaboration.

These efforts aim to build a more informed, investment-ready and strategically aligned regional ecosystem to position the region as a competitive and attractive hub for isotope innovation and development.

Recommendations & actions

Based on the feedback received during this review of opportunities, the SOIC has developed the following set of recommendations and core actions for implementation by the Coalition and its partners. With a commitment to advancing these recommendations and actions, the SOIC will bolster the southwestern Ontario region's position as a strategic economic zone for the Province of Ontario when it comes to the medical isotope sector.

Recommendation 1

Build on the success of the Gamzook'aamin Aakoziwin Partnership to ensure that increased production of medical isotopes in the region generates meaningful and lasting economic opportunities for the Saugeen Ojibway Nation and its people.

SOIC ACTION ITEMS

Embed Indigenous partnerships in economic development strategies.

- Support Indigenous capacity and leadership in emerging industries like medical isotopes.
- Encourage collaboration that prioritizes shared benefit and long-term impact.

Recommendation 2

Leverage regional development funds to advance isotope innovation.

SOIC ACTION ITEMS

- Advocate for isotope-specific allocations within the Southwestern and Eastern Ontario Development Funds.
- These resources should be directed to:
  - Grow the isotope sector through job creation, skills development, and commercialization.
  - Attract private investment and expand supporting infrastructure.
  - Support partnerships between industry, academia, healthcare, and municipalities.
  - Fund pilot projects, such as mobile imaging or rural isotope hubs.

Recommendation 3

Propose a joint feasibility study on expanding isotope technology in rural Ontario.

SOIC ACTION ITEMS

- Recommend a joint study between the Southwestern Ontario Isotope Coalition, the Ministry of Rural Affairs, and the Ministry of Health to explore how modern and emerging isotope technologies can enhance patient access, improve health outcomes, and support the sustainability of the public healthcare system in rural regions.
- As a key component, the study should assess the feasibility of deploying a **Mobile PET Scanner** in rural southwestern Ontario. This includes:
  - Evaluating clinical need and potential health system impact.
  - Analyzing cost, logistics, and regulatory considerations.
  - Exploring service delivery models in collaboration with healthcare providers and imaging specialists.
  - Identifying funding opportunities from the provincial government and other partners.
- This joint effort would support more equitable access to advanced imaging and position Ontario as a leader in rural health innovation.

Recommendation 4

Continue work to increase awareness of the nuclear medicine sector among youth in the region and across Ontario.

SOIC ACTION ITEMS

- Continue work with the CNIC to deliver Student Track programming at the Canadian Radiotheranostics Leaders' Summit.
- Work with SOIC partner organizations to provide tailored opportunities for students in the Southwestern Ontario region to learn more about the nuclear medicine sector.

Recommendation 5

Strengthen coordination and strategic advocacy across partners.

SOIC ACTION ITEMS

- Foster cross-sector collaboration to improve communication, align priorities and advocate effectively at all levels of government.
  - Use regular quarterly SOIC meetings to share information and updates on sector news.
- Develop shared messaging and resources for all partners to use to communicate the sector's impact.

Recommendation 6

Expand localized access to core infrastructure like hot cells, shielded isolators and other supportive infrastructure/providers.

SOIC ACTION ITEMS

- Conduct a regional infrastructure audit to identify priority gaps in equipment and local capacity.
- Continue support for hot cell construction by Bruce Power.
- Assess the opportunity to localize shielded isolator capacity.

Recommendation 7

Secure regional political support through a resolution from the Western Ontario Wardens' Caucus (WOWC).

SOIC ACTION ITEMS

- Leverage the leadership and regional reach of the WOWC to formally endorse the growth and development of the isotope sector through a supportive resolution.
- Use the resolution to strengthen advocacy efforts with provincial and federal governments and signal readiness for investment and partnership to the business community.

Recommendation 8

Undertake research to strengthen regional advocacy and investment readiness.

SOIC ACTION ITEMS

- Generate evidence to support public and private investment by assessing the economic and strategic value of the isotope sector in southwestern Ontario.
  - Conduct a gap analysis to identify where infrastructure, policy or service delivery needs to be strengthened.
- Commission an economic impact study to quantify job creation, GDP contribution, taxation benefits, and downstream benefits of isotope activity.

Recommendation 9

Increase career awareness and talent attraction across educational pathways.

SOIC ACTION ITEMS

- Promote careers in the isotope sector through coordinated outreach and awareness building initiatives targeting local students in the southwestern Ontario region.
- Create a campaign highlighting career pathways in the isotope sector and distribute to high schools across the region.

Recommendation 10

Align skills development with industry needs through stronger collaboration.

SOIC ACTION ITEMS

- Leverage the connectedness of SOIC partners to foster greater information sharing between industry partners and academic partners on projected workforce needs and core competencies.
- Initiate a specific conversation between the Industry Working Group and academic partners in the Education, Healthcare and Research Working Group to determine the best way to facilitate increased levels of information-sharing.

Recommendation 11

Advocate for streamlined radiopharmaceutical approvals in Ontario and Canada.

SOIC ACTION ITEMS

- Collaborate with the CNIC to push for regulatory modernization, especially for treatments already approved for use in peer/likeminded jurisdictions.
  - Support CNIC's advocacy with regional perspectives, case studies/examples and impacts.
  - Participate in CNIC-led advocacy days.

Recommendation 12

Enhance workforce training through sector-specific programs and micro-credentials.

SOIC ACTION ITEMS

- Develop targeted training solutions in collaboration with industry and academic partners to address critical skills gaps in isotope production and nuclear medicine.

Outcomes & next steps

The Southwestern Ontario Isotope Coalition is making meaningful progress toward building a collaborative, strong and forward-looking isotope ecosystem in the region.

Looking ahead, the SOIC is well-positioned to serve as a catalyst for change. With a unified vision and actionable roadmap emerging from this review of opportunities, the Coalition is poised to influence policy, attract investment and advance meaningful innovations in nuclear medicine and isotope applications.

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