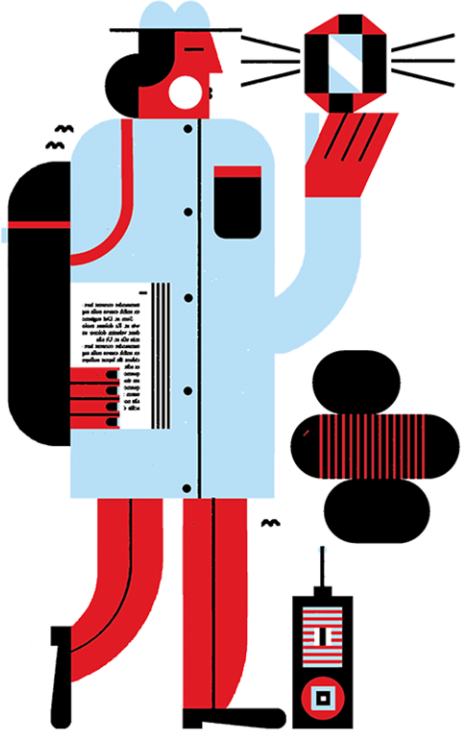


Alliance grants

Developing solutions to societal needs



Alliance – Societal impact

Purpose

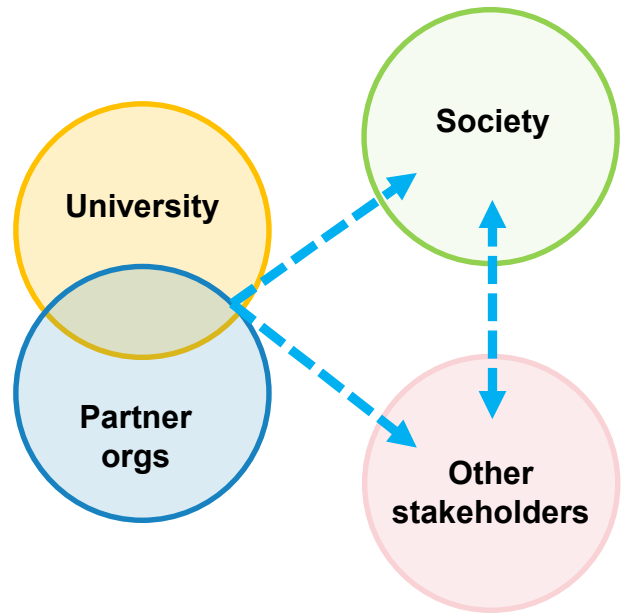
Projects at the intersection of science and society

- Solve societal challenges through R&D
- Engage affected parties in society
- Share the results with them to achieve the expected outcome
- Seek benefits beyond the partner organization's interests



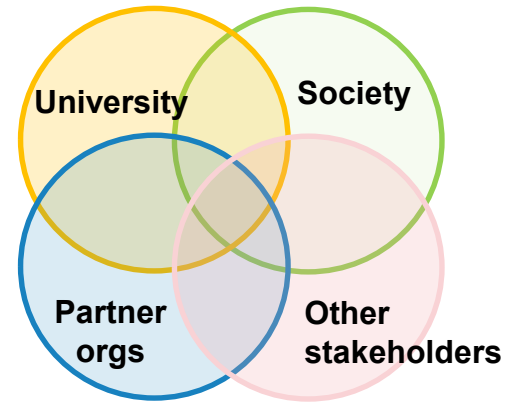
Alliance – Societal impact

Research at the intersection of science and society



From a collaboration where university expertise focuses on a partner's challenge

Option 1

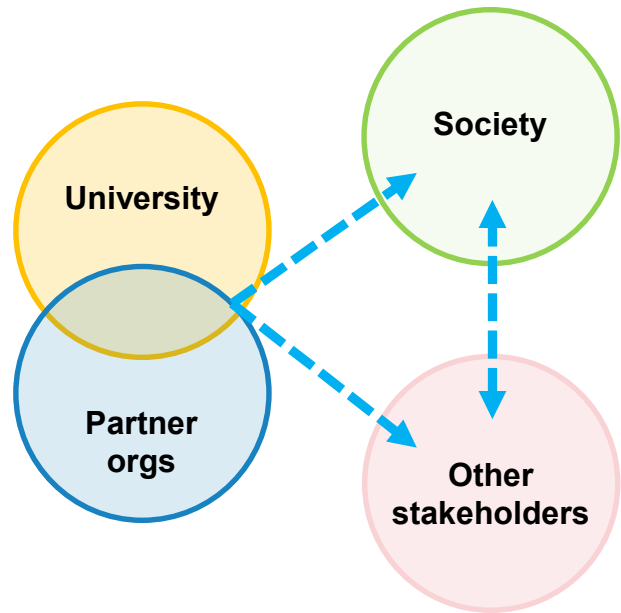


To a wider collaboration where many expertise and points of view address a societal need

Option 2

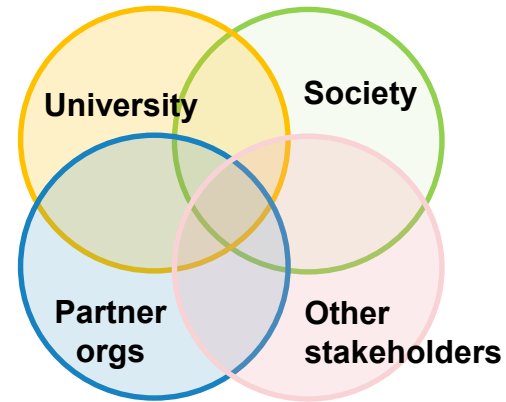
Alliance – Societal impact

Research at the intersection of science and society



Financial Risk is lowered
partners invest cash and in-kind

Option 1



Perspectives are broadened
expertise and perspectives
knowledge dissemination and mobilization
link to end users and practical results

Option 2

Research at the intersection of science and society

Building a project that focuses on the societal need requires:

**Societal
impact**

- Learn about a societal challenge / need where your expertise could help develop a solution

**Making
connections**

- Bring stakeholders together, from science and society
- Identify the activities and desired outcomes
- Set the goals and the R&D strategy

**Broad
outcomes**

Seek maximal societal impact:

- Knowledge dissemination and mobilisation tailored to end-users
- Avoid raising barriers for targeted groups to use the results (e.g. IP management)

Alliance – Societal impact

Application / Evaluation process



- Alliance application, including the PIVP section
- PIVP selection committee (pass/fail)
- Evaluation of the overall merit
- Funding decision – Alliance merit indicators

Alliance Option 2 grants

Common misconceptions and errors

- X An alternative to Option 1 without partner cash
- X "Important for Canada" is the same as "Societal Impact"
- X Societal impact is presumed, affected groups are not involved
- X Impact limited to direct partners
- X Process to develop an Option 2 project the same as Option 1
- X Dissemination through scientific publications and conferences only
- X No or insufficient mobilization strategy
- X No plan to share with targeted end users in IP strategy

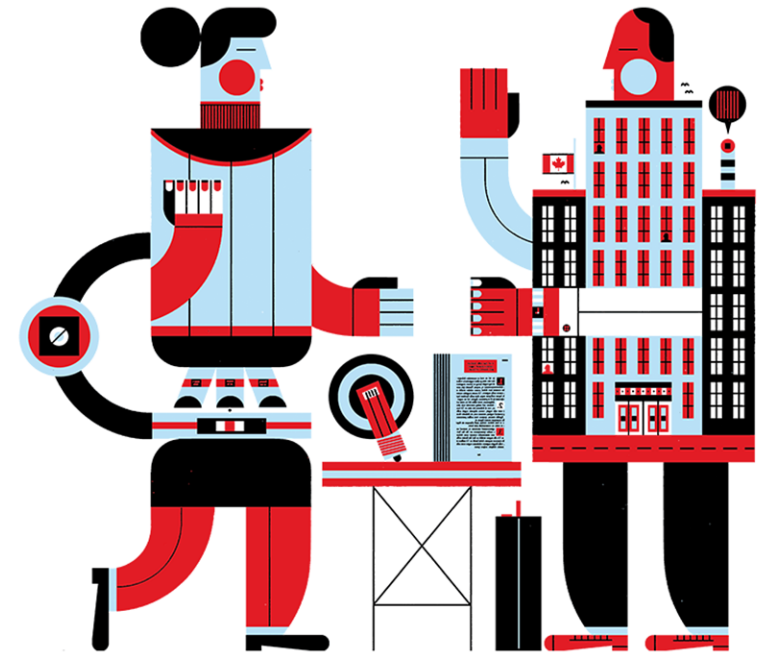
- Societal impact
- Making connections
- Broad outcomes

More details → [Alliance grants: Research topics](#)
→ [PIVP selection committee review instructions](#)

“

Alliance Option 2 grants aiming at creating a societal impact supports research **at the intersection of science and society**. To solve these challenges, teams must involve people affected by these issues and who will benefit from the results of the research. Teams must **share the research in ways** that ensure their use by those affected groups, rather than focus on the partner's financial goals. Because the approach takes more effort, **NSERC covers up to 100% of the project costs**.

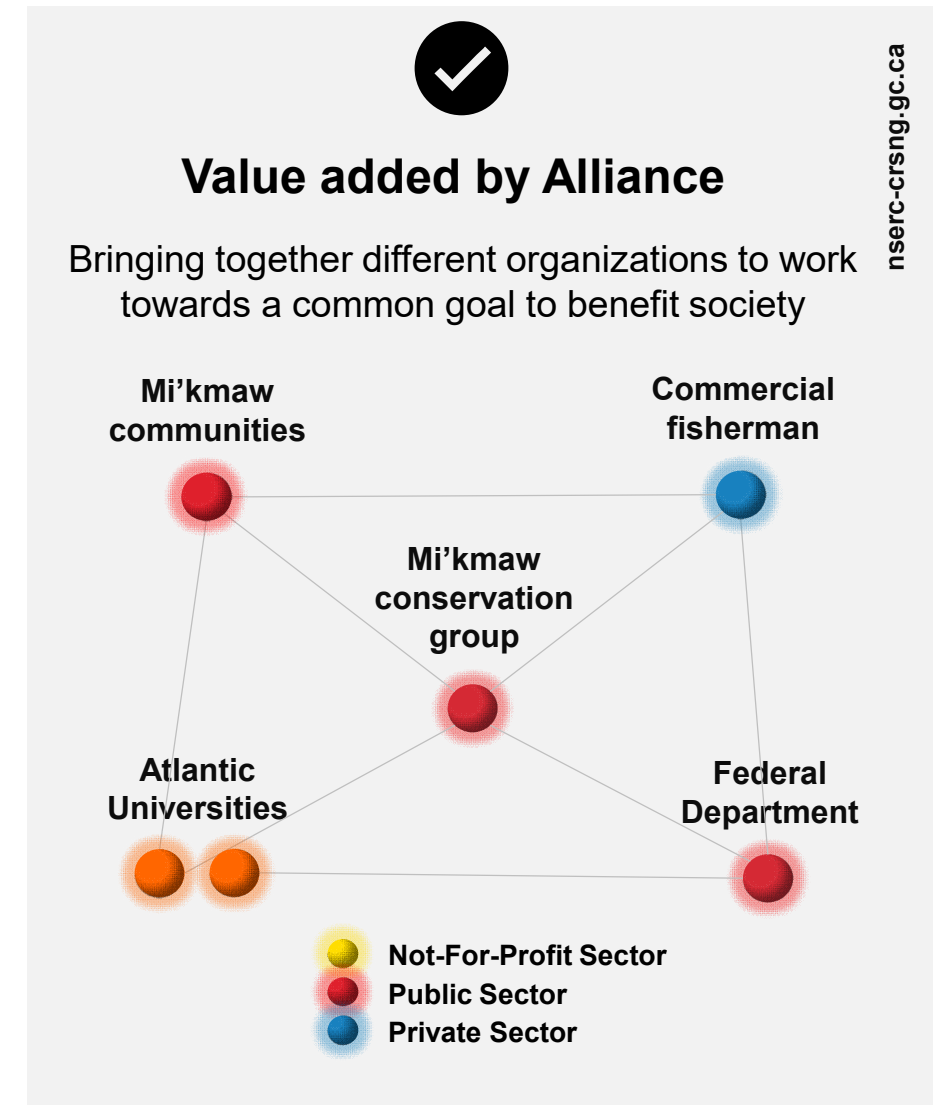
2. Option 2 examples



Funded project: Option 2 example

Understanding habitat connectivity and population structure for the conservation of culturally and commercially valued aquatic species in Pekwitapa'qek (Bay of Fundy, NB) and Pitu'pa'q (Bras d'Or Lake, NS)

- **Societal need:** understanding aquatic species impacted by fisheries practices and environmental changes in marine ecosystems of cultural significance to Mi'kmaw communities and right holders
- **Connections:** Mi'kmaw communities and conservation group, bringing their unique knowledge, collaborated closely with a commercial fishery and DFO to develop new knowledge that will be put into practice to maintain sustainable fishery activity while safeguarding the ecosystems.
- **Broad outcomes:** Combining Mi'kmaw traditional knowledge with telemetry will generate new information on species of importance and their habitats. This will help DFO on policy changes that are critical to maintain sustainability and control the impact of human activity in these ecosystems, thus addressing the needs and rights of the Mi'kmaw communities.



Grant: ~ \$1,450,000 over 5 years

Funded project: Option 2 example

Life cycle analysis of present and future buildings

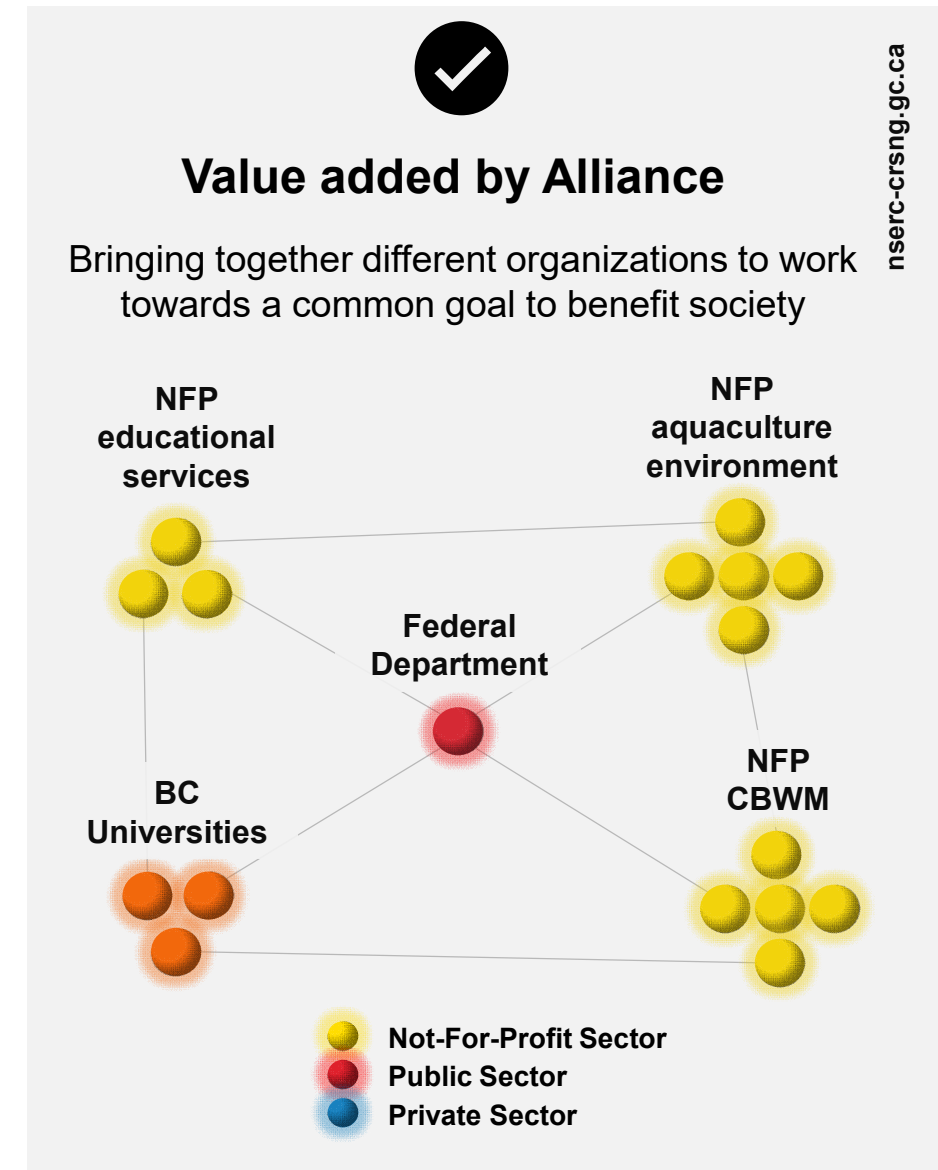
- **Societal need:** There is a need to reduce GHG emissions by 30% compared to 2005 levels. The building sector is a large contributor of GHG and wants to implement green building initiatives and eco-design. But the complexity of life cycle analysis (LCA) and environmental performance makes it necessary to address the methodological complexity of LCA in the construction industry.
- **Connection:** A not-for-profit organization joins forces with the team of academic experts and brings on board its impressive network, membership and social networks' presence to the project, as well as crucial field data and technical and practical expertise.
- **Broad outcomes:** A simplified life cycle analysis for the construction industry will be disseminated to the whole industry and to other key stakeholders (architects, engineers, public administration, etc.) via workshops conferences and public symposiums and the partner's large network, to increase the consideration and adoption of green construction at different decision-making levels and allow the dissemination of the project's results, which should impact the policies and regulations of the sector towards new standards and programs.



Grant: ~ \$450,000 over 5 years

The Impact of Road Salt on Pacific Salmon Success

- **Societal need:** Pacific salmon populations are declining and their spawning habitat is degraded by contaminants such as road salt, which is overused around many Canadian cities where winter salt pulses far exceed water quality guidelines. This is an important sector generating \$1.4B per year with over 12,000 jobs.
- **Connections:** this project started in form of citizen science with a local streamkeeper organization. It now brings together 13 not-for-profit organizations, local experts and community-based water monitoring organizations (Community based water monitoring (CBWM) services, educational services, aquaculture and environment) and one federal department (DFO).
- **Broad outcomes:** together, they will measure the background salt levels, salt pulses and the abundance of fish, and they will study the effects of salt pulses on salmon hatching, development, and physiology. A public outreach program will educate the public, local governments, and regulatory authorities on the extent of the road salt pollution problem and its impacts on salmon success.



Grant: ~ \$550,000 over 5 years

Funded project: Option 2 example

Novel Solutions for Battery Thermal Management and Battery Reuse

- **Societal need:** There is a need to improve the safety, energy efficiency and reliability of batteries to support the growth of electric vehicles and bikes, and also to make it more affordable by optimizing the life and repurposing used vehicle batteries. It is therefore necessary to not only achieve technical results, but also to turn them into a service to the population.
- **Connections:** One automotive industry association, one auto part maker and one bike manufacturer joined forces with a not-for-profit community group to develop a viable solution to address these issues.
- **Broad outcomes:** The development of efficient thermal management solutions to predict battery surface temperature and the ability to assess used battery pack modules will enhance the Canadian leadership and innovation in battery management systems, improve public safety and energy efficiency by minimizing adverse effects of battery heating, improve the reliability of EV and lower the cost of refurbished batteries for EVs and e-bikes, and support the development of e-transportation policies.

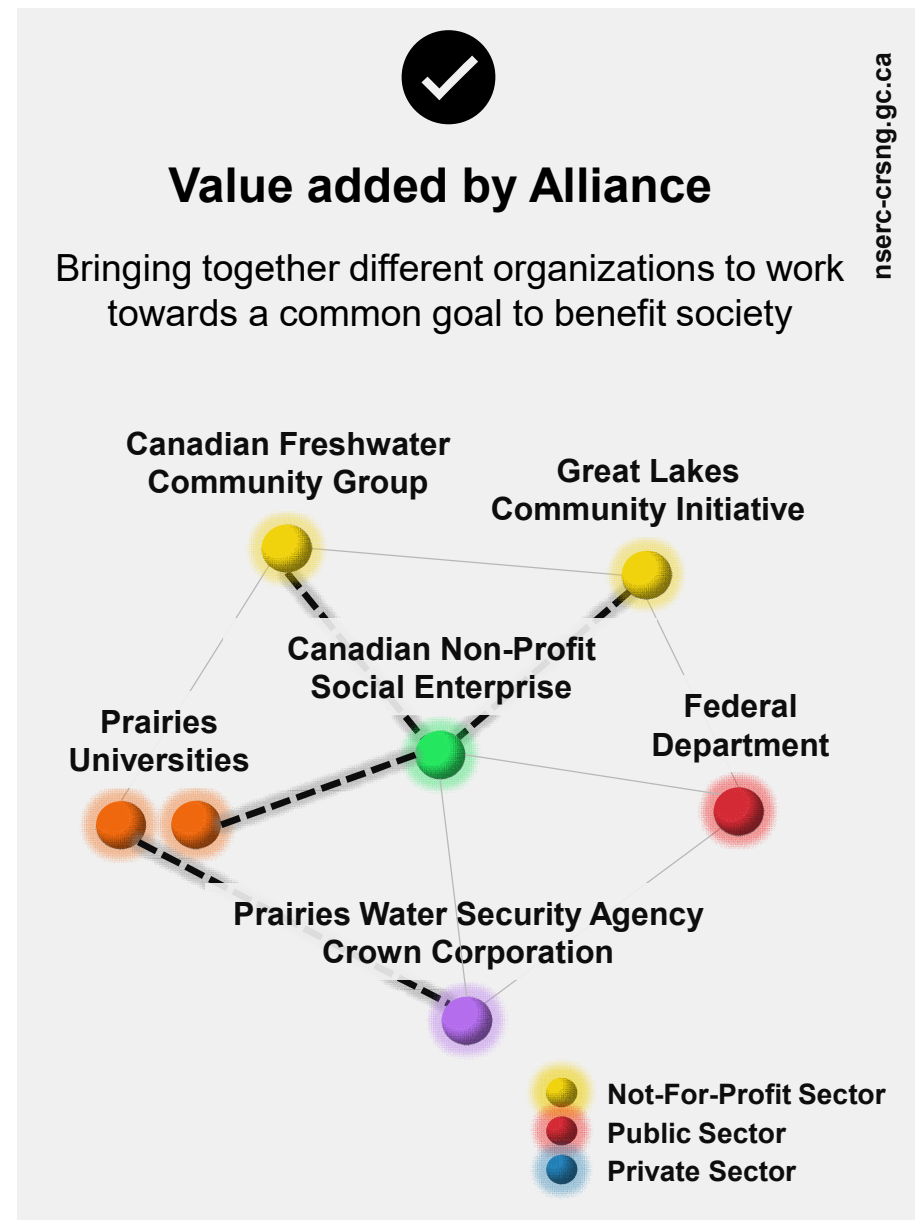


Grant: ~ \$140,000 over 3 years

Funded project: Option 2 example

Water Quality in Canada: Validation, Interpretation, and Mobilization of Community-Based Water Monitoring (CBWM)

- **Societal need:** Freshwater management requires accurate and relevant data to make evidence-based decisions, which is challenging in Canada's fragmented monitoring network, where there is notoriously little communication and coordination between different stakeholders. Yet, safe water supply is a fundamental need for society.
- **Connections:** in this project, a Federal department, a Provincial Water security agency team up with local community groups and a Canadian not-for profit social enterprise to break the barriers and to collectively participate in developing a solution to improve the access to relevant and accurate data by enabling them to participate in water stewardship.
- **Broad Outcomes:** The development and use of an open data hub and partner outreach platforms will connect over 110,000+ people, 130 societal groups, 1,800 online users and train 5,500 students. Interactive education tools and online training on water stewardship, and intensive dissemination through NGO networks, community groups and government will support sustainable and meaningful CBWM by improving its legitimacy and validity for academics and government and establish the basis for long-term sustainability in water testing programs across Canada.



Grant: ~ \$190,000 over 4 years