



# WAVES OF CHANGE

A SERVICE DESIGN BRIEF FOR DRAWDOWN TORONTO



## LAND ACKNOWLEDGMENT

We would like to begin this report by acknowledging the ancestral and traditional territories of the Mississaugas of the Credit, the Haudenosaunee, the Anishinaabe and the Huron-Wendat, who are the original custodians of the land on which we stand and create.

As inhabitants of this shared land, we must all strive to be thoughtful and diligent custodians to help our planet heal. As designers, we have a responsibility to help heal the wounds of colonialism, and work to unlearn harmful ideologies and better understand the connection between the settler-colonial system and the acceleration of global climate change. In this work, it is important that we look to the teachings of Indigenous peoples who have long been at the forefront of the climate justice movement. Indigenous peoples have an intimate understanding of nature and have fought for it by standing up to the construction of pipelines, overfishing, and habitat destruction.

We recognize that land acknowledgment is only a first step in the essential act of reconciliation and relationship building with Indigenous peoples. We invite you all to engage in self-reflection and explore your own locations through an Indigenous lens using tools like [native-land.ca](https://native-land.ca) or [whose.land](https://whose.land).

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# 1. OVERVIEW OF THE PROJECT

Climate change is one of the greatest stressors impacting our world today. As part of the Understanding Systems course of the Master of Design in Strategic Foresight and Innovation at OCAD University, our team was passionate about understanding and framing the systems in the climate action space.

Systems thinking is recognized as essential in understanding climate science, political processes, energy consumption processes, and human behaviour. With the help of the systems design tools, we were able to frame these interconnected processes and understand how they form social systems. We learned that using system design tools is an effective way to communicate and educate people and organizations. It is impactful in bringing about change in people's beliefs and attitudes towards climate change and help us find practicable solutions that can mitigate environmental harm.

We hope to facilitate the value system that humans are the only ones capable of taking up the responsibility of counteracting harmful and exploitative actions that we have taken against nature for hundreds of years and preserving and protecting our natural world systems.

## 1.1 OUR PROCESS

We decided to tackle the topic in two phases. Phase 1 was information gathering and getting a deeper understanding of the current climate action space, specifically from the lens of Project Drawdown- a global non-profit working to aid research, education, and advocacy for climate change. We laid out the actors and stakeholders in the system and used the relevant system design tools to frame and understand the climate action social system. This phase helped us understand the challenges and opportunities in the larger climate action space.

In Phase 2, we looked at Drawdown Toronto as a case study of an organization working in the climate action space in the GTA region. This inquiry gave us a more contextualized understanding of the lived experiences of the volunteers that form the core team of Drawdown Toronto. As understanding systems is an iterative process, we had the opportunity to refine our research questions at multiple points in our inquiry.

## 1.2 RESEARCH QUESTIONS

This systems design project attempts to address the following research questions:

- 1. What are the climate challenges that need to be addressed in the next ten years?**
- 2. How can we engage key stakeholders to implement actionable climate change solutions?**

Some secondary questions that were also addressed are:

- 1. What are the main influences and challenges that shape the climate action space?**
- 2. Who are the major stakeholders in this system and how their relationships shape this social system?**

**3. What are the major story archetypes and feedback loops that help understand the different forces at play?**

**4. What are the factors that influence social change movements?**

## **1.3 BOUNDARIES OF THE SYSTEM**

Climate change is a wicked problem and can only be addressed through collective global action. However, for the purpose of defining the scope of our project, we established the following geographic boundaries.

1. Canada as the geographic boundary for the visualized climate action system
2. GTA as the geographic boundary for Drawdown Toronto

Establishing these boundaries helped us understand and frame solutions with contextual relevance and understand the challenges that are specific to a local region.

## **1.4 PROJECT DRAWDOWN AS A CASE STUDY**

To understand the climate action space through the lens of an engaged stakeholder, we chose Project Drawdown as a case study. After understanding the broader climate action space, we engaged with the core team of Drawdown Toronto that has been working with local stakeholders in knowledge sharing about climate action with the Drawdown Framework as a guiding philosophy.

## **1.5 AUDIENCE FOR THE SYNTHESIS MAP**

Our primary audience for this systems analysis includes but is not limited to:

1. Drawdown Toronto
2. Project Drawdown
3. Climate Change influencers and changemakers in the GTA region
4. Environmental Activists
5. Researchers & academics working on climate change
6. Residents of the GTA and the civil society at large

## 2. PROJECT DRAWDOWN

Project Drawdown is a non-profit organization working to help the world reach “drawdown”—the point in the future when levels of greenhouse gases in the atmosphere stop climbing and start to steadily decline, thereby stopping catastrophic climate change—as quickly, safely, and equitably as possible and building a better future for all.

The project led by activist and entrepreneur Paul Hawken, was started in 2013 and has since brought together over 65 researchers from across the globe with 128 experts in climate, sustainability, academia, and business (One Earth, 2021).

Project Drawdown believes a better world rests in our decisions, every day, in every part of our lives—whether as a voter, a community member, a consumer, an employee, a family member, or a friend. Every choice we make is a choice between the world we have today and building something better tomorrow—something that bends the arc of history towards a more liveable and just future.

As a small but mighty non-profit, they are having an outsized impact on the global climate solutions conversation.

The following metrics represent their successful global reach:

- 31,135 new audience members across Project Drawdown’s social media channels
- 3,261 mainstream media stories mentioning Project Drawdown
- 108% increase in engagement across Project Drawdown’s social media channels
- 10,000+ Number of people reached globally by Project Drawdown’s virtual, and in-person talks

*Source: Impact Annual Outcomes and Annual Report. (2022).*

### 2.1 THE DRAWDOWN FRAMEWORK

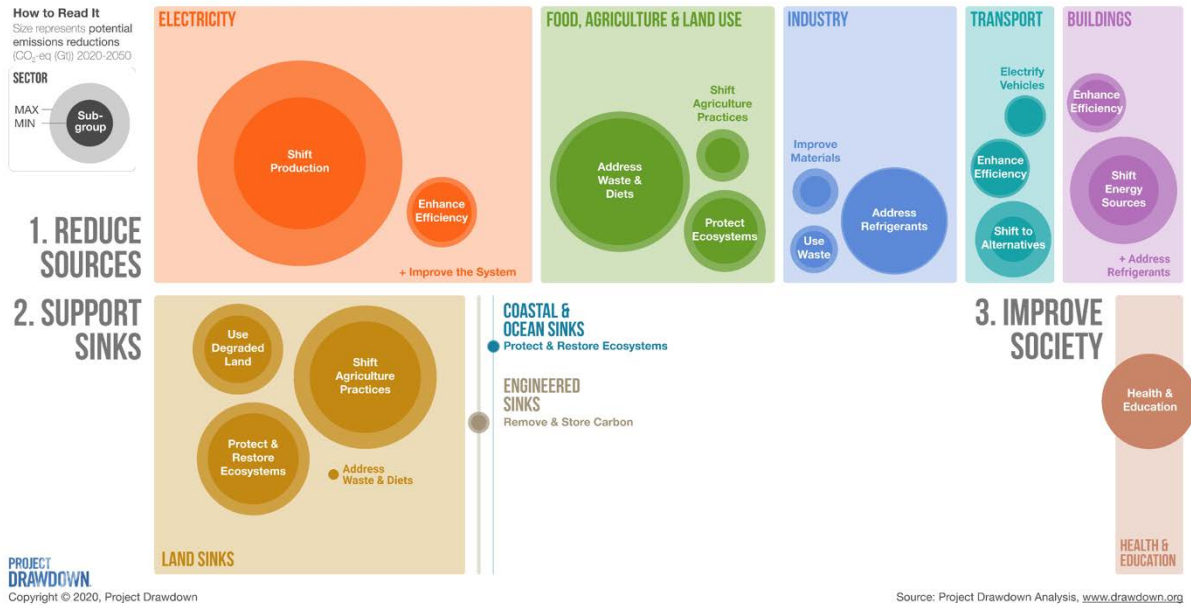
The Drawdown Framework posits that to understand and advance climate solutions, it is important to understand the sources of emissions and nature’s means of rebalancing the climate system. The Drawdown Framework is developed from a unique global systems model, evaluating 80 technologies and practices from the ground up – from innovative energy and agricultural methods to enhanced environmental conservation and restoration. Combined it was shown that these 80 solutions could eliminate 1 trillion tonnes of CO<sub>2</sub> from the atmosphere by 2050, enough to prevent the dangerous climate tipping point of 2 degrees Celsius ([One Earth, 2021](#))

To reach the point of drawdown (the future point in time when levels of greenhouse gases in the atmosphere stop climbing and start to steadily decline), all aspects of the climate equation must be worked on—stopping sources and supporting sinks, as well as helping society achieve broader transformations.

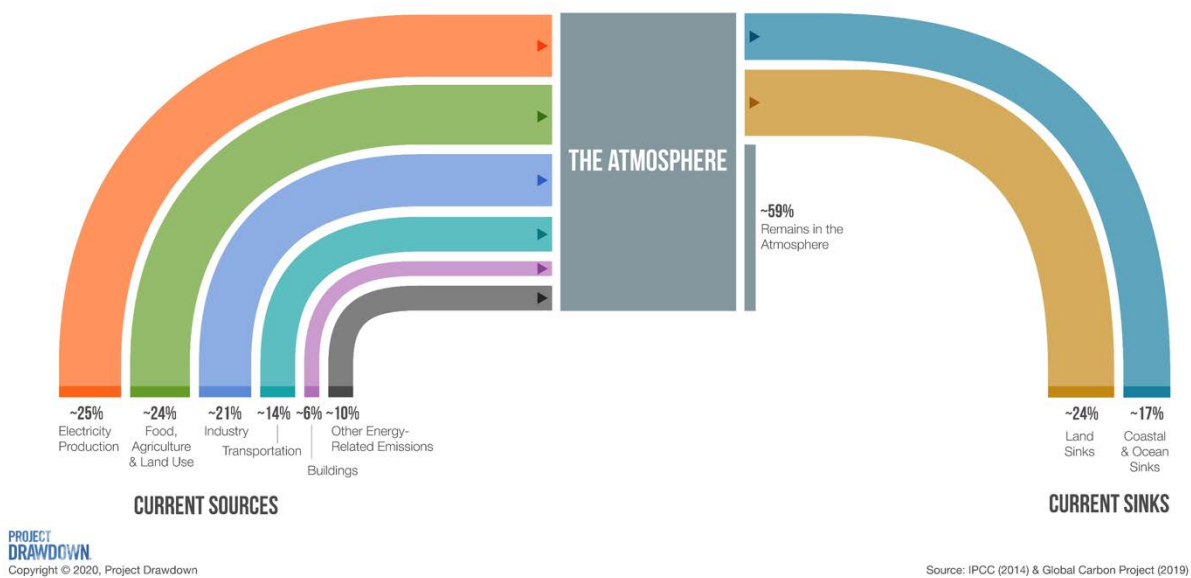
These three overarching themes need to be addressed globally, simultaneously, and with determination to reach the point of drawdown by 2050.

1. Reduce Sources — bringing emissions to zero
2. Support Sinks — uplifting nature’s carbon cycle
3. Improve Society — fostering equality for all

## DRAWDOWN FRAMEWORK FOR CLIMATE SOLUTIONS



## EMISSIONS SOURCES & NATURAL SINKS

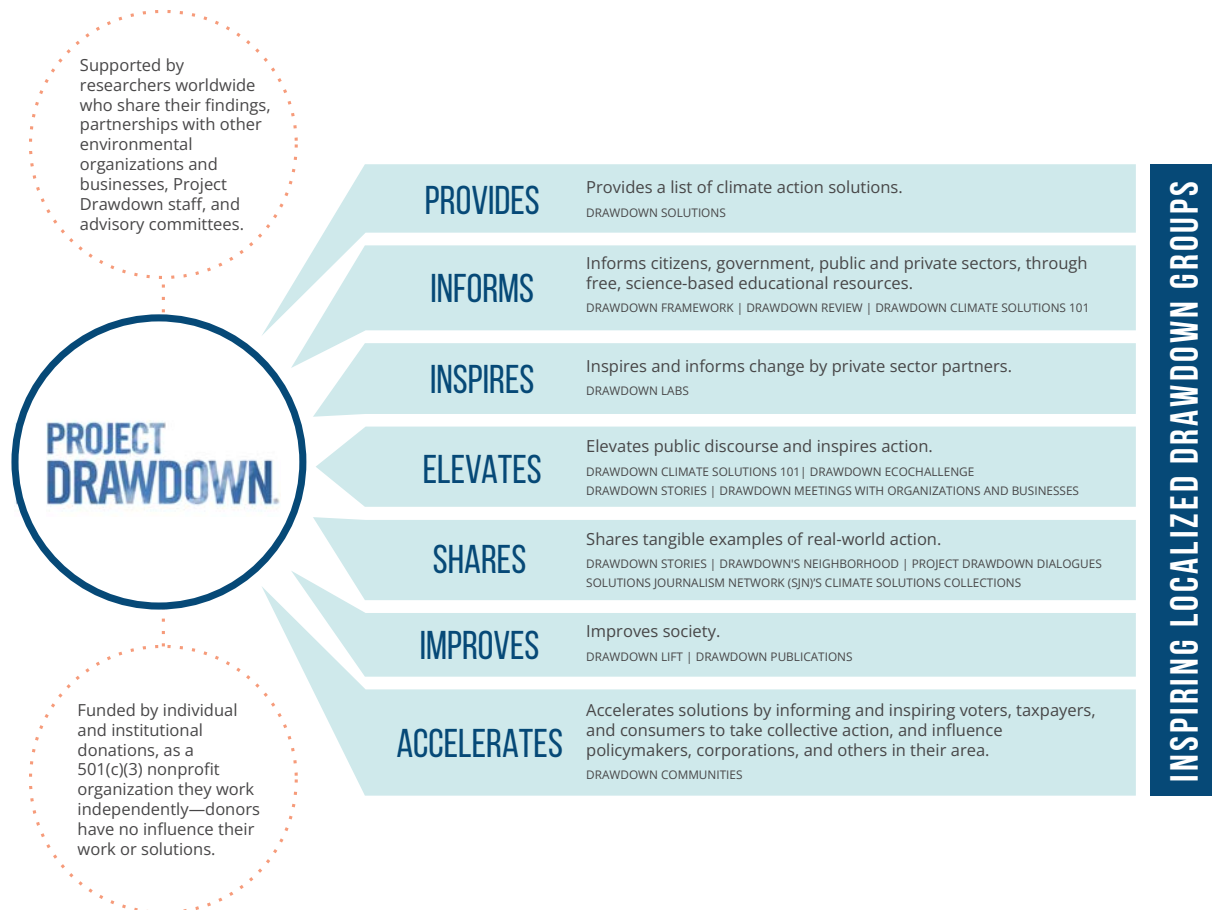


Drawdown Framework ©2020, Project Drawdown

Drawdown Framework for climate solutions consists of sectors and subgroups of diverse solutions—practices and technologies that can help the world stabilize and then begin to lower greenhouse gas levels in the atmosphere.

## 2.2 PROJECT DRAWDOWN PROGRAMS

Project Drawdown has also introduced programs for improving society such as Climate 101, Drawdown Labs, and Drawdown Lift to name a few. The following diagram gives an overview of all the drawdown initiatives and provides insight into their organizational structure.





## 3. CLIMATE CHANGE AS A WICKED PROBLEM

### 3.1 WHAT IS THE PROBLEM?

Human activities have been causing climate change that is advancing at an exponential level and threatening the way we live and the future of our planet. Major effects of climate change in the last decades have high socio-economic costs such as hunger, displacement, unemployment, illness, and death as well as an immense cost to nature- from changing ocean tides, temperatures and acidity to land drought, floods, and major scale extinction of many species of life. In 2021, scorching temperatures caused deadly heatwaves in Canada and [Pakistan](#) and set off wildfires in Greece and Siberia. There was severe flooding in Germany and China, while in [Madagascar](#), a particularly prolonged and intense drought has driven 1 million people to the brink of what is being described as the world's first "climate change-induced famine" (Amnesty International, 2021).

If steps are not taken with urgency to counter the effects of climate change or at least slow down the rate as much as scientifically possible, these effects will compound and magnify existing inequalities, causing destruction and ruin of unimaginable scales within our lifetime. By addressing climate change, we still have the time and ability today to build a sustainable world for everyone because at the end of the day, every human being wants the same thing- a safe place to live on this planet we call home. But we need to act now.

### 3.2 KEY ISSUES SURROUNDING THE NARRATIVE

Narratives are socially constructed "stories" that make sense of events and phenomena, integrating them into worldviews (Van der Leeuw, 2019).

#### **Top-Down**

Historically, the dominant narrative regarding climate action emphasised massive climate risks and "top-down" solutions of globally binding international agreements on emission reductions. This narrative was supported by mainstream climate change research and the traditional view of science-policy interactions based on the knowledge-deficit model (Simis et al. 2016). However, this top-down model is not as successful as theoretically anticipated because of serious challenges associated with this narrative. Namely, reducing emissions is perceived to be costly, reducing competitiveness and slowing down national economic development.

#### **Bottom -up**

On the other hand, a bottom-up narrative emphasises voluntary contributions, actions by individuals, activist groups and municipalities towards climate action steps and implementation. This can be measured in terms of Nationally Determined Contributions (NDC) from each country. This approach acknowledges the difficult trade-offs faced between economic growth and climate action and puts a greater emphasis on solutions that resonate with the interests of individuals and communities.

## **Green Growth**

Another narrative that has received a lot of traction is the green growth narrative and is associated with the term environmentally sustainable, biodiverse, low-carbon and climate-resilient growth in human prosperity. Green growth points to fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. Twenty years after the first Rio Summit, the world continues to face a twin challenge: expanding economic opportunities for all in the context of a growing global population; and addressing environmental pressures that, if left unaddressed, could undermine our ability to seize these opportunities. Green growth is where these two challenges meet, and it is about exploiting the opportunities to realise the two together (OECD, 2011).

## **Degrowth Narrative**

A narrative that radically differs from the green growth narrative is the degrowth narrative, which questions the viability of continued economic growth and argues that the sustainable use of natural resources requires more fundamental changes to the organization of society, including substantial reductions in production and consumption levels (D'Alisa et al, 2014; Jackson 2013; Martínez-Alier et al, [2010](#)). Proponents of this narrative see degrowth as the only possible way of addressing the root cause of environmental destruction, because a smaller economy requires fewer resources and creates less pollution. (Transformative narratives for climate action, 2020) They further argue that rich countries appear to be exhausting the means to sustain economic growth over the long term, and thus the need to consider degrowth as an option is inevitable (Raworth, [2017](#))

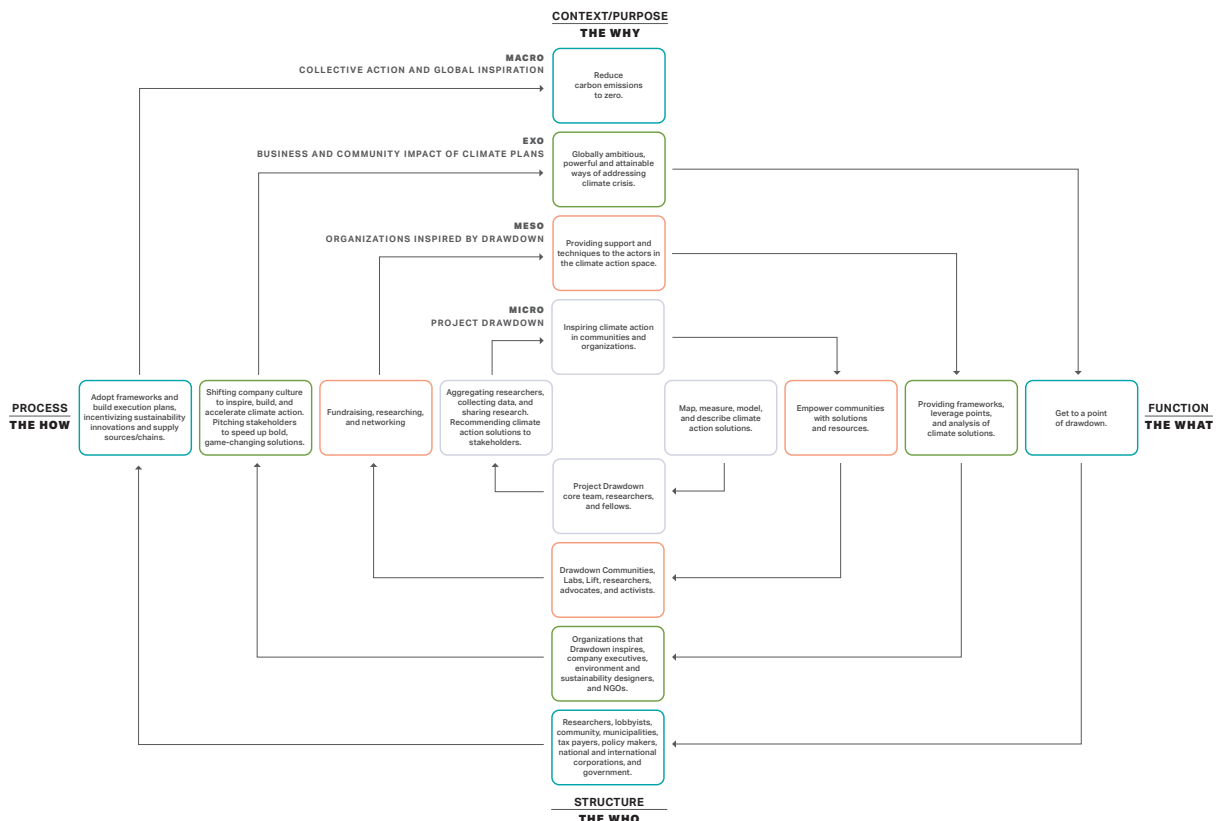
# 4. FRAMING THE SYSTEM

After an initial literature review about climate change and Project Drawdown's work, the next step was to frame the system using the relevant system design tools

## 4.1 ITERATIVE INQUIRY

We used the iterative inquiry tool and mapped out functions, structure, components, processes, and purposes for each level of Project Drawdown's intervention in the climate action space. The final iteration starts with Project Drawdown as an organization (Micro), to the organizations and businesses inspired by Project Drawdown's vision (Meso), to business and community impacts of implementing Project Drawdown's frameworks and solutions (Exo), to finally culminating at a collective and global execution of the climate action solutions (Macro).

The inquiry also helped us understand the flow of information from the beginning of data collection, the challenges that lead to massive carbon emissions, and the required solutions and techniques to counter these climate change challenges. Project Drawdown aims to demystify climate action and incentivize ground-level execution plans by involving communities as co-creators in the climate action solution space.





### **1. MICRO — Drawdown org existing for climate action**

- Function: To map, measure, model and describe the most substantive solutions to global warming.
- Structure: Project Drawdown's core team, researchers, fellows
- Process: Aggregating researchers, collecting data, incorporating, and making widely available shared research. Provide recommendations to organizations on how they can act in their organization and how to get all stakeholders to become allies.
- Purpose/Context: Inspiring climate action in communities and organizations.

### **2.MESO — The organizations inspired by Drawdown**

- Function: Empower communities with solutions and resources.
- Structure: Drawdown Communities, Labs, Lift, Solutions, Donors
- Process: Fundraising, researching, networking
- Purpose/Context: Providing support and solutions/ techniques (to help them in their mission) to the different actors working in the climate action space

### **3.EXO — Impact of those climate plans—Communities and NGOs putting the framework into action**

- Function: Providing Drawdown's global framework, assessment and analysis of climate solutions by defining and describing solution leverage points and enabling environments that are key to scaling each solution.
- Structure: Organizations that Drawdown inspires, companies that adopt plans, groups working in a specific climate action space.
- Process: Inside companies, help shift culture by surfacing employee stories that inspire, build, and accelerate climate action. Externally, the combined voice of Drawdown partners that encourage business peers, governments, and policymakers to speed up bold, game-changing climate solutions.
- Purpose/Context: Ambitious climate action, offering the world powerful—and attainable—ways of addressing the climate crisis.

### **4.MACRO — Drawdown reducing carbon emissions to zero (the collective action of involving all those communities in climate action, includes everyone Drawdown has inspired worldwide)**

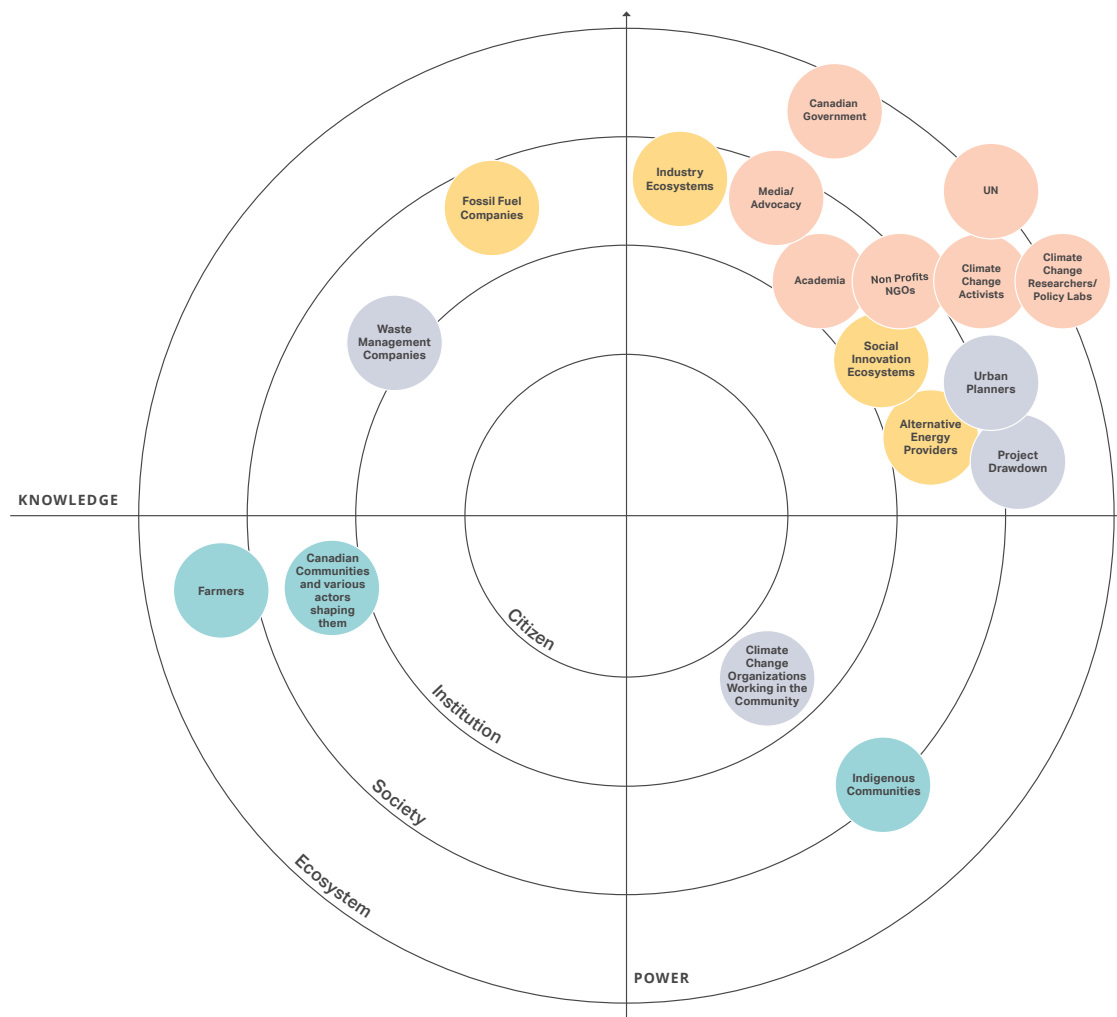
- Function: Get to a point of drawdown- the future point in time when levels of greenhouse gases in the atmosphere stop climbing and start to steadily decline.
- Structure: Voters, taxpayers, policymakers, international NGOS, Multinational Corporations, Governments, Academia
- Process: Adopt the climate action frameworks and build execution plans for it, incentivizing innovations that lead to sustainable practices and continue to harness energy and products from sustainable sources.
- Purpose/Context: Reduce carbon emissions to zero

## 4.2 ACTORS MAP

The Actors Map identifies the “who” of the system of climate change within our defined boundary Canada, the various entities involved in the system, their roles, and the relative knowledge and power they possess. Understanding how these actors influence the system, how they align with each other, and with the government, is critical for coordinated actions to achieve ambitious climate action goals.

Some questions we answered through this tool were – Who is writing our climate policy? Is there a coalition of people and organizations banded together by common beliefs on policy decisions? Who are the legislators relying on to provide them the basis for the validity of proposed measures? Who are letting the leaders know that they are paying attention to climate change?

We then identified the key actors in the climate action space and categorized them as Communities, Organisations, Industry Ecosystem, Policy makers and Influencers. After multiple iterations and the analysis of relationships among the actors and actants, we finally arrived at a list that was most relevant to climate change in the Canadian context. Since our boundary is at a national level, the role of international NGOs and UN is minimal. However, they affect policymaking and we have taken their influence into consideration in the overall analysis.



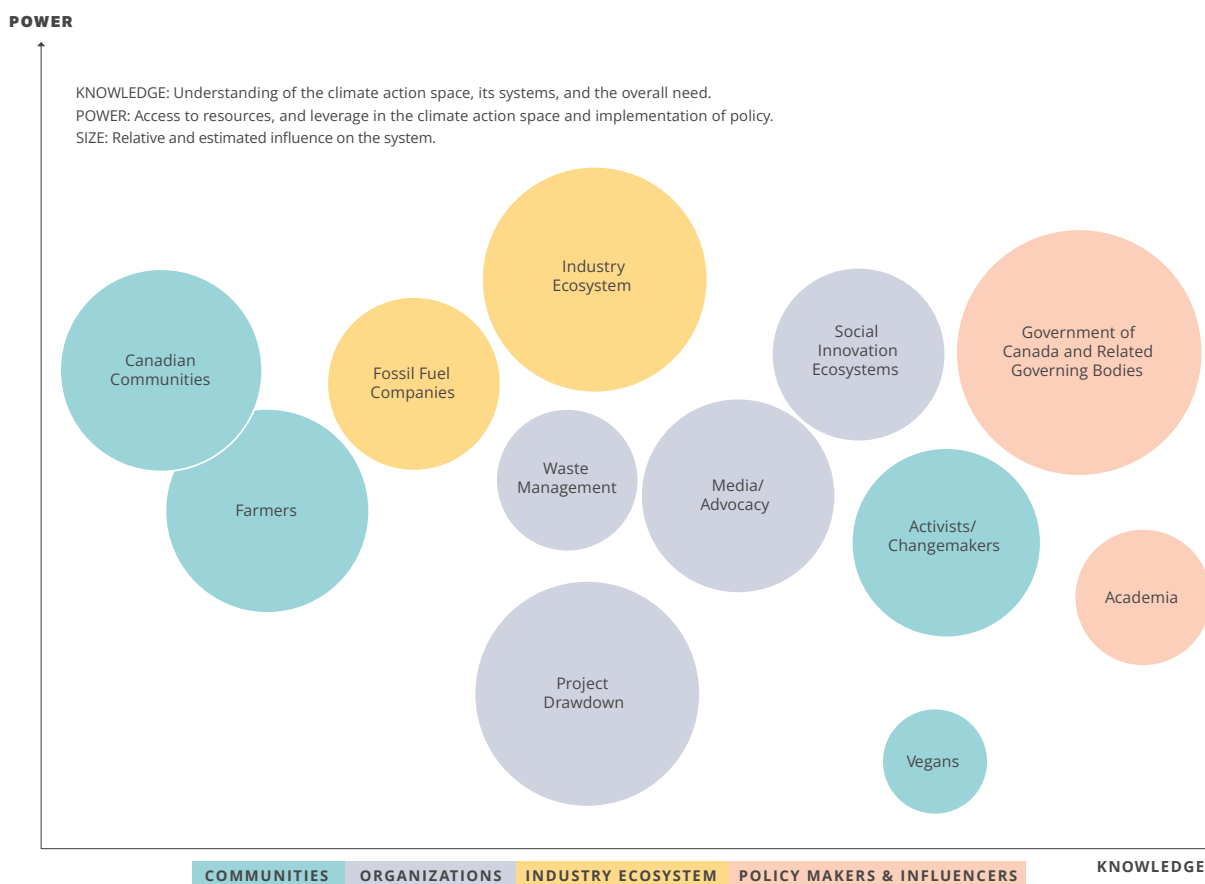
## 5. LISTENING TO THE SYSTEM

With the completion of the first stage of framing the system, we moved on to the next stage of listening to the system. In this stage, we deepened our understanding of the climate action system in the Canadian context through an extensive literature review and employed the Stakeholder map to understand their interactions with each other and the social system.

### 5.1 STAKEHOLDER DISCOVERY AND MAPPING

Taking the Actors map further, we plotted those actors on the matrix of knowledge of climate change and their level of influence (power) in shaping the system.

Our framing of the system indicates that the knowledge gap amongst the key stakeholders is a major barrier to reaching the point of drawdown. Overall climate action system is more of an ecology due to the potential power of collective action of communities. Therefore, climate action solutions are effective only when the communities are active participants in the co-creation and implementation of these solutions. The key stakeholders function as complete social systems that are interdependent. In the climate action space, collective action is related to power, influence, and some stakeholders such as the media and activists have the power to bridge the knowledge gap between policymakers and the communities.





Gaps in climate action for most actors include adaptation and knowledge of emission reduction efforts. Although actors at the community level may appear to be self-organizing and allocating climate actions in a mutually beneficial way, there may also be missed opportunities for deeper coordination and missing information that could result in a deeper climate change impact.

Climate change adaptation will, in some cases, require substantial changes in local practices. Such changes have a much better chance of being accepted and consistently maintained if they originate in a process that involves engagement rather than a “top-down” process where adaptation is imposed from outside without consultation or interaction.

This mapping is the first insight into the interactions that can be leveraged to bring about social change. Based on these insights, we identified a list of stakeholders that affect the climate action space in Canada.

**POTENTIAL STAKEHOLDERS TO ENGAGE WITH IN THE GTA REGION**

<p><b>1. Local Governments for Sustainability / International Council for Local Environmental Initiatives (ICLEI)</b></p> <p><b>2. Toronto and Region Conservation Authority (TRCA)</b></p> <p><b>3. Toronto Climate Action Network Organizations</b></p> <ul style="list-style-type: none"> <li>• Association for Canadian Educational Resources (ACER)</li> <li>• Toronto Centre for Social Innovation</li> <li>• Citizens' Climate Lobby — Toronto Chapter</li> <li>• Climate Change Toronto</li> <li>• Climate Action Club Toronto</li> <li>• Toronto Climate Pledge Collective</li> <li>• Community Resilience to Extreme Weather (CREW)</li> <li>• Council of Canadians (Toronto chapter)</li> <li>• David Suzuki Foundation</li> <li>• Enviromentum</li> <li>• Etobicoke Climate Action</li> <li>• For Our Grandchildren</li> <li>• Fridays For Future Toronto</li> <li>• Green Neighbours 21</li> <li>• Inwit Toronto</li> <li>• MobilizeTO</li> <li>• Naturopathic Doctors for Environmental and Social Trust</li> <li>• Ontario Clean Air Alliance</li> <li>• Parkdle-Highpark 4 Climate Action</li> <li>• Project Neutral</li> </ul>	<p><b>4. Activists/Interest groups</b></p> <ul style="list-style-type: none"> <li>• Rise To Zero</li> <li>• Sustainability and Environmental Justice Portfolio @ Engineers Without Borders University of Toronto</li> <li>• Toronto East End Climate Collective</li> <li>• Toronto Environmental Alliance</li> <li>• Women's Healthy Environments Network (WHEN)</li> <li>• Toronto350</li> <li>• StopPlastics</li> </ul>
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## 5.2 RESEARCH QUESTION FRAMING

At this stage, we felt that we had adequate information to frame our preliminary research question, so we have a clear direction for the next steps in our design journey. Based on our understanding of issues so far, we came up with the following research questions:

- 1. What are the challenges facing climate action in the next 10 years?**
- 2. How will Project Drawdown address these challenges?**

## 6. UNDERSTANDING THE SYSTEM

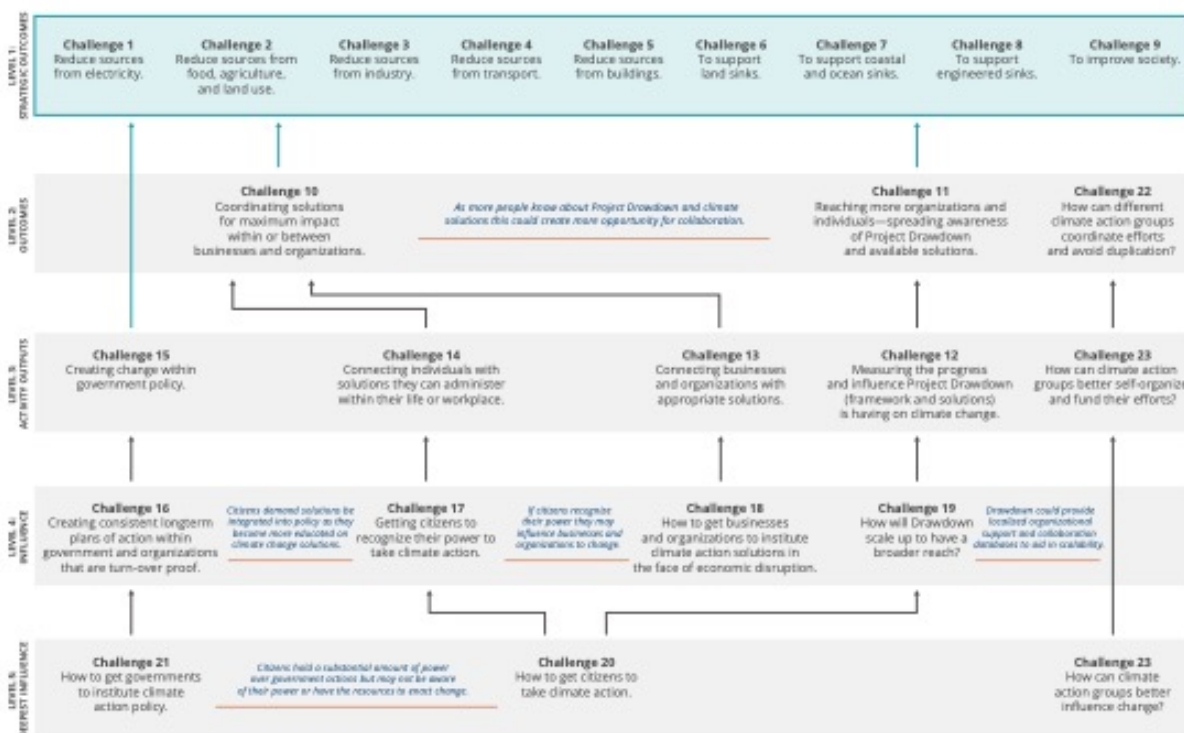
With the two research questions as our guiding light, we moved to the next stage of understanding the system to explore the human behaviours and motivations underlying the apparent structures,

### 6.1 INFLUENCE MAP

Project Drawdown provides a framework and a menu of solutions made freely available to all in their mission to share knowledge and help the world reach drawdown. Since they act primarily as an educational source, they run the risk of creating an echo chamber with existing climate action actors. Localized Drawdown groups inspired by Project Drawdown are hugely varied in their organizational structures and available supports. It is paramount that Project Drawdown become scalable in order to reach new ears and better support localized action.

Government and citizens alike have access to the Project Drawdown information and hold high-levels of power, but citizens may not be aware of their power or lack the resources to enact change. Citizens must task themselves with keeping government climate action plans in check especially when newly elected officials are appointed, or economic disruptions move attentions elsewhere.

Citizens also hold power over organizations and businesses. There's potential for climate action if communities influence organizations and businesses to invest in climate action solutions, even in the face of short-term financial loss. There is also a need for advocacy about existing climate change solutions so there are more opportunities for collaboration with businesses and communities.



Although there are well-established NGOs in the climate action space with paid staff, many climate action groups are small, local, self-organized, and run by volunteers. Knowledge and resource gaps are inevitable as small teams learn how to engage the community, fundraise, and maneuver government policy. Sharing consistent and tested organizational models by established organizations could help alleviate the growing pains sometimes experienced by grassroots groups. Also, there are many groups working for change, but they may not be aware of each other, or they may be duplicating efforts. Opportunities for collaboration must be fostered to make the most of the actions being taken to combat climate change.

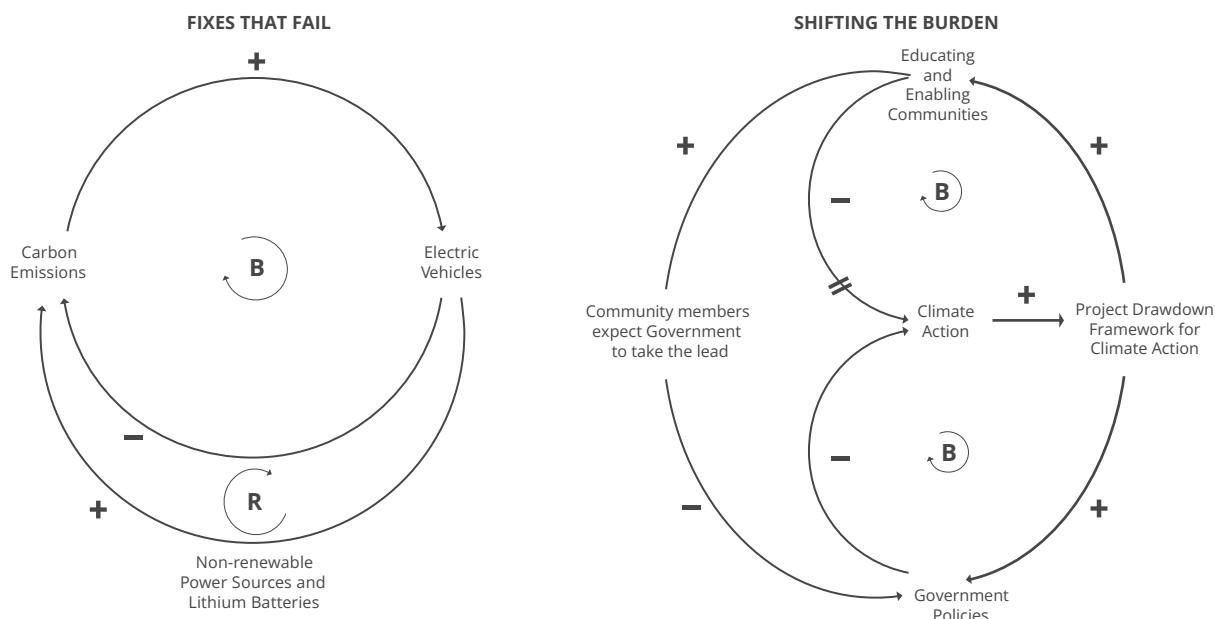
## 6.2 CAUSAL LOOPS

System archetypes are defined by leading System thinker, Peter Senge, as a series of recurring, mostly dysfunctional patterns of behaviour in organized systems and can indicate a central problem in the system of interest. For our system analysis, we chose two archetypes to aid in our understanding of how variables influence one another and develop a “big picture” perspective of the problem (Jones and Van Ael, 2022).

### Fixes that Fail

In this archetype we see that throughout the climate solution space there are examples of fixes that fail. Often, we find ourselves incorporating changes believed to be for the betterment of the environment only to discover unintended environmental impacts. There is a trade-off and balance that must be struck within many climate solutions.

One such example, is electric vehicles (EVs). EVs reduce car emissions—dramatically so when powered by renewable electricity (Drawdown.org, 2022). However, they still require electricity and use lithium batteries. In areas where electricity is generated by natural gas (as is the case in much of Alberta), EV drivers are inadvertently and most likely unassumingly running their car on fossil fuels. Updated power grids to renewable energy sources would assist in making this a more robust solution. EVs are still a good solution in the pursuit of lower CO2 emissions for personal travel, but perhaps, public transit options and neighbourhood restructuring might be other ways to combat emissions and power consumption.





### **Shifting the burden**

This archetype helps us understand the relationship between the Project Drawdown Framework and two key stakeholders— Canadian citizens and the government. The Framework aims to both inform and inspire with solutions for climate action. It is the hope that these solutions will be promoted through government policy and by citizens within their everyday lives.

Citizens may shift this burden of responsibility to governments. However, as found in the stakeholder analysis and the influence map, citizens have immense influence in the climate action space. Additionally, if the government fails to act, via policy and allocation of funds to climate action, we see an interruption in the loop and climate action slows down or halts completely. In fact, citizens and government must both act simultaneously and in cohesion to accelerate and sustain long-term climate action to reach the point of drawdown by 2050.

## 7. EXPLORING THE POSSIBILITY SPACE

At this point, we had completed the first phase of our research process and reached out to Drawdown Toronto to learn more about the work that they are doing in the GTA region and get real-world insights from stakeholders that had “real skin in the game.” We conducted in-depth, individual interviews in the appreciative inquiry style with three members of Drawdown Toronto’s core team.

### 7.1 APPRECIATIVE INQUIRY

These were some of the key insights that were compiled after the completion of primary research.

- The Drawdown Toronto chapter is completely volunteer driven.
- There is a need for greater funding and manpower to enact change
- There is a discrepancy between the City of Toronto’s policies around climate change and the actual practicability of those policies. For example, the city encourages you to use bikes as a means of transportation but the weather, safety conditions, or the streets are not designed to be biker friendly
- Refrigerants and Food Waste are the two key climate change issues that can be addressed at the GTA level. However, there is hardly any action around these issues at a policy level and in the City of Toronto’s Net Zero strategy they are not considered important sectors for climate action.
- The vision of Drawdown Toronto is to affect change at the highest level by shifting paradigms around climate change and bring about behaviour change.
- The actual Drawdown Framework is very numbers driven so the aim is to have a narrative at the GTA level that is more emotional and connects with the heart.
- Drawdown Toronto sees its role as a connector of people working in the climate action space and an educational organization that can enable other organizations to use the Drawdown Framework to implement solutions at a local level.
- There is very little collaboration between local chapters or even global chapters of Project Drawdown. Some local chapters may not even use the term “Drawdown” in their name.
- Certain local chapters such as Drawdown Georgia seems to gain more momentum and engagement in the society to create change. It might be beneficial to study those success stories to replicate learnings at a local level.

These insights gave us an understanding of the challenges faced at the local GTA level and helped us clarify our next steps. This also gave a new direction to our inquiry based on the lived experiences and insights of the volunteers from Drawdown Toronto’s core team.

Based on the findings from this primary research, we reframed our research questions to the following:

- 1. What are the climate action challenges that need to be addressed in the next ten years?**
- 2. How can we engage key stakeholders to implement actionable climate change solutions?**

The reframing of the second research question helped us identify the possible points of intervention that were most aligned with the specific goals and needs of Drawdown Toronto at a local level.

## 8. ENVISIONING DESIRED FUTURES

We chose the three-horizon framework to give us a comprehensive overview of the future possibilities and challenges in the climate action space.

### 8.1 THREE HORIZONS

After gaining insights from our primary and secondary research, we used the three-horizon framework to envision the desired future to reach drawdown in 2050, the most urgent climate challenges in the next ten years and the strategic interventions that can be implemented to accelerate movement towards the desired future.



These are some of the strategic interventions that can be implemented soon to mitigate the adverse effects of climate change:

- Government Policies to create more inclusive and equitable societies
- Collective community action and stakeholder mobilization to affect change
- Climate education and awareness campaigns
- Implementation of local and regional solutions addressing climate change
- Improved political will around climate action
- Switching to renewable energy sources
- Sustainable waste management
- Switch to plant-based diets
- Government policies incentivizing sustainable industry practices
- Introducing a regenerative systems design approach
- Investments in clean tech
- Amplification of decolonized perspectives

These are some of the proposed longer term strategic interventions to reach drawdown by 2050:

- Create more equitable societies
- Shift to more sustainable indigenous practices
- Implementation of new laws to reduce pollution
- Elevation of collective consciousness to adopt more sustainable lifestyles
- Regenerative systems design
- Shifting to Circular economies

## 9. PLANNING THE CHANGE PROCESS

At this stage, we created linkages between the macro-level challenges of the climate action space and connected them with the local needs and goals of Drawdown Toronto. To gain a better understanding of the change process, we applied the log frame model in its simplest form to create a mental model of the change process for the service redesign of Drawdown Toronto.

### 9.1 FOSTERING THE TRANSITION

As a culmination of our design journey, we synthesized all the information from our primary and secondary research to propose the way forward for the service redesign of Drawdown Toronto,

### 9.2 TRANSITION BY DESIGN

After gaining a comprehensive understanding of the issues surrounding the climate change and studying Drawdown Toronto's role as an engaged stakeholder in the climate action space, we moved on to the next step. We applied the team's learnings with the help of the Transition by Design, tool based on Geels' Multi-Level Perspective, to map the change process For Drawdown Toronto.

From our analysis and interviews with the Drawdown Toronto team, it is evident that their key value proposition is as a knowledge-sharing body that enables the implementers and changemakers actively working in the climate action space to benefit from Drawdown's research.

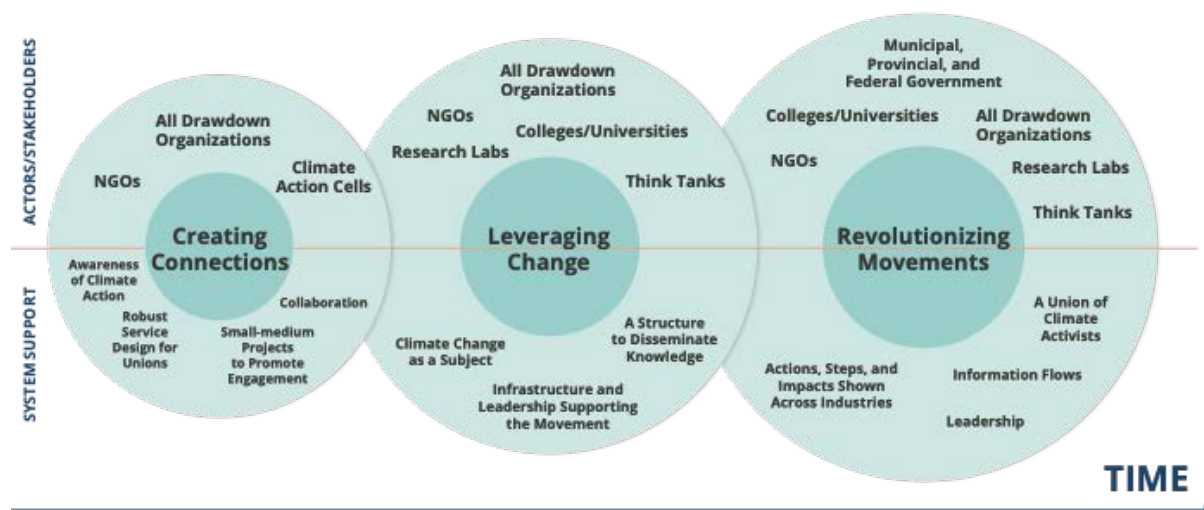
This positioning also offers the local chapters of Project Drawdown to emerge as the nexus for local collaborations among the various stakeholders working in the climate action space. All systems change movements and particularly climate action can only be addressed through collective stakeholder engagement working towards actionable goals.

Applying this to Drawdown Toronto as a movement for social change, we propose the following road map for their service redesign journey.

#### **Micro**

At a micro level, Drawdown Toronto needs greater organizational resources to create a movement that may be truly impactful at a local level. The Toronto chapter is new, so there is an opportunity to engage with climate action leaders and influencers in the GTA region who can serve as a strong catalyst to create momentum at a social level and create a narrative around climate action that is easily understood by the public.

Toronto is such a fertile ground for stakeholder engagement with many NGOs, non-profits and activists that are passionately working for climate change. Drawdown Toronto just needs more organizational resources to effectively engage with them.



A key insight in the interviews with the core team of Drawdown was that in the initial years, Drawdown Toronto conducted several educational workshops and then were burnt out and lost momentum due to lack of manpower. Therefore, as in all volunteer driven social change movements the people are the primary resource and everything else follows.

At this stage, there is also opportunity to leverage networks with the other chapters of Drawdown in Canada and the USA to create some form of a collective at regional level and exchange learnings and resources with each other.

These collaborations will also help us in applying for funding, engage policy makers and implement local solutions and community engagement programs that create awareness about climate change and mobilize stakeholders. The success of these programs will help establish trust, visibility and credibility which will help us move to the next stage.

### Meso

At the meso level, we expand the network to engage with other large networks such as universities, research institutes, think tanks etc. , that are working in the climate action space. The regional networks that we have built in the first stage add value to these collaborations.

The GTA region is immensely powerful due to its high density of universities and research institutes. This milieu is especially supportive of Drawdown Toronto's value proposition of being a knowledge-sharing resource since this audience has the capacity to understand the scientific research of Project Drawdown and provides immense leverage for the propagation of Project Drawdown's philosophy.

There are also several incubators in the GTA region that have great entrepreneurial activity happening in clean tech innovations. These collaborations can prove to be high leverage interventions in the social system.

At this stage, it is critical that Drawdown Toronto works with a formal organizational structure in place with clear roles and charismatic, competent leadership in place to keep the momentum of the Drawdown Toronto movement evolving.



Media can also play a critical role to help disseminate information about Drawdown Toronto's work and create awareness about the Drawdown Framework. The role of media can be an accelerator for behaviour change and awareness creation.

### **Macro**

In this last stage, Drawdown Toronto can exercise influence and create change at a national level and use the leveraged connections to engage with government bodies and policy makers at a national level. At this level, all the key stakeholders that are acting in the climate action space form the leveraged network of Drawdown Toronto and it has become a national movement acting as an intermediary between the civil society and the policy makers.

There are formal structures in place both for work activities as well as information flows. This empowers Drawdown Toronto to apply for funding and operate at a national level and be truly a force for social change in the climate action space.

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### **OCADU Professors**

Jeremy Bowes

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## THE TEAM



Aisha is a recovering workaholic, an aspiring yogi, and a lifelong learner. She loves silences, walking barefoot on the grass, and the sound of the ocean. Aisha brings her research, storytelling, and analytical thinking skills to the team. She is interested in regenerative system design, indigenous lifestyles, and narratives of social change movements. Aisha is looking forward to finishing her Master of Design in Strategic Foresight and Innovation at OCAD University in Toronto, Ontario.



Janine is a design and creative consultant with a passion for visual storytelling. She is inspired to make positive changes in organizational structures, and improve the experiences of those interacting within them, through a systems approach informed by foresight. She loves to get to know new people, is a bit of a foodie, and brings a sense of humour to her work. Janine will soon be wrapping up a Master of Design in Strategic Foresight and Innovation at OCAD University in Toronto, Ontario.



Neha is a visual designer, illustrator, and researcher with stints in eminent multi-national advertising groups and academia in the past. She has an eye for details, an ear for music and a human-centered approach to her practice. She is interested in society, gender, inclusion, climate, sustainability, future studies, and nuances of systems. Currently pursuing a Master of Design in Strategic Foresight and Innovation at OCAD University, Toronto.



Sumona is a digital designer focused on developing impactful content- aimed towards building well-being, identity and resilience in individuals and companies by combining the subjects of psychology, ancient philosophies (mind/body), technology innovation and systems design. Her current area of research lies in learning how immersive worlds affect self-identity and self-concept and to what extent may it influence our mental and physical health. Her purpose is to combat the epidemic of depression, anxiety, and loneliness through building stronger bonds with our primary nature and other humans.



Vinit is an industrial designer and researcher. Vinit has been involved in several research audits and design research projects. He brings his critical thinking and synthesizing capabilities to the team. Vinit's work is in the areas of human behaviour, social innovation, and foresight.

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