# Fellowship Case Study Instructions

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# Overview of the Social Innovation Fellowship Program

The Social Innovation Fellowship Program is a training & development program for youth 18-30, living in Canada, looking to develop the technical and transferable skills needed to work in social impact. Fellows apply these learnings to capacity-building projects supporting impact organizations from coast-to-coast.

We are seeking 50 Fellows to participate in our 2022/2023 program, which is conducted virtually. Our team will begin onboarding during Summer 2022, offering foundational workshops and training. Fellows will then commit 10 hours per week to the program from September 2022 to March 2023. As a Fellow, you have access to:

- Training: Weekly workshops and online modules led by experts, curated by SIA
- Personal & Professional Development: Including a Social Impact Coffee Chat Program and Mentorship & Wellness Program led by SIA alumni
- Experiential learning projects supporting impact organizations: Projects will be completed in two cycles of eight to ten weeks each: Cycle 1 (September - November 2022) and Cycle 2 (January - March 2023)
- Priority hiring for summer internships with SIA partners in Summer 2023. Fellows and SVF Associates will be first in line for 20+ Summer Analyst positions with SIA partner organizations from May to August, 2023. Partners include SVX, Community Foundations of Canada, Innovate Calgary, New Market Funds, Thrive Impact Fund, Pillar Nonprofit Network, Esplanade Québec, Fair Finance Fund, Vancity Community Investment Bank, Kaléidoscope Social Impact, and Relativ Impact.

## About the Social Innovation Academy

The Social Innovation Academy launched in May 2019. To date, 170 SIA Fellows and Analysts have provided over 130 impact organizations with capacity-building, pro bono support.

The Social Innovation Academy is committed to extending our training opportunities to youth with diverse backgrounds. We honour the experiences that individuals bring from non-linear and non-traditional paths that have led you to apply today.

## Selection Criteria

- You are between the ages of 18 – 30. If you don't fit this criteria but feel strongly about joining the program, please send an email to hello@socialinnovationacademy.ca to discuss eligibility with the team.
- You can be living or studying *anywhere* in Canada. The program is open to all Canadian citizens, permanent residents, and international students with Canadian study permits
- You can be studying, working, or pursuing any initiatives - there is no education (university or college) requirement needed to apply

**Requirements**

- Strong self-awareness, empathy, and emotional intelligence
- Strong intercultural competency, awareness, and appreciation for people with diverse backgrounds and experiences
- Demonstrated interest in and care for social/environmental issues
- Desire to support the growth and development of the Canadian social innovation sector (social enterprises, impact investing funds, charities, non-profits, co-operatives)
- High level of initiative, organization, self-motivation, and problem-solving skills
- Excellent verbal and written communication skills
- Drive to make a tangible difference in both oneself and in one's local and global community
- Experience working in the Prairies, the Maritimes, or the North is an asset

## Commitment to Diversity and Inclusion

*The Social Innovation Academy is an equal opportunity organization committed to building and fostering a fair and inclusive community that values diversity and encourages respect for all. We welcome applicants across any race, colour, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, Indigenous status, or any other legally-protected factors. We recognize the value of identifying and removing barriers for any applicants interested in participating in our programs. Please contact us at hello@socialinnovationacademy.ca to start a conversation about different accommodations available.*

| Week of April 4-8 2022 | Virtual orientation and social with 2022/2023 Fellows across Canada (**2 hours total**) |
|---|---|
| June - July 2022 | Workshops (Core Principles & Core Foundations) (**2 hours/week**) |
| August 2022 | Assignments and Case Studies (**up to 5 hours/week**) |
| September 2022 – March 2023 | Workshops, personal & professional development, and hands-on projects (**up to 10 hours/week**) |

# Case Study Application Assignment

As a Social Innovation Fellow, you will interact with various organizations solving complex environmental, social, and cultural problems.

During the Fellowship, you will work on two Challenges - eight-week, bite-sized projects, completed in teams of 3-5 Fellows - supporting Canadian SPOs, nonprofits, or charities. We want to know how you might approach these Challenges, so we designed this portion of the application to understand your ability to think critically about issues, research and analyze data, and communicate.

While this exercise pulls elements from the case study method used in consulting, design, and business practices, it is much more than that. We would like you to take a moment to reflect on your own background and how your experiences influence how you think about these issues and solutions. If you haven't been exposed to a case study before, this exercise may seem daunting - this is our moment to assure you that *you can do this*. Analysis is much more than crunching numbers, and insightful recommendations take many shapes and forms. There truly is no right way to answer these prompts.

## Instructions

- Please identify (1) an issue and (2) a region to base your case study on. In the next section, you'll find a list of example issue areas and regions. You may choose from this list but you are **not required** to – these are simply examples. The region can be focused on anywhere – locally, nationally, globally.
- The page limit for this case study is **3 pages max** (not counting references pages).
- Please cite all of your sources and references in footnotes or a separate reference page (reference page does not count towards page count). We do not have a preferred citation style.
- Feel free to get creative with your submission: no need to stick to our example template, but make sure to answer the guiding questions and stay within the page limit. Visuals and graphics are welcomed!
- Submit your case study as a .pdf file on the application form. The file should be named: CaseStudy_YourInitials (for example, "CaseStudy_AB.pdf")

## What Are We Looking For?

### 1. Ability to understand and analyze the issue
These issues are often complex, sophisticated, wicked problems. We want to see how well you can understand the underlying system in which the issue takes place. What are the root causes? Who is contributing to the problem (positively or negatively)?

## 2. Ability to understand and identify existing solutions

Before we attempt to create solutions of our own, we should always understand what is already existing in the landscape. We want to see how well you can identify existing stakeholders and analyze their role in the issue area.

## 3. Ability to identify key insights and lessons

You may find a lot of information about the issue area you're researching. We want to see your ability to form insights with the information you can find. We want to hear what you think are the key insights and lessons – what has worked? What hasn't worked?

## 4. Ability to acknowledge existing biases and assumptions

In the impact space, we recognize that we come from many different backgrounds and varying levels of privilege. Our experiences and upbringings play a role in how we view issues, the work that different social purpose organizations are doing, and the people powering these initiatives. We want you to explore how your background and positionality influence how you approach an exercise like this one.

## Guiding Questions

a. **Problem Landscape**:
- Who is being affected the most by the challenge? How are they being affected? What are the numbers and what is the research saying?
- What are the underlying causes?

b. **Solution Landscape**
- What is the existing landscape of solutions to the problem? What is happening locally? What efforts have been tried and what are the results?
- What are some other solutions that have been tried elsewhere (nationally or globally)? What lessons were learned? How can they apply to your region of study?

c. **Key Insights**:
- Summary of key lessons learned: What did you learn from your research?
    o What's missing in the landscape? (Policies, products, programs, collaboration, knowledge sharing).
    o Where are the gaps between problems and solutions?
    o What's not being addressed, or under-addressed?

d. **Biases & Assumptions:** Briefly reflect on and describe how your experiences and background influence your view of the issue and how you generate key insights.

## Issue/Region Topic Examples

The issue area should centre around a social, environmental, cultural issue. The region can be based anywhere – however we would advise against choosing a region that is too large. It is hard to narrow down the topic into 3 pages when the region is too wide-ranging.

Examples
You **do not need to choose** from this list. These are just examples.

| Issue Area | Region |
| --- | --- |
| Food Insecurity | Vancouver, Canada |
| Access to Quality Healthcare | Northern Canada |
| Clean Electricity Generation | California, USA |
| Post-secondary Education Affordability | Accra, Ghana |
| Single-use Items Waste | Toronto, Canada |
| Biodiversity Loss | British Columbia |
| Housing Affordability | Hong Kong |
| Menstrual Equity | South Africa |
| Food Waste | New York |
| Access to Mental Health Support | London, UK |

# Sample Case Study

Note: this sample does not include part d) Biases & Assumptions - we want to leave this portion of the exercise as open to interpretation as possible.

Issue: Reducing Emissions the Built Sector | Region: Canada

## Problem Landscape

In 2017, buildings emitted 85 megatonnes of greenhouse gases, equivalent to 12% of total Canadian emissions, or the third largest emitting economic sector behind oil and gas, and transportation. GHG emissions linked to buildings, however, require a more nuanced analysis. We can break them up between (1) indirect emissions and (2) direct emissions.[1]

The Canadian data on building emissions reflects only direct emissions, or emissions produced "on-site" such as through combustion of natural gas and petroleum products for heating and cooking, organic waste originating from buildings that are sent to landfills, wastewater treatment plans that emit CH4 and N2O, fluorinated gases from air conditioning and refrigeration systems. In order to get a picture of GHG emissions that result from buildings, we have to adjust the building emissions to include indirect emissions, which means that the emissions are not directly emitted from the building, but rather at the power plants that generated the electricity.



Buildings % of Canada's GHG Emissions
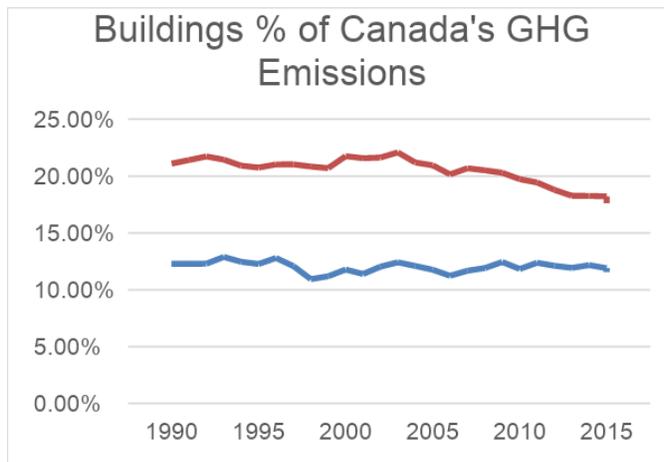
In the figure, the red line represents both direct and indirect emissions from buildings as a percentage of Canadian GHG emissions, whereas the blue represents only direct emissions.

BC emissions: In 2017, residential and commercial buildings make up 6% and 4% of all BC GHG emissions, respectively. They make up 8% and 5% of all stationary emissions, respectively. Public electricity and heat production make up only 1% of total emissions. This suggests that indirect emissions are not a major factor within the built environment in British Columbia.[2] To achieve GHG emissions in BC, we do not need to focus on indirect emissions, as 90%+ of electricity is generated from hydro in BC. Only 1% of BC's energy emissions are from public electricity generation.

In an independent assessment of BC's building emissions plan, 10 building archetypes were developed to serve as the baseline for BC buildings.[3] The average building GHGI is 10.7 kg $CO_2$e per $m^2$/year. Small single-family dwellings (SFD) that use natural gas for both space and water

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[1] Government of Canada
[2] Province of BC
[3] The Integral Group

heating have the highest GHGIs at 18.7. On the other hand, 10-unit multi-unit residential buildings (MURBs) with electric space heating have the lowest GHGIs at 3.9. The study found that the baseline greenhouse gas intensities are not close to the targets set by the province, which are around 3-5 kg $CO_2$e per $m^2$/year. The key takeaway is that most of these buildings are not currently meeting the targets set by CleanBC or the City of Vancouver.

Heating plays a large role in a building's energy use – they are primarily used to heat air and water. Since most buildings' heating infrastructure (e.g. boilers, furnaces) are powered by natural gas or oil, buildings' emissions largely come from space and/or water heating. In commercial and residential buildings, they consume upwards of 60% of the building's overall energy usage, and make up 83% of a building's GHG emissions.[4] Cooling is also a major contributor to building emissions. In the United States, 10% of all energy consumption can be traced back to the cooling needs for residential buildings[5].

**Solutions Landscape**

For the purposes of this case study, we mainly focus on solutions to heating buildings with low emissions. There are a variety of technologies related to reducing emissions in the built environment, including innovations in window design, mass timber, and district heating. The carbon reduction potential in better energy management accounts for 25% of energy saving potential in buildings.

| Technology[6] | Efficiency (%) | Typical capital cost (per joule of useful heat) | Fuels | Operating cost (per joule of useful heat) |
|---|---|---|---|---|
| Conventional boilers/ furnaces | 60-84 | Low-medium | Oil, nat. gas | Medium-high |
| Condensing boilers | 85-97 | Medium | Oil, nat. gas | Medium-high |
| High-efficiency fireplaces | 70-80 | Low-medium | Biomass, natural gas | Low-medium |
| Lighting | 40-50 | Low | Electricity | Lighting |
| Masonry heaters | 80-90 | Medium | Biomass | Low-medium |
| Electric resistance heaters | 100 | Low | Electricity | Medium-high |
| Heat pumps (electric) | 200-600 | Medium | Electricity | Low-medium |

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[4] EPA, BCSEA
[5] EIA
[6] Project Drawdown

| Heat pumps (gas-driven) | 120-200 | Medium-high | Gaseous fuels | Low-medium |
|---|---|---|---|---|
| Sorption chillers | 70-180 | Medium | Nat. gas, oil, bioenergy, solar, waste, heat, etc. | Medium-high |
| Solar thermal | 100 | Low-high | Solar | Low-medium |

These are technologies that span from ready and available "plug-and-play" solutions to more sophisticated installations. Below are two examples of technologies that have varying levels of effectiveness.

- Smart Thermostats: Most of these technologies result in cost efficiency outcomes. Nest, a smart thermostat company, provides an estimate ranging between 19.5% to 36.1% in energy savings for their Nest Learning Thermostat. However, adoption remains low at 3% globally.[7]
- Lighting: In BC, lighting is responsible for 3% of GHG emissions in commercial/institutional buildings, 1% in single detached homes and 2% in MURBS. Thus, we can conclude that lighting upgrades, while there are many available solutions, will not necessarily reduce a substantial amount of GHG emissions.

**Key Insights**

The technology to reduce building emissions exists and has been proven to be effective. The adoption of these low-carbon technologies for buildings, however, has been slow. A key reason is that the cost to install these technologies for homes and offices is often prohibitively high for individuals. In some jurisdictions, it is difficult for any individual resident to take action; major capital investments from governments and investors are required.

To increase adoption, I believe we need additional incentives and financial products that help reduce the financial barrier. There are an increasing number of financial innovations that can make these upgrades more affordable. For instance, companies like CoPower, SolShare, and Mosaic use financial mechanisms like green bonds, equity shares, and financing to help building owners reduce the upfront cost of installing new technology, and use the community investor model to help raise the capital. The investors then get paid back as the building owners/residents use the renewable energy or benefit from reduced energy bills.

**Biases & Assumptions**

*Note: we did not complete this portion of the case example on purpose. We are leaving this open to your interpretation.*

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[7] Project Drawdown