

# Creation of the **Transformation Hub**

## **Transforming Climate Action**

### **Canada First Research Excellence Fund**

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## **INTRODUCTION**

Research performed through our proposed program will put excellent transdisciplinary science first, the needed fertile ground for open innovation towards transformative actions. Even if excellent research is produced, successfully responding to the climate and sustainability crisis requires bringing together scientists from various disciplines, but also actors, partners, rightsholders, stakeholders, decision-makers and even artists from outside academia, starting at the earliest stages of the research process.

Building innovative methodologies for uplifting research co-design and knowledge co-production and establishing extensive collaborations across disciplines and knowledge systems (e.g., Indigenous and non-Indigenous) requires resources. Moreover, engaging in sincere dialogue with Indigenous communities in order to make space for research projects that not only address community needs and priorities, but also respect local customs and research ethics, requires time.

Access a broad spectrum of expertise, to financial support at the appropriate time, and to trained facilitators are conditions that are rarely met in the current research ecosystem. The idea behind the *Transformation Hub* is to create a cohesive structure to allow these processes to occur deliberately. The *Hub* will become a porous interface between academia and society where research processes themselves are studied and steered towards a decolonized stewardship of the Ocean-Climate-People nexus.

More specifically, we propose the creation **within Université du Québec à Rimouski (UQAR)**, of a *Transformation Hub*, to 1) facilitate the creation of a social environment for improved interactions between researchers (across disciplines), and between researchers and people, communities, and organizations in and outside academia and 2) encourage, train and assist scientists in becoming active partners in change-making

processes that support climate-ocean sustainability at different scales, from the local (regional, national) to global (international) levels (e.g. Österblom *et al.*, 2017).

## **BACKGROUND**

UQAR is the ideal location for the *Transformation Hub* for several reasons. Over the years, through initiatives such as Réseau Québec Maritime, Manger Notre Saint-Laurent, the InterS4 Consortium, and the Archipel group, UQAR researchers have developed significant expertise in building transdisciplinary projects that bridge with civil society, including Indigenous communities. In addition, UQAR is located in the city of Rimouski, in the administrative region of the Bas Saint-Laurent (Québec). The size of Rimouski is at the *sweet spot for transformation*, meaning that changes made at this scale have the most chances to impact individuals as well as higher governance levels (provincial, federal and international). Designated as the first official FabRegion in Canada, Bas-Saint-Laurent also provides a fertile ground for the emergence of transformative ideas and policies (<https://fabregionbsl.quebec>).

The *Hub* will be powered by a team of professionals who will work at the interfaces between art and science, between Indigenous and Western worlds, between ideas and needs, always aware of opportunities for action and innovation. More specifically, the goals of the *Transformation Hub* are to promote a shared, multiscale understanding of complex issues, and a shared leadership for co-creating profound social innovations in relation with the Ocean-Climate-People nexus, because solutions for people and nature to coexist harmoniously are needed *now*.

The *Hub* will also be a space to ‘reconceive the university as a unity of research, teaching and social transformation’ (Scharmer, 2019) so that our research not only addresses climate/ocean and sustainability science, but also addresses the questions of how to achieve sustainability through equity-based approaches (Pascual *et al.* 2022). Innovative strategies and collaborative processes involved in making transdisciplinary co-designed science to guide transformative actions will be studied, documented, and reported by research associates within the *Hub*.

## **KEY DELIVERABLES – ACTIVITIES: WHAT WILL THE HUB DO**

- Facilitate the identification of synergies amongst disciplines and support coordination and interactions amongst researchers and partners from various organizations and civil society.
- Create a space that allows enough time and room to engage in real dialogues to co-design and co-produce knowledge and projects that are making sense and are relevant for different actors and are open to different ways of knowing (e.g. Indigenous and Local knowledge).
- Create a safe and culturally appropriate space 1) for the co-creation of research projects with, by and for Indigenous communities, 2) to foster dialogue and two-

ways learning between scientists and Indigenous communities, and 3) to develop and implement inspiring practices in Indigenous research.

Strengthening cross-cultural research relationships with Indigenous communities presents several challenges (Ljubicic et al. 2021). To address these challenges, the *Hub* will bring together Indigenous advisors and researchers from various disciplines already engaging in working relationships with Indigenous communities at UQAR. It will create a culturally appropriate space where Indigenous partners are welcomed as research leaders and peers. It will be a convivial space where researchers and communities work together towards the fulfillment of the 5Rs' of Indigenous research principles: relationality, respect, relevance, reciprocity, and responsibility (Johnston et al. 2018).

- Design and engage in processes that activate individual and collective transformation and leadership, inspired by tools and methodologies developed at the Presencing Institute (MIT) as well as the Stockholm Resilience Centre.

Universities have the potential to become pivotal change agents for sustainable development. But to take this role, they need to promote transformative literacy within the institutions' walls, i.e., *the ability to understand and participate in social transformation (...) Sustainable development will then supposedly not be a special topic to deal with, but an integral part of an institution* (Giesenbauer and Müller-Christ, 2020).

To achieve this, professionals and research associates will work on the *Hub* using a process provided by MITx u.Lab, a massive open online course given by the Presencing Institute (MIT Sloan School of Management; <https://www.presencing.org>). This process is organized around theory (Scharmer and Käufer, 2013) and practices that integrate social science, mindfulness, and design thinking in the service of societal transformation.

- Build a legacy of transdisciplinary, inclusive, and innovative thinking through the formation of over 8 postdoctoral researchers and the outcome of the research linking to the *Hub*.
- Create a diverse learning community of researchers, students, Indigenous and non-Indigenous community members, and various organizations to develop new tools and approaches to a more sustainable and equitable future about ocean and climate issues.
- Facilitate communication with the public: many researchers cannot communicate their findings in such a way that the general population can participate and be part of the solutions with researchers. Thus, the *Hub* team, with the help of its Scribe-Communication Artist, will focus on making the findings emerging from our research program shareable to different audiences, from primary and high school students to policymakers.

Here are some examples of the materials that could emerge from the *Hub*: 1) The creation of a scientific online journal, with articles written by our programs' scientists, but reviewed by youth, is one example of how our research could engage younger generations (e.g. <https://kids.frontiersin.org/>). 2) The production of a transdisciplinary Massive Online Course (MOOC) that incorporates the rationale and findings from our Ocean-Climate-People nexus project, but that also connects participants to practices that foster transformative actions at different scales.

- Foster the engagement of the arts in climate change and ocean science and transformations as ways to live, heal, and understand various scientific and non-scientific perspectives about the topic.

The engagement of the arts in climate change research has increased over the past decade. Recent analysis of arts-science climate projects show that the importance of the arts goes beyond raising awareness about climate issues and makes real contributions to the co-production of knowledge across disciplines and to societal transformations (Galafassi et al. 2018). Through the *Hub*, it will be the task of the Arts-Science Commissioner to establish networks between artists and scientists.

- Accompany decision-making processes, from data to decision. The *Hub* will build on the expertise from the InterS4 Consortium in knowledge brokering (UQAR) that has developed tools related to this field, particularly in how to mobilize decision makers.

#### **Other ideas related to expenses and research implementation:**

- Strategic project development: the *Hub* can outline a particularly promising idea, with one or more partners, and put together the best team to realize the idea.
- Open calls for projects in a format that allows time and latitude to reflect together.
- Experiment, evaluate, and disseminate on different modes of knowledge mobilization.
- Calls for networking workshops: they could be requested by managers, for example.
- Calls for international postdoctoral fellowships.
- Calls for Indigenous project proposals.
- “Weaving art and climate-ocean science” exhibition call.

### **Key collaborators and inspiration sources:**

- MIT Presencing Institute (<https://www.presencing.org/aboutus>)
- Stockholm Resilience Center (<https://www.stockholmresilience.org>)
- FabRégion Bas-Saint-Laurent (<https://fabregionbsl.quebec>)
- Ville de Rimouski
- Living Lab en innovation ouverte (Llio; <https://llio.quebec>)
- Observatoire global du Saint-Laurent (<https://ogsl.ca/fr/accueil/>)
- Consortium InterS4 en courtage des connaissances et de l'Innovation de l'UQAR (<https://consortiuminters4.uqar.ca>)
- Institut des sciences de l'environnement (Université du Québec à Montréal)
- Réseau Québec maritime (RQM; <https://www.rqm.quebec>)
- Institut Environnement Développement Société (EDS), Université Laval (<https://ieds.ulaval.ca>)

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