



Future Economy Lab Montréal Report

Building an inclusive and resilient climate economy in Québec

December 9, 2020



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EXECUTIVE SUMMARY

At the Future Economy Lab (FEL) we are bringing together a select group of organizations to pioneer a new way of nurturing entrepreneurial ecosystems that create inclusive and resilient economies. The first iteration of FEL launched in partnership between Maison d'innovation sociale, McConnell Family Foundation, SecondMuse Capital, and Real Ventures focused on the climate economy in Québec. Tailoring the complex landscape of climate finance to Québec's entrepreneurs and investors requires a strong understanding of the province's resources, entrepreneurial activity, investor culture, and political priorities. Researching this has been a central part of the first iteration of the Future Economy Lab Montréal.

Our approach to research was multidisciplinary: video or telephone interviews with over 20 stakeholders, database analysis, report reviews, stakeholder mapping, and virtual workshops with 30+ participants. This research has been the guide for designing a new financing and ecosystem development structure to serve the Québec climate economy. Research has found that in Québec, there is strong public consensus in favour of taking action against climate change. The province has long been a leader in sustainable development and has set ambitious goals for climate change; most notably, a 37.5% reduction of GHG emissions by 2030 (vs. 1990 levels).

Given the criticism of traditional financial mechanisms, ranging from a lack of diversity to only supporting the growth of unicorns, we have started to see more nontraditional mechanisms - instruments and models - created to address some of these pitfalls or gain popularity (in the case of those that have been implemented for decades in the social economy). Our experience and research has found that ecosystem development - i.e the knowledge, resources and relationships surrounding and supporting entrepreneurs and innovators - is at the core of building new economies. As such, we are proposing the design of a fund paired with an ecosystem development program .

The uniqueness of this proposed model is that it aligns the interests of the ecosystem development efforts with a fund from the very beginning, helping to complement, strengthen, and de-risk one another. We believe that by supporting the healthy development of a climate focused ecosystem, this may help de-risk the fund's investments as it would support the development of a healthy pipeline of investments and help ensure the success of the businesses and projects that the fund invests in.

They would be managed separately but would have one board of advisors for both which would be able to provide a holistic perspective and guidance. While the activity of the ecosystem development program focuses on creating a more enabling environment for climate-focused innovations to thrive, the fund exists to fill the capital gap of scalable businesses and to attract and catalyze additional capital and financing mechanisms in the climate sector.

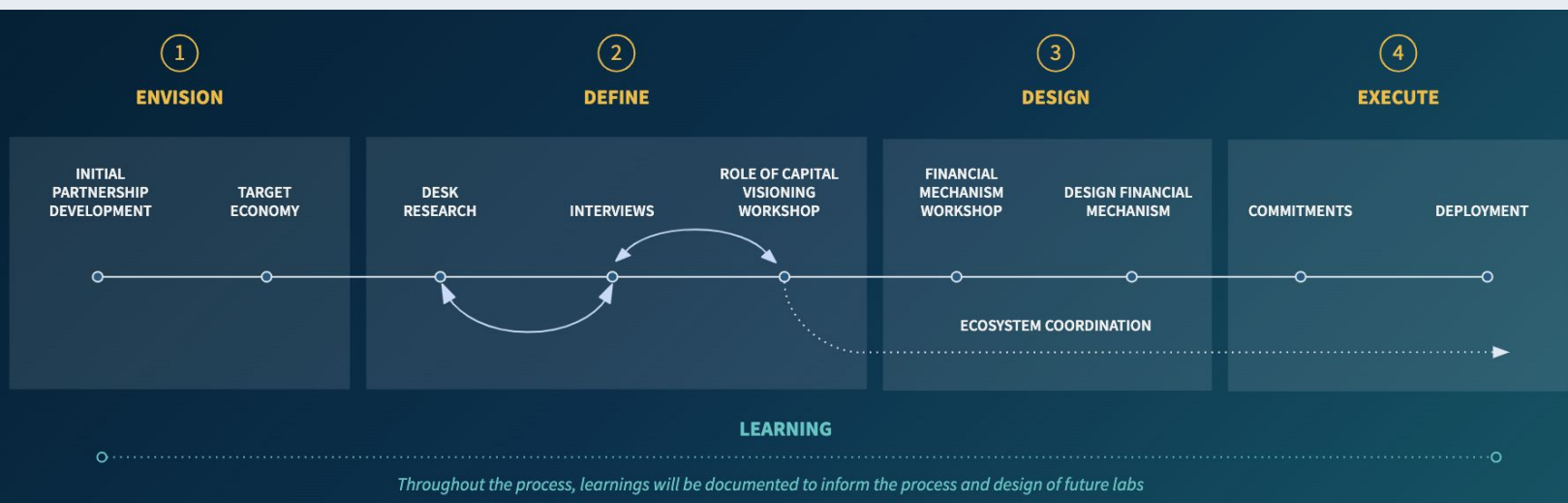
Although there is an active network working in Québec's climate economy, it is still nascent. We have the right building blocks to catalyze the next generation of the climate movement which will be more inclusive, more diverse, globally connected, and data driven.

INTRODUCTION

We are at a crossroads. It's time to rebuild the economy of the future. Recent world events have shown us how interconnected we are with one another and with nature, making clear the human pressures on our natural systems. It has demonstrated how fragile our systems are and questioned the assumptions and policies that have defined our economies. With the Future Economy Lab, our goal is to redefine how economies can be comprehensively built with inclusivity and resilience at their core from the bottom up.

About The Future Economy Lab

The Future Economy Lab (FEL) is a membership based research and design lab. FEL aims to innovate the financing and development of new economies — ones that are inclusive and resilient. When we talk about building resilient economies, we are not only talking about economies that can withstand shocks; but instead, economies that are inherently more successful in the long run *because* they have taken into account environmental and human well-being. These are economies that are working in concert with local communities and the environment, supporting their growth (*not exploiting them*), and therefore protecting and growing the primary assets that make that economy possible to begin with.

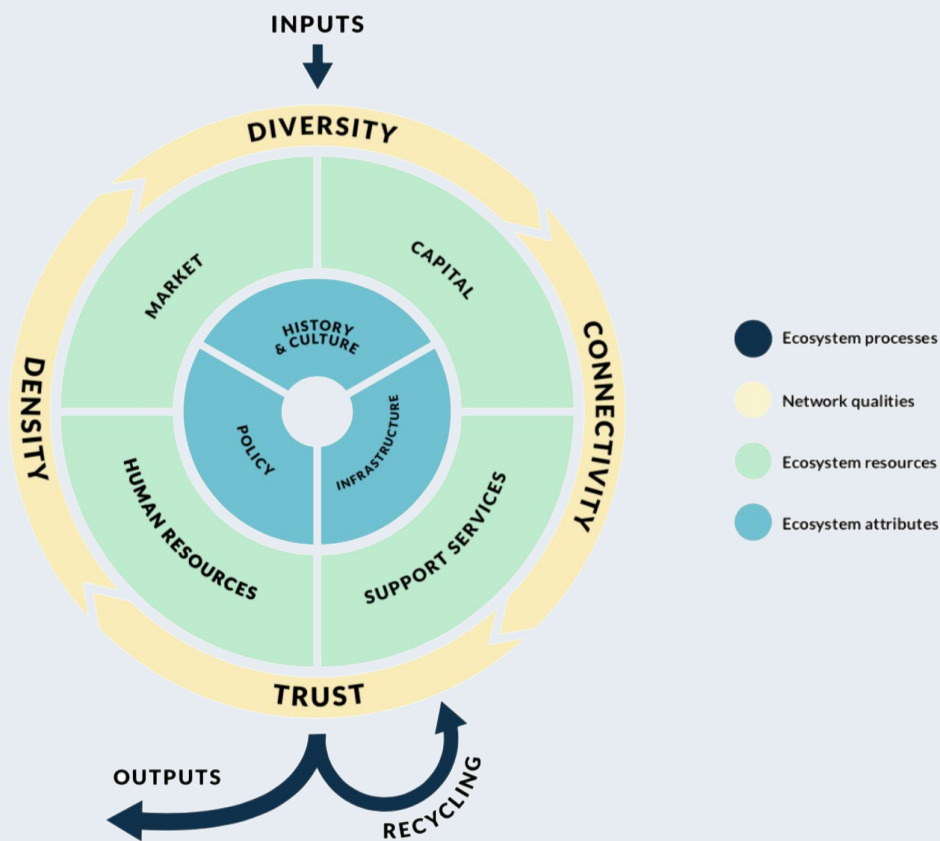


For us, a successful economy is not measured solely by an increase in GDP or by its production; instead it is measured more holistically by taking into account a variety of factors including but not limited to the following:

- **Ability for all people to witness sustained economic well-being**, freedom, and a life with dignity
- **All people have full capabilities to be active agents** of their lives and communities
- **Strong social bonds** between stakeholders creating strong communities that rely on each other
- **Growth of an entire ecosystem** that enables the progress of innovation not just one off businesses
- **Supporting the growth of sustainable development**; meeting the needs of the present without compromising the ability of future generations to meet their own needs
- **Promoting the preservation of the environment** and working towards reversing the damages that have already been made



FEL is piloting new approaches to financing the R&D and early support of innovation and entrepreneurial ecosystems by engaging diverse local stakeholders - from investors to governments to those supporting entrepreneurs - in the design of financial mechanisms in an economy of choice. Entrepreneurial ecosystems have been defined as ‘combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures’.¹ Our approach is collaborative in nature where we want to design with and for the community. We curate the mechanism for each city/region according to its aspirations, its social fabric, its intellectual capital and its innovation assets.



For our work in Québec we have three stated objectives:

- 1 **Build Québec's Climate Economy** with an inclusive and coordinated entrepreneurial ecosystem.
- 2 **Design and take to market a sustainable financial mechanism** in the Climate Economy that is able to endure innovation capacity in this entrepreneurial ecosystem over time.
- 3 **Create a global learning community** to advance the thinking of how we sustainably finance the development of new inclusive and resilient economies.

¹ Spiegel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, 41(1), 49-72.



Research Approach

Tailoring the complex landscape of climate finance to Québec’s entrepreneurs and investors requires a strong understanding of the province’s resources, entrepreneurial activity, investor culture, and political priorities. Through primary and secondary research, FEL analyzed the pressing challenges and emerging opportunities of climate finance in Québec. The approach was multidisciplinary: video or telephone interviews, database analysis, report reviews, stakeholder mapping, and virtual workshops with 30+ participants. This research has been the guide for designing a new financing structure to serve the Québec climate economy.

We grounded our research in understanding the key challenges for addressing climate change in Canada and then applying this to Québec’s economy. We first prioritized public or parapublic data-informed reports detailing Canada’s contribution to climate change and the risks that would ensue to key areas of the country’s economy. We then mapped this to Québec’s leading economic sectors, exploring i) the contribution to provincial GHGs, ii) the contribution to provincial employment and GDP and iii) the leading industrial players in each sector and opportunities for influencing change.



After identifying Agriculture and Transportation as key sectors for GHG reduction, climate adaptation, and increased social inclusion, we proceeded to conduct primary research. Through interviews with entrepreneurs and workshops with capital providers, we explored the financing landscape for each sector. Our key inquiries were: i) exploring the financial and non-financial supports available to emerging entrepreneurs and ii) exploring alternative forms of fund mechanisms that best enable innovation and understanding investor appetite for these.

The interviews with entrepreneurs were instrumental in designing the ecosystem development portion of the fund mechanism. The FEL team intentionally solicited the opinions of both emerging and experienced entrepreneurs on their experience with financial partners and their unmet needs, enabling FEL to integrate the work within the existing network of actors exploring Québec climate finance. Through developing an understanding of the priorities of other actors in the space, FEL was deliberate to i) identify gaps in the financing chain and ii) collaborate with existing actors to explore solutions.

THE NEED FOR ALTERNATIVE FINANCING MECHANISMS

Financial innovation comes in many shapes, and is needed now more than ever. The crisis of COVID-19 has illuminated the negative principles central to our economic system and is pushing against this system's vulnerabilities— with indigenous people, visible minority² groups, women, and unsecured workers being affected disproportionately. With many local economies and global sectors nearing collapse, we are entering a necessary period of rebuilding (that will continue after this crisis subsides), with the opportunity to restructure in ways that prepare us for a more resilient future. What we started to see in our research was a shift in dialogue emerging by capital providers from crisis management to recovery efforts and preparing for future crises. As large amounts of money started being pumped into the economy by governments around the world, resounding calls were made for both governments and international financial institutions to think about climate at the heart of stimulus packages.

“If we relaunch the economy in the wrong direction, we will hit the climate crisis wall. We need to **unite** all the energies for a green recovery.”

— *Canfin, chairman of the EU Parliament's environment committee*

In a 2019 Social Venture Impact Investing Canadian Landscape report³ by the Centre for Social Innovation & Impact Investing at UBC Sauder School of Business they found that the lack of viable investment products with strong track records is one of the major barriers to growth of the impact investing space in Canada. Although they have identified a growth in assets under management earmarked for impact investing (five-fold growth between 2014-2018) this is still a nascent practice in Canada. Investment products need to be aligned with the non-traditional business models of some climate ventures. Many of these businesses may not have traditional exit strategies or revenue growth trajectories and thus seek alternative sources of finance that provide more flexible options. Furthermore, climate focused ventures and projects often provide impact that goes beyond financial returns providing both positive social and environmental returns which should be factored into return expectations. The lack of consistent impact measurement frameworks and methods has made it difficult for capital providers to capture this impact in a way that translates to portfolio returns.

To address the need for alternative financial mechanisms and models, we have seen the creation of and a rise in sustainability linked loans, government issued bonds, character based lending models, community investment trusts, real estate investment cooperatives, social impact bonds, pay for performance models, loan loss reserve funds, impact fees and more⁴. Below is a closer look at blended finance funds which we have modeled our design after.

² A visible minority (French: *minorité visible*) is defined by the Government of Canada as "persons, other than aboriginal peoples, who are non-Caucasian in race or non-white in colour". The term is used primarily as a demographic category by Statistics Canada, in connection with that country's Employment Equity policies.

³ Bruno Lam and Dr James Tansey. *Social Venture Impact Investing: the Canadian Landscape*. British Columbia: UBC Sauder School of Business, 2019. Accessed: https://www.sauder.ubc.ca/sites/default/files/2019-03/SVII_Canada_S3i_FINAL_Report.pdf

⁴ Appendix A outlines some alternative financial mechanisms that were considered during program research and design.

Blended Finance Funds

As defined by Convergence, blended finance is “the use of catalytic capital from public or philanthropic sources to increase private sector investment in sustainable development”. Blended finance structures combine concessional funds from public and philanthropic funders with market rate seeking investments from the private sector. By strategically aligning pools of funding you are able to create new investment opportunities. This allows us to combine profit-making activities with activities that generate public goods that are essential for developing economies and companies, but that typically are only financed through philanthropic capital.

The Zero Gap Fund led by the Rockefeller foundation is a portfolio of large-scale blended finance funds and other mechanisms to finance a series of SDGs. The Global Innovation Lab for Climate Finance is a network that uses a blended approach to capital to accelerate the adoption of instruments that can unlock billions of dollars for climate change initiatives while also reducing private investors’ risks and improving their financial returns. One example is the West African Initiative for Climate-Smart Agriculture (WAICSA), a blended finance fund that offers subsidized interest rate loans to smallholder organizations and agribusinesses for loans under \$1million. The WAICSA is composed of a Financing Facility (80% of the fund) and a Technical Assistance Facility (20% of the fund). The Financing Facility offers capital both directly to agricultural businesses and smallholder organizations as well as through local financial institutions. The Technical Assistance Facility supports financial intermediaries to design loan products that integrate CSA conditionality and supports farmers in implementing locally adapted CSA practices. They have found that by having both a fund and technical assistance services they are able to further de-risk investments as it increases favorable conditions for repayment of loans given that CSA practices offer improved productivity and income for farmers.

Design

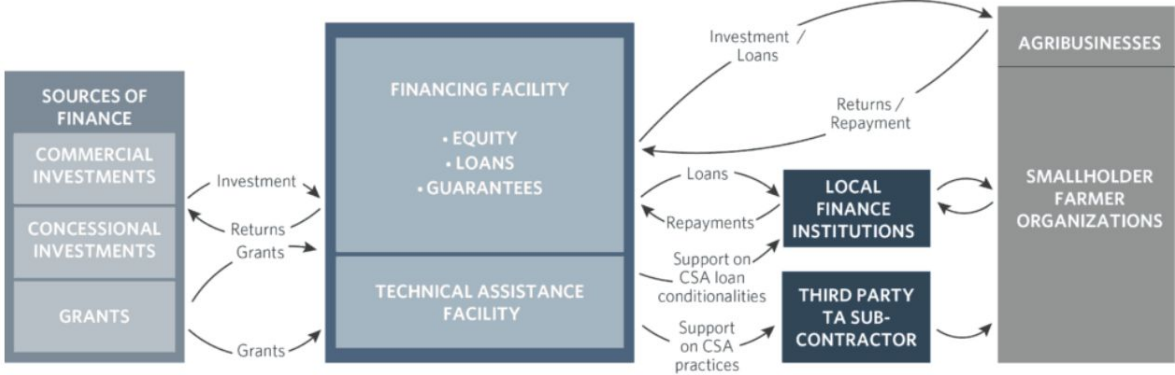


Image from Global Innovation Lab for Climate Finance

QUÉBEC & THE CLIMATE ECONOMY

Research has found that in Québec, there is strong public consensus in favour of taking action against climate change. Québec has long been a leader in sustainable development, creating the Manifeste Écologique Québécois in 1978, instating a province-wide Sustainable Development Plan as early as 2005, taxing carbon since 2007, and relying primarily on renewable energy for electricity. Québec is also home to the largest carbon market in North America once it merged its system with California in 2014. Globally the cap and trade method approach has been recognized as one of the most efficient and least costly economic tools for reducing greenhouse gas emissions.

While Québécois have reason to be proud, the reality of our climate friendliness is more complex: Québec's per capita electricity consumption is 40% higher than the national average; two of the largest oil refineries are located in Québec, representing over 20% of Canada's total refinery capacity; overall, we are the third highest emitting province in the country⁵.



Recognizing these incongruities, the Québec government has set itself ambitious climate goals for 2030, including reducing GHG emissions by 37.5% (vs. 1990 levels), increasing renewable usage by 25%, decreasing petroleum use by 40%, and incentivizing over 100,000 additional electric vehicles on the road⁶. The province is ratifying these ambitions through policies and budget allocations⁷.

- **+\$1bn in the 2019/20 budget to fight climate change and foster transportation electrification**
- **\$465 million over the next two years to encourage sustainable personal transportation**
- **\$5bn to increase local consumption of QC products, increase exports and double the area of designated farmland in Québec**
- **\$100 million to improve the management of residual materials**

In the realm of climate change, Québec, like everywhere in the world, needs to act simultaneously to reduce its GHG emissions and to strengthen its resilience to anticipated climate change impacts -- and the time to do so is now. Research has found that climate change impacts are already affecting Québec businesses and adaptation capacity will be largely dependent on financial incentives offered by the market. The government is actively playing a role by providing financing to projects aimed at conserving resources, strengthening the resilience of specific sectors such as agriculture, forestry and mining and raw materials which are more vulnerable to climate change and investing in an array of initiatives to reduce GHG emissions, first and foremost in the transportation sector.

⁵ Johanne Whitmore and Pierre-Olivier Pineau. *The State of Energy in Québec*. Montréal: Chair in Energy Sector Management, HEC Montréal and Transition énergétique Québec, 2018. Accessed: https://energie.hec.ca/wp-content/uploads/2019/05/EEQ2019_EN_WEB.pdf

⁶ Ecotech Québec. *Cleantech in Québec in 90 seconds*. Ecotech Québec, June 5, 2018. Video, https://www.youtube.com/watch?v=V7AiTso9De0&feature=youtu.be&ab_channel=%C3%89cotechQu%C3%A9bec

⁷ Gouvernement du Québec. *Investing Now To Take Charge Of Our Future - 2019-2020 Budget*. Québec: Gouvernement du Québec, March 2019. Accessed: http://www.budget.finances.gouv.qc.ca/budget/2019-2020/en/documents/BudgetinBrief_1920.pdf

In our research, we came across an active network of organizations working in the climate space. The chart below is meant to represent where organizations fit in the ecosystem. It is important to recognize that some organizations fit in more than one column and that climate is not the sole focus of these listed below (oftentimes it is only a small portion of their portfolio of activities). Also, please note that this is an evolving list and not all organizations working in this space have been identified (further mapping is required of the ecosystem).

MARKET <i>Trading Partners, Access, Platforms</i>	CAPITAL <i>Informal, Investors, Institutions</i>	HUMAN RESOURCES <i>Bootcamps, Education, Training</i>	SUPPORT SERVICES <i>Associations, Research Bodies, Incubators/Accelerators</i>
<ul style="list-style-type: none"> SVX EcoTech Quebec Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques Ministère de l'Économie et de l'Innovation Global Affairs Canada L'Acadie Lab Ecoterra Climate LaunchPad 	<ul style="list-style-type: none"> BDC AlphaFixe Capital Cycle Capital McConnell Family Foundation Trottier Foundation Fondation Greater Montreal Climate Fund Desjardins Fonds d'action québécois pour le développement durable Jarislowky, Fraser Limited Saputo Foundation EnerTech Capital Green Municipal Fund Low Carbon Cities Canada Fonds Ecoleader Biomass Energy Fund Inlandsis Fund Mirova 	<ul style="list-style-type: none"> Recolte MAPAQ Women 4 Climate Parcours développement durable Montréal Municipalities for Climate Innovation Program Quebec AgriFood Innovation Center Dunsky Consulting CIRODD Future Earth MILA CERES Canada 	<ul style="list-style-type: none"> Climateable EcoFuel Impact 8 Esplanade Mouvement des accélérateurs d'innovation du Québec Tandem Launch InnoCentre Creative Destruction Lab Montreal Climate Coalition COOP Carbone Ouranos Climate Innovation Cluster Propulsion Quebec

To narrow our scope of research, we determined two leading sectors that could leverage the province's entrepreneurial spirit to reshape a new climate-focused economy: AgriFood and Transportation.



Each of these sectors are central, established and yet growing areas of Québec's economy, and within each there is latent potential to facilitate greater climate resilience and inclusivity at scale.



A closer look at the **agrifood** sector

Québec's agri-food⁸ industry is ripe with climate-related risk and opportunity. Currently, agricultural practices are responsible for over 11% of the province's GHG emissions, with emissions having been fairly stable since 1990⁹. The agri-food sector is growing faster than the Québec economy as a whole, contributing over \$25.4b to the economy - over 8% of provincial GDP¹⁰. There are over 2,400 food processing businesses in the province and over 500,000 Québécois employed across the sector's value chain¹¹. This is a sector with strong cohesion and coordination in the province with strong unions and cooperative groups such as Union des Producteurs Agricoles representing 42,000 farmers across Québec and Sollio Cooperative Group employing 15,360 people and 122,466 farmer and consumer members.

As recognized by the Gov. of Canada, "agricultural production is highly dependent on weather and climate. [...] Interestingly, the opposite is also true: weather and climate are influenced by agricultural practices". Extreme weather events (such as floods and heat waves) can reduce crop yields by up to 50%; with seasonal cycles being already less reliable than they were, farmers are finding it challenging to plan and manage production. Québec investors have an opportunity to climate-proof this sector early, thereby seeding much-needed innovations that could improve agriculture across the country while securing our local food system.



A closer look at the **transportation** sector

Road transportation is one of the province's most emissions-intensive activities, with transportation-related petrofuel starkly contrasting the province's otherwise renewable-sourced electricity. With the overall transportation sector accounting for approximately 40% of Québec's emissions¹², there is a clear need to invest in zero-emissions vehicles, modal shifts to public or active transit, biofuel alternatives, and overall efficiencies in the sector. Not only is transportation the highest emitting sector in all of Québec, emissions have increased 22% in this sector since 1990 while the province's overall has gone down¹³.

Given the impact of this sector on GHG emissions, the province is dedicating a lot of time and resources to incentivizing personal electric vehicles and increasing the use of public transportation. Early stage ecosystem players, such as those involved in Québec's Climate-KIC competition, have found that this sector has bred more late-stage eagerness than early-stage innovation. Propulsion Québec (the cluster for electric and smart transportation) has been leading the charge in understanding and catalyzing the resources available in Québec. It has set ambitious goals for the province to become a global leader in electric and smart transportation with working groups focused on reinventing the future of mobility.

⁸ Agri-food includes: production of raw materials (farming, livestock), food processing, sales and services

⁹ Gouvernement du Québec. *2013-2020 Climate Change Action Plan*. Québec: Gouvernement du Québec, 2012. Accessed: http://www.environnement.gouv.qc.ca/changements/plan_action/pacc2020-en.pdf

¹⁰ *Industries: AgriFood*, Investissement Québec, 2020. Accessed: <https://www.investquebec.com/international/en/industries/agri-food.html>
Michelle Lalonde. *Québec government invests \$5 billion in province's food industry*. Montréal: Montréal Gazette, April 7, 2018. Accessed: <https://montrealgazette.com/news/local-news/quebec-government-invests-5-billion-in-provinces-food-industry>

¹¹ Ibid

¹² Canada Energy Regulator. *Provincial and Territorial Energy Profiles – Quebec*. Government of Canada, September 29, 2020. Accessed: <https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-quebec.html>

¹³ Gouvernement du Québec. *Investing Now To Take Charge Of Our Future - 2019-2020 Budget*. Québec: Gouvernement du Québec, March 2019. Accessed: http://www.budget.finances.gouv.qc.ca/budget/2019-2020/en/documents/BudgetInBrief_1920.pdf

INVESTMENT & ENTREPRENEURIAL LANDSCAPE

In the 2019/2020 provincial budget, \$75 million was dedicated to foster entrepreneurship and participation of young people in the economy and four new campuses for École des entrepreneurs du Québec were opened. At a city level, in part attributable to high levels of funding for venture capital, R&D, and university entrepreneurship programs, Montréal has the entrepreneurial capital to deliver on these ambitions of building a climate-resilient economy for the future¹⁴. With over 1300 startups in Montréal, 23 investment firms, 30 thriving incubators and accelerators, and 42 co-working spaces, the city is considered a “growing ecosystem to watch” by Startup Genome. Entrepreneurs are ready, the challenge is supporting and financing the first few steps.

From our research we identified three key themes on challenges entrepreneurs face:

- 1 Financing gap**
- 2 Need for alternative sources of capital**
- 3 Access gap for Indigenous peoples, visible minorities, and women**

Financing Gap

There are a substantial number of investors in Montréal, however, most businesses lack access to capital in the initial start-up/pre-venture phase. 70% of startups surveyed by Bonjour Startup Montréal identified financing as a barrier with only 12% of startups having received risk capital. In a survey of over 2,500 ventures across Canada, pre-seed investments was identified as a major pain-point for finding capital for social ventures according to the report by UBC Sauder Centre for Social Innovation & Impact Investing. Although there is access to numerous grants and other similar opportunities, the lack of flexible pre-seed capital makes it difficult to invest in their businesses due to stringent allocation policies. Our interviews in Québec confirmed these findings with entrepreneurs stating that it is difficult to access capital at early stages. Within the context of a fast evolving climate crisis, it is important that we are able to harness the potential of early stage businesses in an equally fast moving way. We also know that we must invest at the early stages if we want to see more businesses succeed for upstream investments.

A recurring theme that emerged from our workshops was that investors are looking for green, impactful places for their capital while entrepreneurs are faced with a dearth of capital. It was expressed that to help understand gaps and barriers more transparency between financial institutions is needed. It will be important to reduce the silos between capital supply (investors) and demand (entrepreneurs).

¹⁴ The City of Montréal has outlined its own plan for climate change adaptation which can be accessed online at: http://ville.montreal.qc.ca/pls/portal/docs/PAGE/ENVIRO_FR/MEDIA/DOCUMENTS/2017_PACCAM_2015-2020_REPORT.PDF



Need for alternative sources of capital

Non-traditional business models lead to non-traditional exit strategies; and many climate entrepreneurs¹⁵ would consider themselves to have non-traditional business models. In the same UBC Saunderson survey, they discovered a lack of patient capital to support social ventures entering the growth stage requiring post-seed capital entering what they called a “valley of death”. In our interviews with climate entrepreneurs in Québec, they expressed that traditional VCs don’t fully understand the needs of climate entrepreneurs and that due to the nature of their businesses they require more patient capital. Entrepreneurs working in the climate space have stated that their timelines are not aligned with the traditional return expectations of major investors since their businesses often have a longer time frame for return on investment

In our workshop with capital providers and entrepreneur support organizations, they recognized that learning to operate in new ways across all investor types, government, and entrepreneurs is needed if we want to see growth in the number of businesses working to fight climate change. Investors also expressed that there is a need to balance financial returns with impact. We know that climate businesses are able to provide a lot more than just financial return; the issue is that we do not have a common measurement of impact KPIs, and fund managers are not yet incentivized to perform based on impact.

Access gap for indigenous peoples, visible minorities, and women

When trying to better understand the diversity and access to capital for climate business - and Québec more specifically - we were not able to readily find this data. In a survey we administered to capital providers, we asked if they kept track of demographic breakdown of their pipeline and the response was no. Our research was able to reveal that in Canada, ownership of cleantech SMEs was less diverse than that of all SME (81% majority owned by men, compared with 64% of all SMEs)¹⁶. Furthermore cleantech SMEs were also less likely to be majority owned by visible minorities, indigenous peoples, and person(s) with a disability.

To create an inclusive and resilient climate economy in Québec we need to have a better understanding of what populations are accessing capital and which ones are being excluded from it. We know that indigenous peoples, minorities and women are disproportionately hurt by the cost of and lack of access to capital. Venture Capital is known to be an industry that prefers white males over others. As an example, we have seen just 1% of venture-funded start-up founders who are Black, according to BLCK VC, an organization that connects and advances Black venture capital investors. Furthermore, Black women only represent 0.2% of venture-backed founders. Although these figures are from the United States, we know that in Canada underrepresented minorities have also suffered from systemic racism which has left them disproportionately out of the economy.

¹⁵ When we use the term entrepreneur we are inclusive of social entrepreneurs and others who might not label themselves as a social entrepreneur but whose work is driven by strong social values and who are motivated by achieving more than just a profit from their business.

¹⁶ Lyming Huang. *SME Profile Clean Technology in Canada*. Ottawa: Innovation, Science and Economic Development Canada Small Business Branch Research and Analysis Directorate, February 2020. Accessed: [https://www.ic.gc.ca/eic/site/061.nsf/vwapj/SME-profile_Clean-technology-Canada_2-eng.pdf/\\$FILE/SME-profile_Clean-technology-Canada_2-eng.pdf](https://www.ic.gc.ca/eic/site/061.nsf/vwapj/SME-profile_Clean-technology-Canada_2-eng.pdf/$FILE/SME-profile_Clean-technology-Canada_2-eng.pdf)



The Canadian government has acknowledged this with Prime Minister Justin Trudeau stating that “the pandemic has shone a light on the inequalities that disproportionately hurt Black Canadians, and has underscored the need to restart our economy in a way that allows all Canadians an equal chance to succeed”. To start addressing this, the government in partnership with Canadian financial institutions, has announced Canada’s first-ever Black Entrepreneurship Program, dedicating \$221 million to support Black entrepreneurs and business owners.



With respect to Indigenous peoples, it is suggested that while economic outcomes improved overall for Indigenous populations in Canada in recent years, they are still not on track to meet 2022 targets of Economic Parity. According to the Indigenous Economic Progress Report from 2019, the gap between Indigenous and non-Indigenous on key indicators such as education completion rates, income, entrepreneurship and others continues to be significant¹⁷. The average income of Indigenous population is about 74% that of non-Indigenous population. With respect to entrepreneurship and self-employment, there were improved outcomes reported in 2016, with the percentage of total Indigenous individuals embarking on entrepreneurial and business development at 7.4% (vs. 6.8% in 2006). This, however, is still lower than the 12% in non-Indigenous populations. The CCAB’s 2016 Aboriginal Business Survey found that Indigenous business owners cite attracting quality talent (39%) and retaining valuable employees (29%) as their greatest challenges in conducting business. The second greatest barrier for Indigenous business owners was regarding funding. Access to financing, equity or capital (31%) was listed as being a major obstacle they face in growing their businesses.

Several initiatives and programs have been launched in recent years to support Indigenous entrepreneurship development and access to capital at national scale; these programs taken alone, however, are not enough. If desired by Indigenous communities themselves, they could be reinforced through complimentary means such as developing collaborations with Indigenous on reserve populations in relation to the development of a climate economy in areas of infrastructure, for instance by incentivizing purchase of power on reserve compared to off reserve and other rural or remote areas. Reducing the impact of transportation barriers in remote, Indigenous communities could be another interesting way to increase collaboration potential with Indigenous communities and to increase access to financial resources, thus fostering the creation of a more inclusive entrepreneurial ecosystem. These are amongst the many recommendations made by the National Indigenous economic development board (2019) to assist Indigenous communities in their economic and entrepreneurial development to reach 2022 targets. It is estimated that closing such socio-economic gaps would boost Canada’s economy by \$27.7B annually¹⁸.

¹⁷ The National Indigenous Economic Development Board. *The Indigenous Economic Progress Report 2019*. Gatineau, The National Indigenous Economic Development Board, 2019. Accessed: <http://www.naedb-cndea.com/wp-content/uploads/2019/06/NIEDB-2019-Indigenous-Economic-Progress-Report.pdf>

¹⁸ Ibid

PROPOSED DESIGN

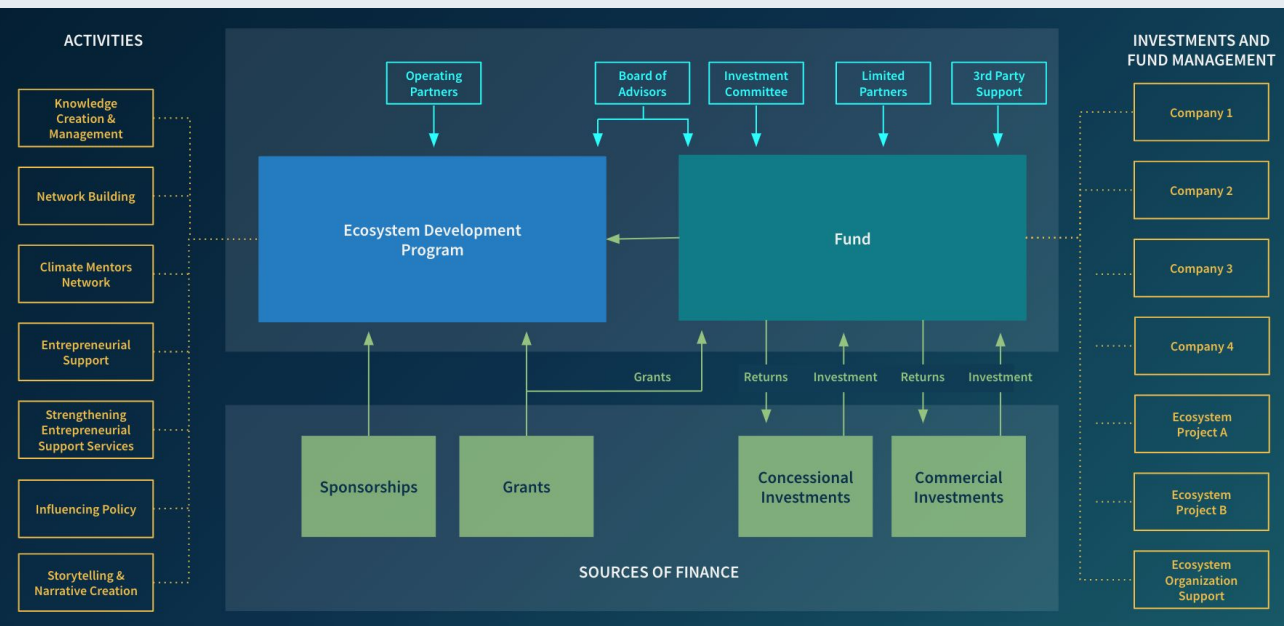
We are proposing the design of a fund paired with an ecosystem development program. Our experience and research has found that ecosystem development has to be at the core of the model when building new economies. Our vision is that by creating an ecosystem development program, rather than incubating and accelerating only individual companies that our portfolio would invest in, we are able to support the growth of an entire ecosystem to create an inclusive and resilient climate economy in Québec.

The uniqueness of this proposed model is that it aligns the interests of the ecosystem development with a fund from the very beginning, helping to complement, strengthen, and de-risk one another. We believe that by supporting the healthy development of a climate focused ecosystem, this may help de-risk the fund's investments as it would support the development of a healthy pipeline of investments for the fund and help ensure the success of the businesses and projects that the fund invests in.

They would be managed separately but would have one board of advisors for both which would be able to provide a holistic perspective and guidance. While the activity of the ecosystem development program focuses on creating a more enabling environment for climate focused innovations to thrive, the fund exists to fill the capital gap of scalable businesses and to attract and catalyze additional capital and financing mechanisms in the climate sector.

By combining an ecosystem development program with a fund we will:

- **Get 10x more entrepreneurs in the Climate Economy**
- **Increase the diversity of entrepreneurs in the Climate Economy**
- **Increase the supply of capital for early stage climate ventures**
- **Build a pipeline of investment-ready companies**
- **Build long lasting local capacity for innovation**
- **Accelerate the speed of innovation & commercialization**
- **Have the ability to de-risk investment (success rate)**



A closer look at the *fund*

The fund would be initially a \$30-50 million blended finance fund to support the growth of the climate economy by investing in projects and businesses that are focused on creating a positive environmental impact with network effects. The breakdown of capital deployed and the types of financial instruments that would be used is detailed in the graphic below.



Having different instruments allows us to pool together a wider variety of investors (with different risk and return appetites) and serve a larger pool of businesses and projects. Through different investment tranches, funds are provided for start-ups and companies in early commercialization to provide the early needed capital to help to establish the company and position it for further investments. Using a blended financing mechanism we are able to demonstrate investment viability of these early stage ventures and ideas that will facilitate their ability to fundraise additional public and private sources of capital. Many of the entrepreneurs that we spoke with mentioned that to qualify for public grants they required some level of private investment. One entrepreneur that we spoke to was able to leverage a \$100,000 line of credit to secure \$1,000,000 from public grants. This demonstrates the power that even small amounts of private capital can make in helping businesses and projects secure additional capital.

The idea of using impact dependent convertible notes came from our research on sustainability linked loans. Since the companies and projects we will be investing into will already be demonstrating a positive environmental impact, we will use these as a way to incentivize companies to go beyond environmental impact to also include positive social impact. Recent discourse has pointed out that many companies either pursue one or the other but seldom both together. The hope is that by providing better terms for greater impact we can incentivize climate companies and projects to also think about their social impacts.

In addition to capital and the services provided by the ecosystem development program, the fund would provide one-on-one mentorship for founders/project leads, support access to new markets, provide tailored impact measurement services, and communications support for the business and projects that we would directly invest in. We are aware that commercialization and exports are key challenges for emerging businesses. Studies have shown that startups with higher Global Market Reach early on see their revenue grow 2X faster, and according to the 2020 survey of Bonjour Startup Montréal, 70% of entrepreneurs would like to have access to a local expert to help them with their export strategy.

Beyond the expected financial returns, the fund’s success would be measured by ESG and SDG impact metrics at the fund and company level following the guidelines of the Principles for Responsible Investing. In line with the latest SDG Impact Standards, the fund would be using the SDGs strategically to make capital allocations and not simply to use it as another reporting lens. Our goals will be aligned with SDG targets and municipal and provincial climate goals. To ensure integrity and transparency of reporting, we would work with an external M&E specialist to conduct our impact analysis authenticating that our investments are making a positive impact. The fund manager and board would be involved in and accountable for impact management practices and performance. The fund would also commit to good governance models that counter traditional power dynamics to foster inclusivity and encourage multidirectional accountability and learning -- resulting in greater resilience for the fund, as well as the economy, businesses, and people we would invest in.

TARGET SIZE	\$30-50 million	TARGET NUMBER OF INVESTMENTS	25-40
FOCUS	Investing in projects and businesses that are focused on creating a positive environmental impact with network effects .	FUND TERM & INVESTMENT PERIOD	10 Year Term 2 One-Year Extensions <i>(first year at GP discretion; second year with LP consent)</i> 4 Year Investment Period
STAGE	Pre-Seed, Seed	KEY TERMS	2.5% Management Fee 25% Carried Interest (5% for ecosystem)
TARGET INITIAL INVESTMENT SIZE	\$100K to \$1M	TARGET RETURNS	DPI of 3-5X

Note: All terms are subject to final fund documents. This is for discussion purposes only.



A closer look at the **ecosystem development program**

The activities would centre around the creation and coordination of a network of actors that would share knowledge, resources and relationships to help innovators, entrepreneurs, community organisations, entrepreneurial support organisations, companies, and municipal governments to source, support and scale solutions. Fundamental to the organization of the ecosystem development effort is the belief that no one actor holds the resources - financial, technical or relational - to address the complex issue of creating an inclusive and resilient climate economy in Québec. As such, we will be strategically partnering with other organizations doing similar work. In some cases we would be leading activities and programming while in others we would be supporting the work of those in the ecosystem.

The programming will be iteratively built as we continue to learn about the specific needs of the community and as the ecosystem evolves and matures. This also includes identifying what will be the initial region(s) of focus for this work. We want to work with each region to invest in their strengths. Having a phased approach to the activities allows us to design for and adapt to the emergent and current realities of the ecosystem, ensuring that we are continuously applying our learning to market needs and gaps and we are growing alongside the ecosystem. Based on our research to date, the activities below have been identified as important and lacking in the current ecosystem, and would be the focus of our first few years of operation.

IMPACT MEASUREMENT & REPORTING

Example Activities

- Working one on one with early stage businesses to measure and communicate their impact in a way that doesn't add an extra burden
- Supporting companies to look beyond “traditional” environmental and climate change metrics to also include social impact
- Working with experts in the field to develop “quick and easy” guides and proxies for early stage businesses that want to measure their impact
- Provide support and best practices to other funders that are looking to measure the social and environmental impact of their portfolios

PROGRAMMING FOR ACCELERATORS & INCUBATORS TO INTEGRATE CLIMATE ENTREPRENEURS IN COHORTS

Example Activities

- Host workshops for accelerators and incubators to better understand the needs of climate entrepreneurs and learn how to best support them
- Create curriculum specifically targeted for climate entrepreneurs that can be adapted by existing accelerators and incubators
- Create a knowledge exchange between existing accelerators and incubators to share learnings on what is required to support climate entrepreneurs
- Advocate for more climate entrepreneurs to be included in Montréal's top accelerator and incubator programs

CLIMATE MENTORS NETWORK

Example Activities

- Recruit mentors across a variety of topics from storytelling expertise to finance to give advice and support to entrepreneurs working in the climate space
- Creation of different “tracks” of mentors who have different profiles such as near peer, young professionals, prominent leaders in the field, established founders, and C-suite executives who can provide a wide variety of high touch to low touch support to entrepreneurs
- Creation of support network for mentors who can build relationships with one another

RESEARCH TO UNDERSTAND INCLUSION & ACCESS TO CAPITAL

Example Activities

- Work with leading universities and researchers to better understand the inclusion dynamics of capital in the climate economy, i.e. demographics of who has access to capital, what type, for how much, who participates in this sector and who is excluded
- Engage with Indigenous peoples and minority communities to understand the best and most respectful way to create an inclusive governance model for the fund and ecosystem development program (one that will reflect authentic inclusion values, including Indigenous vision of what a climate economy is and build relationships with Indigenous organizations to put their funding needs and concerns at the center of the process)

Other activities that the ecosystem development program would engage in include the following:


Co-host Events *Network Building*
Co-host events (virtual & in person) to raise awareness of climate innovations & entrepreneurs with a focus on showcasing underrepresented minorities.


Communications & Awareness
Storytelling & narrative creation
Using storytelling and digital engagement to develop a common language around climate and connect individuals and institutions to each other and a cause.


Supportive Spaces *Network Building*
Work with spaces that already exist in the ecosystem to host workshops, office hours and other events to foster a space where entrepreneurs working in the climate economy can come together.


Research Institutions
Knowledge creation & management
Partnerships and projects with research institutions around Québec to advance collective knowledge about the needs of climate innovations and entrepreneurs.


City Strategies *Influencing Policy*
Build the collective capacity of government officials to advocate for and support the growth of climate businesses and innovations via increased investment, policies to support impact investing, and procurement of innovations.


Connecting to a Global Network
Network building
Connecting cities in Québec to the network of cities actively working on climate change innovation (New York and Chicago being the firsts).

The activities and goals of the ecosystem development program are complex, and therefore a comprehensive measurement framework will need to be developed alongside an M&E specialist. During the ecosystem development program’s first year, we will engage with an external M&E partner for 2-3 months to support the design and set-up of a monitoring system that will collect data across the facility’s programs and regularly share analyzed data with the facility’s decision-makers and key stakeholders.

Similar to the multiple sources of capital for the fund, the ecosystem development program would also use multiple sources of capital to fund its programs and activities. This innovative funding model was created based on conversations and a design session with multiple stakeholders and experts in the field. This is a unique model in that investors and the fund itself contribute financially to the growth of the entrepreneurial ecosystem. Having this expectation from the onset ensures that capital providers are active contributors to ecosystem development. The model is designed to be flexible enough to allow for a hybrid approach to financing and allow for changes that may occur over time. The addition of sponsorships and project based financing allow for the natural growth and expansion of the ecosystem development work.

TYPE OF FUNDING	SOURCE OF CAPITAL	INDIVIDUAL AMOUNT	USE OF CAPITAL
10% of LPs investment	LPs	Additional 10% of overall investment of LP	General creation, management, operations of facility Additional fundraising
5% carry of the fund	Fund	Amount based on fund’s returns	Funding to other organizations involved in ecosystem development activities
Sponsorship	Foundations Investment Funds Corporations & Banks	\$100,000 - 500,000	General activities of the facility Funding other organizations involved in ecosystem development activities Community building in the ecosystem
Project based financing	Foundations City, Provincial, Federal Grants	\$100,000 +	Specific initiatives and programs with concrete deliverables executed by the ecosystem development facility and strategic partners.

CONCLUSION

Although there is an active network working in Québec's climate economy, it is still nascent at a large scale. We have the right building blocks to catalyze the next generation of the climate movement which will be more inclusive, more diverse, globally connected, and data driven. The uniqueness of this proposed model is twofold: 1) it pairs ecosystem development with the creation of a fund from the onset and 2) it uses a blended approach to finance ecosystem development which includes investors at the initial phase of creation as well as dedicating a portion of the fund's returns back to the ecosystem.

Having an ecosystem development program alongside a fund is uncommon as the focus is usually on one or the other. The added support given by funds is often only reserved for their portfolio companies and has a very narrow focus tailored to each company. As a result, what we have seen is the success of a few where many fail. The advantage of having an ecosystem development program alongside the support that the fund will provide is that we will be able to create an enabling environment for multiple ventures and projects to succeed. This not only helps create a greater pipeline of investment opportunities for the fund, but it can also help de-risk the fund's investments as the ventures and projects invested in will have access to the entire support ecosystem that is required for them to thrive.

Our approach to financing the ecosystem development is also innovative, as it includes investors as critical builders of ecosystem development from the very onset. By investing early into the development of a climate ecosystem capital providers are moving from the sidelines and taking a bigger part in building the economies that affect us all. In this model we also align the fund's returns with the ecosystem development by allocating a 5% carry of the fund for ecosystem-building services. The other two sources of funding, sponsorship and project-based financing are more traditional sources of finance for ecosystem development. What is unique here is the composition of actors involved. Given that the ecosystem development will focus on the growth of the entire climate economy, other private investors have also expressed interest in funding the ecosystem development even though they would not be LPs in this fund. This further demonstrates the need for this type of activity in Québec.

During the course of FEL, we were able to more deeply understand the supply and demand of capital within the climate economy of Québec. We engaged with over 50 organizations who all shared with us a unique perspective. Although we were able to advance our collective understanding of this space, we came across many interesting questions and comments that still require further reflection and research, or that have not been addressed in this report. Those points of interest include, but are not limited to, the following:

- *What are the populations that are most and least active as innovators and entrepreneurs in this economy and why?*
- *What are the populations that have access to capital, how much, what type and why?*
- *How do we start to think about the purpose that capital has more intentionally?*
- *How can we encourage longer investment horizons?*
- *How do we equip entrepreneurs to design their impact models and track the required data to report in a trustworthy way? How do we help funds track portfolio aggregated impact?*
- *How can we work more closely with city and provincial governments to align investments with public policy?*
- *What governance structures can we apply that foster inclusive decision-making and counter traditional power dynamics? How would these affect the ecosystem development program, the fund management, and its investment committee processes?*

These questions and many more are worthy of further exploration to help us better create an inclusive and resilient climate economy in Québec.

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Appendix



EXPLORING ALTERNATIVE FINANCING MECHANISMS

Part of our desk research entailed looking at alternative financing mechanisms used outside of Québec in order to have an understanding of different models and tools used more globally in the growth of new economies. We explored financing tools used to support the climate economy (both by the private and public sectors) and non-traditional forms of financing outside of the climate economy that look to use capital as a force for good. Some of these tools include: loan guarantees, convertible notes, SAFE, revenue-based investing, pay-for-performance contracts, blue bonds, character based lending, asset based lending, and more. Below is a closer look at sustainability linked loans and government issued green bonds, specifically.

Sustainability Linked Loans

A sustainability linked loan (SLL) is a loan instrument that incentivizes borrowers to achieve agreed upon sustainability performance objectives such as improving ESG scores. It requires both parties to work together to set sustainability performance targets and the terms for the loan. The goals are meaningful to the borrower and help them achieve their own sustainability goals by providing financial incentives primarily a more favourable interest rate. Some common categories of sustainability performance targets are listed below:

Category	Example
Energy efficiency	Improvements in the energy efficiency rating of buildings and/or machinery owned or leased by the borrower.
Greenhouse gas emissions	Reductions in greenhouse gas emissions in relation to products manufactured or sold by the borrower or to the production or manufacturing cycle.
Renewable energy	Increases in the amount of renewable energy generated or used by the borrower.
Water consumption	Water savings made by the borrower.
Affordable housing	Increases in the number of affordable housing units developed by the borrower.
Sustainable sourcing	Increases in the use of verified sustainable raw materials/supplies.
Circular economy	Increases in recycling rates or use of recycled raw materials/supplies.
Sustainable farming and food	Improvements in sourcing/producing sustainable products and/or quality products (using appropriate labels or certifications).
Biodiversity	Improvements in conservation and protection of biodiversity.
Global ESG assessment	Improvements in the borrower's ESG rating and/or achievement of a recognised ESG certification.

Chart from the Sustainability Linked Loan Principles

To promote the development and integrity of these loan products, the Sustainability Linked Loan Principles (SLLP) have been created by a working group of representatives from leading financial institutions that are active in the global syndicated loan markets. They have set out a framework that allows participants to understand the different components required.



Government Issued Green Bonds

Governments have issued bonds for many decades to help finance capital intensive projects. With a recent understanding of the importance of creating climate resilient cities and provinces, governments have been using different types of bonds to help transition to more renewable sources of energy. Green bonds help raise capital for specific clean power and carbon-reducing projects. They offer longer maturity periods, third-party credit enhancement and more flexible covenants. Seychelle's government issued an innovating \$15M Blue Bond in 2018 to attract new investors in support of its sustainable development agenda. Seychelles, in partnership with the Nature Conservancy, the Paris Club and the World Bank, converted its foreign debt into a funding stream for marine-based projects that have positive economic, environmental and climate benefits.

Revenue bonds have been used by municipal projects that can generate revenue since the bond is paid back from revenues generated by the asset the bonds funded. In New Mexico, schools received \$20million in energy efficiency upgrades through revenue bonds. The terms of the bond required schools to allocate 90% of the savings that resulted from their upgrades to pay off the bond while 10% they were able to keep for their own activities. Another example of using bonds to support the transition towards more energy efficient buildings has been in Illinois. A \$25 million industrial revenue bond was given to a private college to make campus housing improvements that reduced energy and water costs helping them achieve LEED certification. To cover the bond debt, the university charges students a premium for those students that chose to live in these upgraded facilities.





Join us

The Future Economy Lab seeks to test new approaches to financing the R&D and early support of innovation and entrepreneurial ecosystems. We engage different local stakeholders - from investors to governments to those supporting entrepreneurs - to design financial mechanisms in an economy of choice.

Our approach is collaborative in nature where we want to be designing with and for the community. We curate the mechanism for each city/region according to its aspirations, its social fabric, its intellectual capital and its innovation assets. Future economies are growing all around the world.

We have recently completed the first iteration of FEL in Montréal focused on the climate economy. We are looking to continue this process and running other labs outside of Montréal and/or in a different sector all together.

If interested in learning more or obtaining a copy in French please reach out to Natalia Arjomand at natalia.arjomand@secondmuse.com

Let's learn together with a network of global partners as we design new financial mechanisms and shape new economies in other cities and sectors.

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