



SCALING
CLEANTECH
IN CANADA

GLOBE ADVANCE 2020

Scaling Cleantech —
What's Next for Canada
Summary Report



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Executive Summary

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As part of the inaugural GLOBE Advance, part of GLOBE Forum 2020, Emissions Reduction Alberta (ERA), GLOBE Series, The Delphi Group and sponsors Carbon Management Canada (CMC), Foresight, and Royal Bank of Canada (RBC), hosted the [Scaling Cleantech — What's Next for Canada discussion](#).

With \$2.5 trillion global market opportunities on the table for cleantech development, 10 years and counting to meet Paris Agreement targets, and an opportunity for cleantech to drive economic stimulus, now is the time for Canada to move from start up to scale up.

“Scale up”: An entrepreneurial venture that has achieved product-market fit and now faces either the “second valley of death” or exponential growth[^].

“Scaling up”: Going from n1 to n100 of cleantech projects or products sold, allowing the venture and Canada to reap the resulting economic and environmental benefits.

The Scaling Cleantech — What's Next for Canada session at GLOBE Advance sought to build on previous discussions and progress by focusing on three topics:

- The current state of Canadian cleantech and lessons learned to date
- Challenges in scaling companies and exporting technologies
- Solutions to accelerate commercialization and impact

The review of Canadian cleantech data by Natural Resources Canada (NRCan) and MaRS Data Catalyst provided key insights into the sector and highlighted five main gaps in the available data:

- 1** Data representation is strong in some regions of the country (such as Alberta, Ontario, Québec, and British Columbia, while other regions (such as the Prairies, territories, and Atlantic provinces) lack enough information to paint a clear picture of the strengths and challenges facing the sector.

[^]<https://scaleupnation.com/scale-up/>

- 2 A focus on pure play^B cleantech companies instead of all companies advancing cleantech innovation — including clean technology business lines in companies whose primary business is not clean technology, and in-house clean technology research and development (R&D by large industry — was also flagged as a barrier to capturing a true picture of Canada's cleantech sector. While the current data set is very helpful, it is missing key components of the cleantech development ecosystem that are having a material impact on commercialization — and on the resulting economic benefits.
- 3 The greenhouse gas (GHG) reduction potential of clean technologies developed and sold by Canadian firms should be better understood to determine what, if any, external solutions will be needed to meet our national reduction target.
- 4 More data on export and market potential is needed to maximize the value of the data set in driving opportunities for Canada's cleantech sector.
- 5 The "valley of death"^C is real for many companies, with the stage at which this happens varying by company location. In many cases, the root causes (especially regional intricacies) of the valley of death and broader scale-up challenges remain unknown. More data is needed to truly understand the underlying scale-up issues facing companies during commercial deployment and beyond.

Following the MaRS Data Catalyst and NRCan presentation, executives from three different companies offered their insights and lessons learned throughout their scale-up journeys in a Fireside Chat. They stressed the importance of building the right team and not being afraid to change your team as the needs of your company shift and evolve. Other important lessons were the importance of not only obtaining but maintaining customers, having access to non-dilutive funding contributions (e.g., government grants), developing a sound technology protection plan, and expanding knowledge and skills through mentorship.

In the final portion of the session, each participating organization was invited to make a specific commitment that addressed scale-up barriers. A wide variety of personal and organizational commitments were recorded and can be summarized according to the following themes:

- Education
- Accountability
- Collaboration
- Adoption & Market Pull
- Skills & Business Models
- Regulatory & Policy

^BThe core clean technology sector, or "pure play," is represented by companies primarily engaged in research and development (R&D) or the manufacture and sale of clean technologies (Source: Natural Resources Canada).

^CThe valley of death can be defined as the gap many companies face between capital investment during development and eventual revenue generation from product sales.

These commitments demonstrate important capacity and skill-building actions that are needed within the ecosystem to advance the scaling of clean technologies in Canada. It is also important to recognize that the commitments address a number of the barriers that were identified during the initial Scaling Cleantech discussion at GLOBE Capital 2019, including lack of awareness of the sector and insufficient partnerships and ecosystem collaboration.

Commitments around financing mechanisms were limited during the Advance session and remain a gap. Given the current COVID-19 crisis, pain points such as financing and liquidity will be magnified within the cleantech sector. [A recent study of US-based startups by NFX](#) indicated that they expect to experience financial disruption and reduced market demand for at least 12 months, while investors are expecting to be impacted for up to two years. New financial models and mechanisms to scale clean technology development will be needed now more than ever.

COVID-19 CONSIDERATIONS

Unfortunately, it is not an exaggeration to suggest that life as we know it has been significantly disrupted since GLOBE 2020 in February. COVID-19 has affected everyone, and many industries and sectors are struggling to maintain staff and revenue — let alone scale and grow their impact. While the impacts of the pandemic on the cleantech sector emerged after the GLOBE Advance workshop, we have incorporated COVID-19 considerations into this document so that it is as relevant as possible. Now more than ever, increased support for the cleantech sector — particularly in the form of new financing mechanisms to scale Canadian cleantech companies — is needed. Canada has much to offer global and local markets, and cleantech innovation is poised to play a key role in our efforts to build back better.

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Background & Context

The GLOBE Advance conversation was the third in the Scaling Cleantech in Canada series, which began with a workshop at GLOBE Capital 2019 in Toronto. During the GLOBE Capital working session, Delphi and GLOBE, in partnership with ERA, Foresight, RBC and the Canadian Commercial Corporation (CCC), convened a conversation about the barriers and gaps to financing the scale up and growth of clean technologies and companies in Canada. The outcome of the Capital session was the [Flowing Investment to Scale Clean Technology report](#).

The report recapped three high-level required solution sets identified at the workshop:

- 1** Increase and enhance information/knowledge sharing on existing mechanisms
- 2** Create new financial vehicles/mechanisms and partnerships
- 3** Grow understanding and capacity in cleantech companies and investors

In October 2019, Delphi, GLOBE, and ERA delivered two sessions during SPARK 2019 in Edmonton, supported by both Foresight and Energy Efficiency Alberta (EEA). The first, a conference panel, discussed the need to share information and grow the understanding and capacity of cleantech companies, investors and the broader cleantech ecosystem. The proposed solution was a platform for key financing and capacity building agencies to share the mechanisms and support they offer.

The second session, a small stakeholder discussion, identified key actions needed to accelerate the commercialization of cleantech solutions in Alberta. The key takeaways from that discussion are highlighted in the [Scaling Cleantech in Alberta Summary](#).

In February 2020, a three-hour, interactive session was convened at GLOBE Advance. It brought together more than 80 participants from across the Canadian clean technology ecosystem, including government agencies, banks and funding institutions, accelerator programs, industry, and technology developers.

The session focused on a pan-Canadian outlook and engaged participants on the commitments they could make to advance scaling efforts in Canada. The session consisted of three distinct parts:

- PART 1** Natural Resources Canada (NRCan) and MaRS Data Catalyst shared their latest research on the state of the pure play cleantech sector in Canada.
- PART 2** ERA hosted a Fireside Chat with three Canadian cleantech companies (Axine Water Technologies, Mangrove Water Technologies, and Terramera), who offered different perspectives on the unique challenges and barriers facing scale-up companies.
- PART 3** All participants were invited to discuss and identify individual or organizational actions that they could take to accelerate the scale up of clean technology.







PART 1 |

State of the Pure Play Cleantech Sector: Pan-Canadian Insights and Applications

Introduction

Mallika Nanduri Bhatt | NRCan

Speakers

Melissa Felder & Kie Gouveia | MaRS Data Catalyst

**SURVEY
HIGHLIGHTS:**

NRCan and MaRS shared the three-year (2018-2020) pan-Canadian analysis of data from 491 pure-play cleantech companies. Partners in the data gathering process included Foresight, Alberta Clean Technology Industry Alliance (ACTia), Prairie Biosciences Canada (PBC), Ecotech Québec, Newfoundland and Labrador Environmental Industry Association (NEIA), and the Maritimes Energy Association.

70% OF THE VENTURES WERE LESS THAN **10 YEARS** OLD



The “valley of death,” which refers to the gap many companies face between capital investment during development and eventual revenue generation from product sales, appears to be real. The Technology Readiness Level (TRL) most impacted by the valley of death varies by province, with TRL 7 as one of the notable valleys of death.

Most ventures have applications in energy production (89), followed by energy efficiency and storage (77), waste management and resource recovery (36), water and wastewater (34), and monitoring (33).



The company breakdown across Canada was as follows: British Columbia (74); Alberta (83); Saskatchewan and Manitoba (12); Ontario (182); Québec (78); and Atlantic Canada (59).

The study identified sector strengths within each region/province; for example, Ontario is home to the most smart-grid companies, whereas B.C. is home to the most transportation companies.



Applications for this data: MaRS can augment and structure data to (1) understand how regional companies could contribute to key environmental focus areas, and (2) identify where there may be gaps — from a technological and/or an innovation support ecosystem perspective. As a country, we can also gain a sense of what primary benefit may be derived from commercialization and what regions stand to benefit the most.

Following the formal presentation, participants discussed what's missing from the data, what it's telling us, and insights into the health of the Canadian cleantech ecosystem. As a result of that discussion, five data gaps were identified, as well as the opportunity for a broader survey to better support cleantech company commercialization. These are noted in more detail below.

GAP 1 Overall Data Collection and Regional Representation

The importance of pan-Canadian data collection and regional representation was made abundantly clear. Several provinces, including Ontario, Québec, British Columbia, and Alberta, were widely represented by the data; while others, such as Manitoba, Saskatchewan, Atlantic Canadian provinces and the territories, were underrepresented by the survey data. Data also appeared to be lacking for early or 'ideation' stage companies (i.e., those in TRL 1 and 2).

Questions from participants:

- How can a more holistic picture of the Canadian cleantech ecosystem be obtained?
- How can government entities such as Environment and Climate Change Canada and Statistics Canada (and others) help to fill current data gaps?

GAP 2 Impact of Focusing on Pure Play vs. Broad Innovation

It was agreed that by better understanding the clean technology needs and strengths of individual provinces and territories, Canada can improve inter-provincial/territorial trade within the country and bolster our internal cleantech markets.

Questions from participants included:

- While the data focused on pure play technologies, are there other data sets (such as in-house technology development by large industry) that are also needed to tell the true story of cleantech development in Canada?
- Are we limiting ourselves when we only talk about pure play and Canadian clean technologies?

GAP 3 Understanding the GHG Reduction Potential of Canadian Cleantech

Furthermore, while exporting Canadian cleantech will be important, it is recognized that importing clean technologies from other regions will likely be needed for Canada to meet our national climate targets.

Questions from participants included:

- Do we have an understanding of the GHG reduction potential of Canadian-made technologies and the gap that will be required to hit our national goals?

Increased data in this area and the development of a pan-Canadian cleantech implementation roadmap could better help us understand this differential.

GAP 4 Export and Market Potential Data

Increased data related to exporting and market potential was also flagged as a key area for consideration.

Questions from participants included:

- Are cleantech companies aware of which industries are currently targeting cleantech solutions for their sector?
- Are Canadian cleantech firms targeting those industries?
- Cities have a lot of export market potential for clean technology solutions. Are we seeing an uptake in cleantech exports by cities?
- How can we make sure our cleantech firms are armed with the appropriate knowledge to increase their likelihood of success in international markets?

GAP 5 Data to Better Understand Valley of Death Causation

The data also seemed to indicate a clear valley of death for companies, although the province in which the company is located influences when the valley of death occurs. Further data would be helpful to understand why so many cleantech companies struggle to move their technology into the deployment stage and beyond to scale-up.

Questions from participants included:

- Is the cause of the "valley of death" truly a deployment pinch point in the Canadian market, or are cleantech firms moving to other countries following foreign market success?

Getting to the root cause of the valley of death — be it regulatory barriers, lack of commercialization expertise or technical skills, or lack of capital for technology development and testing — would support developing solutions.

The Scaling Cleantech — What's Next for Canada organizers will be sharing this feedback with NRCan's Cleantech Data Strategy team for their consideration and potential incorporation into future program plans.



“

Start with scale in mind. If you really want to scale, you need to think about who you need to hire, which markets you pick, and which investors you go after. Hire the right people — hire great people. Lots of mistakes have happened in start-ups and scale-ups because the right person wasn't hired for a specific job.

~ Jonathan Rhone | President and CEO | Axine Water Technologies



PART 2 |

Fireside Chat

Late-Stage Technology Development and Scale-Up Learnings

We will not deliver the results we are promising if we don't see successful companies commercializing and deploying their products at scale.



~ **Elizabeth Shirt** | Executive Director, Policy and Strategy | ERA |
Managing Director of GLOBE Series as of July 1, 2020

Customers are more important than investors.



Saad Dara | Co-Founder and CEO | Mangrove Water Technologies

All stages of clean technology development and company growth face challenges. Focusing on late-stage development and scale-up is fuelled by the dual promise of economic and environmental benefits to be gained from commercializing clean technologies and clean technology companies. As stakeholders in the Canadian cleantech ecosystem, the organizers and sponsors of the session have distinct and differentiated roles in supporting scale-up efforts.

Prior to showcasing three cleantech entrepreneurs, Elizabeth Shirt, Executive Director, Policy and Strategy, ERA (Managing Director of GLOBE Series as of July 1, 2020), shared ERA's mandate to accelerate late-stage emission-reducing technologies and why scaling up is a priority. Key takeaways included:

- The importance of scale up to organizations like ERA, who are helping to accelerate pre-commercial clean technologies in order to deliver GHG emission reductions, economic growth and diversification.
- The importance of action on an individual, organizational, or collaboration/partnership level cannot be understated — even commitments to smaller, incremental actions can lead to big change. For example, ERA has committed to a review of its funded projects — both completed and ongoing — to uncover what barriers to scale-up and commercialization they are facing. It has also committed to helping establish the resources required to help overcome those barriers.

The Fireside Chat brought together executives from three very different companies:

Saad Dara | Co-Founder and CEO of Mangrove Water Technologies

An early-stage start-up focused on turning wastewater into high-value chemicals

Jonathan Rhone | President and CEO of Axine Water Technologies

A company that has created a new standard for treating toxic organic pollutants in industrial wastewater

Steve Slater | Vice President of Strategic Initiatives at Terramera

An agtech company aiming to reduce synthetic pesticides by 80% in 10 years

The discussion focused on the challenges faced by each company throughout its scale-up journey. While no two companies' scale-up pathway will look identical, there are a number of universal scale-up truths. The executives' most important scale-up lessons are highlighted in Table 1.

TABLE 1 | KEY LESSONS LEARNED DURING SCALE-UP

TEAM	FINANCING	CUSTOMERS
Hire the right people — everything depends on that	Generating private capital in Canada is much more difficult than in the US	Customers are more important than investors
Remember that the people you need in the beginning may not be the people you need as you grow	Don't underestimate the importance of non-dilutive government funding, especially during development	Understand your customers' needs and how you can offer value to unlock new customers
Start with generalists and then build out specialized teams as needed	Senior debt is a critical piece of the financing puzzle and is very difficult to secure	
MENTORSHIP & LEARNING	IP	
Find an entrepreneur to learn as much as you can from	Protecting your technology from the start is an important consideration	
Don't be afraid to fail. Fail often. It offers you the greatest learning opportunity possible	Identify the jurisdictions where you plan to export early and develop an IP strategy for that region	
	Put a lot of consideration into the timing of your technology protection strategy	

The pure-play Canadian cleantech data indicates that moving a company from start-up to scale-up presents real challenges. Ultimately, a high percentage of companies will not successfully make the leap. Helping companies on their scale-up journey is a difficult thing to do, since what might work for one company may not work for another. Issues such as supply chain, sales strategy, and patenting will vary greatly depending on a company's product and export goals.

The diversity of challenges facing companies needs to be top of mind when designing mechanisms to support scaling Canadian cleantech companies. Taking an ecosystem approach can support broader growth within the sector.

When building your team, it's important to understand that the people you need at the beginning may not be the people you need as you grow. Always focus and go back to what's going to get you to market. As you grow, this will take increasing effort and focus.



~ Steve Slater | Vice President of Strategic Initiatives | Terramera



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PART 3 |
Moving from Dialogue to Action

The final activity in the three-part session involved a discussion about how participants will take action to help drive clean technology scale-up in Canada. Participants were given the opportunity to answer the following seven questions:

- 1 What could you do in your network?
- 2 What could you do in your organization?
- 3 What could you do in your team at work?
- 4 What could you do as an individual at work?
- 5 Outside of work?
- 6 How can you inspire or motivate others you need to get involved?
- 7 Beyond sharing these commitments in this room, how can we create some accountability for these commitments?

A number of core themes emerged from this discussion, organized in Table 2. A comprehensive list of all the personal and organizational commitments made during the session can be found in the Appendix.

Improving individuals' understanding of the Canadian cleantech ecosystem (e.g., learning about the needs of entrepreneurs, learning about Canadian clean technologies and their successes) and educating others who are less familiar with the Canadian cleantech sector were identified as important action items by a number of participants. In addition, increasing data and knowledge sharing with like-minded ecosystem partners was identified as an opportunity by many participants.

As an ecosystem, we need to begin to evaluate the impact and benefits of informal education and collaboration opportunities within the sector. These seemingly simple actions have big impacts, and we need to collect data to understand how big those impacts really are — the same way we track the benefits and impacts of funding and investment. Education, storytelling, and increased collaboration are ways that we, as individuals, can invest in the Canadian cleantech sector.

These core commitments are important capacity-and-skill-building actions that are needed within the ecosystem to advance the scaling of clean technologies in Canada. It is also important to recognize that the commitments offer solutions to a number of the barriers that were identified during the initial Scaling Cleantech discussion at GLOBE Capital 2019, including lack of awareness of the sector, and room for improvements in partnerships and ecosystem collaboration.

The COVID-19 crisis has magnified many pain points within the cleantech sector, especially liquidity. New financial models and mechanisms to scale clean technology development for continued crisis response and for economic recovery will be needed more than ever.

TABLE 2 | PARTICIPANT COMMITMENTS BY THEME AREA**EDUCATION**

- Getting educated on the clean technology ecosystem and available financing programs
- Educating others (e.g., friends, family) by sharing entrepreneurial and cleantech success stories
- Working to better understand the needs of entrepreneurs

COLLABORATION

- Building relationships and partnerships with like-minded organizations, while promoting broad ecosystem collaboration
- Increasing data/information sharing with stakeholders and partners
- Incorporating diverse perspectives in clean technology discussions

SKILLS & BUSINESS MODELS

- Providing training and funding programs for entrepreneurs
- Providing mentorship to entrepreneurs

ACCOUNTABILITY

- Measuring action by creating an accountability structure

ADOPTION & MARKET PULL

- Leading by adoption and inspiring through action
- Promoting the value — economically, environmentally, and socially — of Canadian cleantech

REGULATORY & POLICY

- Driving organizational change by linking performance goals to clean technology development





Conclusions and Next Steps

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The presentations, discussions and commitments made at GLOBE Advance provided rich food for thought and some clear next steps. The Scaling Cleantech In Canada partners and sponsors propose focusing on the following three actions to continue to support scaling-up efforts in Canada. We recognize that there is more to be done and will continue to collaborate with partners in the cleantech ecosystem to work towards our collective objectives.

1 Follow up on Personal Commitments

GLOBE, Delphi and ERA will follow up with all participants for updates on the commitments made during the Scaling Cleantech — What's Next for Canada session. Participants agreed that, in order to drive true change, we need a structure to hold one another accountable to our commitments. The partners will engage participants at events like GLOBE Capital 2021 to understand their progress as well as the challenges they faced post-Advance. This will feed into further discussion about and actions on how to make the ecosystem more robust and resilient.

2 Improve Data Collection

GLOBE, Delphi and ERA will provide feedback to the Canadian Cleantech Data Strategy on enhancements to data collection that could further benefit cleantech companies, as well as support greater economic and environmental benefits. Better understanding the role of non-pure play companies in commercializing cleantech is one data gap in particular that could align with COVID-19 economic recovery efforts. Central banks, coalitions of cleantech companies, investors, industry and industry associations, accelerators and many other around the world are calling for a green recovery and green economic stimulus. Better understanding (and over time devising methods for better capturing) all of the economic activity derived from non pure play cleantech developers would support aligning green stimulus mechanisms and levers across sectors.

3 Build Scale-Up Financing into Green Recovery Efforts

The COVID-19 response for cleantech ventures has largely targeted the liquidity crunch faced by many. Prior to COVID and going forward, Canada faces a gap in financing options for cleantech companies looking to scale. Here again, Canada has the opportunity to align green economic recovery measures with scaling cleantech, as many cleantech projects that are (a) deployable in the near term, and (b) have economic and environmental benefits have been proven technically and are looking to achieve scale. GLOBE, Delphi and ERA will work with partners to explore and champion concrete options for scaling cleantech as part of potential green stimulus plans.

As we have seen over these past few months, vast change can come swiftly. An opportunity to transform our industries and our economy has presented itself. More than ever, we need to come together to enact change and advance Canada's clean economy. We look forward to bringing the Canadian cleantech ecosystem together again to continue this discussion on the road to and at GLOBE Capital 2021.

APPENDIX | Complete List of Commitments Made During the Scaling Cleantech — What's Next for Canada Session

What could you do in your network?

- Involve cleantech companies in the scope/proposal phase of projects
- Bring sustainability considerations into procurement
- Finance or bring industrial companies to start-ups
- Combine and connect with other entrepreneurs to build networks of mutual support
- Bring up cleantech more often
- Better promotion of government programs
- Connect firms with complimentary technologies to help each other scaling up a cleantech solution
- Focus my speech and efforts into making connections between investors/buyers & cleantech
- Raise awareness of investors
- Be an advocate for energy
- Provide information within my networks
- Participate in industry groups and government rule-making and implementation activities
- Have outcalls with other organizations (funders, R&D supports) + package that info for companies
- Connect to find areas of common interest
- Teach more
- Bring others from large organizations/Accenture employees along
- Build more clean innovation work so that Accenture will invest (partner with Delphi and others in this work)
- Cross-collaboration from "southern" Canadian companies to "northern" Canadian companies for R&D and testing (e.g. testing batteries at -20 C)
- Connect entrepreneurs with successful start-ups in order to exchange lessons learned
- Mentor
- Provide assistance and connections
- Attempt to learn and understand different perspectives
- Assess networks and make introductions for collaborations
- Encourage more engagement and networking to leave their entrepreneur/technology silo to look at more big picture issues and collaboration in order to drive greater potential impact
- Make helpful connections
- Share what I know
- Develop a stronger venture capital market across Canada
- Recruit talent
- Offer my skills in hiring and governance to others
- Convene informed discussions
- Encourage early stage support/de-risking

- Share understanding of need
- Continue to build relationships and partnerships with like-minded organizations
- Start to explore connections to climate adaptation and emergency response
- Collaborate across ISED
- Build the cleantech sub-sector and low carbon transition expertise at ISED
- Continue to engage to better understand IP barriers and match existing supports and priorities
- Tools and resources development to increase IP literacy
- Continue to partner with industry associations/ provinces to get resources into SMEs' hands
- Connect members with other stakeholders to share data/information
- Share information on other work completed in the ecosystem
- Work with key stakeholders to share our research and data to ensure thoroughness
- Build consistent messaging with other relevant stakeholders + build cohesive communications plan
- Share data more freely with like-minded organizations
- Share info via LinkedIn and with government and entrepreneurial connections
- Make linkages between cleantech and the technology sector
- Vocalize our need for carbon negative options to support our carbon-neutral commitment (operations, investment)
- Core cleantech cluster: Engage, launch, and drive network goals
- Build new vertical network to support requires new value chains — e.g. forestry, agriculture, OEMs, end users, MSW — we need coalitions and case studies
- Work on providing more innovative business model
- Explore through client discussion what companies need that we can provide
- Look for connections and encourage broader discussions with potential partners
- Developed a community innovation fund
- Network with incubators
- Work with companies/consultants who can find companies for us to invest in
- Reconnect with ecosystem organizations from my region post-GLOBE to coordinate action
- Research to try and better understand how hardware as a service (HaaS) can be financed
- Link people/organizations within Manitoba in order to bring it into the 21st century

APPENDIX | Complete List of Commitments Made During the Scaling Cleantech — What's Next for Canada Session

What could you do in your organization?

- Find cleantech companies, have coffee, get to know their product and where it might fit in future projects
- Connect team members with external resources + people
- Bring up cleantech more often
- Budget and advance data/thought leadership in this space — need to utilize it
- Unlock funding
- Dig into the data more
- Support SMEs in cleantech sector via advisory services and government (IRAP) funded R&D projects
- More connection opportunities, more match-making, more "I'm looking for" pitches
- Collaborate with accelerators/incubators and investors
- Bring in diverse perspectives and first-hand experience. Data analyzed in isolation and without context can be ineffective or even harmful
- Clearly defining and articulating what you are offering and who you're targeting as a customer
- Walk them through + follow-up
- Become focused on the most suited areas
- Develop/plan, but more importantly start executing and contacting potential customers
- Learn how to connect all the existing dots
- Start looking for/promoting Canadian-based companies/start-ups
- Work with/IT + procurement departments to revamp "intake" of new proof of concepts so we can be more agile working with new start-ups
- Pilot projects
- Work alongside Climate Ministry & partners
- Scale-up and grown our start-up
- Push for more support
- Try to determine what technology would have the biggest impact on GHG reductions in Canada
- Raise funds
- Create new ideas
- Generate sales
- Hone our value proposition
- Offer full cycle technical advice from capture to storage
- Find new technology that's coming and be prepared to incorporate it

- Lead by adoption
- Provide training programs which target skills needed by cleantech companies
- Continue to push for building + communicating environmental potential of cleantech
- Recommend the creation of an advisory council for the cleantech data strategy
- Continue existing work to increase IP literacy in Canada to provide tools/resources to better prepare entrepreneurs and SMEs for productive IP discussions
- More research projects to support the ecosystem
- Improve internal communication of ecosystem activities
- Reduce barriers to core business work through technology investment
- Pass along information from today's event
- Travel changes/procurement prioritization toward green solutions
- Raise awareness of Canadian cleantech companies and explore their applicability to our business
- Demonstrate disruptive "art of time possible" to executive leaders in support of corporate strategy and purpose
- Work on VPPA pitch with more external audiences
- Continue to bring attention to innovative Canadian companies across Canada — there is a lack of awareness
- Launched an initiative with Co Labs in Saskatoon to solve one of our business issues
- Better knowledge for business advisors on specific barriers to better assist our cleantech company clients
- Advocate for new business models and programs

APPENDIX | Complete List of Commitments Made During the Scaling Cleantech — What's Next for Canada Session

What could you do in your team at work?

- Encourage my staff to familiarize themselves with the "other" types of solutions
- Excite them about thinking outside the box
- Keep applying for grants
- Bring up cleantech more often
- Integrate/connect more with businesses
- Share perspectives from incubators/ accelerators you find and connect to our cleantech financing teams
- Connect with financing/resources and risk perspective
- Share my knowledge across the team to have a more collective understanding of the issues specific to BC cleantech
- Evaluate and support (if its business is viable) R&D projects in the cleantech area
- Connect with more cleantech companies, buyers, investors
- Learn more technical skills + provide skills to my team (skills I'm strong at)
- Keep work assignments well targeted and learn. Be efficient, effective and durable
- Share success stories + resources that have worked for past clients with new start-ups
- Be mindful of the diversity of cleantech players
- Understand the challenges of launch/scale (listen)
- Action plan & paper
- Combine team with partners to create
- Grow skills and capabilities
- Knowledge sharing of up and coming tech companies
- Keep an eye on new tech
- Create awareness
- Break down structures
- Communicate partners + funding programs that are available
- Inspire my technical staff to work in translating science to application
- Challenge them to think differently
- Research the needs of the cleantech sector in terms of workers required, skills required, hiring/ retention challenges and success strategies
- Develop an analysis on TRL 9 companies in the NRCAN dataset to ID barriers + export potential
- Go to the cleantech data strategy meeting
- Work with the Canadian cleantech ecosystem to support development of available (TRL 8 + 9) technologies

- Keep staff engaged in the ecosystem as active participants
- Be more active in the cleantech ecosystem to increase deal flow
- Clearly articulate how this adds value to our business — make the connections and establish partnerships
- Ensure team understands the gaps
- Standardize messaging to all team members and partners on needs
- Provide clear purpose
- Encourage demonstrable change
- Develop skills/build resources
- Share prospective conversations with my team
- Look for inter-provincial opportunities
- We share ideas on how we can be environmentally active
- Raw knowledge in the team about cleantech
- Do presentations on cleantech
- Get our national team aligned and focused
- Link my companies with experts to help them address their key challenges

APPENDIX | Complete List of Commitments Made During the Scaling Cleantech — What's Next for Canada Session

What could you do as an individual at work?

- Introduce cleantech options to clients
- Send out notices
- Show more examples/samples
- Be an evangelist for why/importance of pure play cleantech companies
- Ensure I'm connecting internally with other departments who are working in this space
- Provide tech and business info to my clients (SMEs) and my colleagues
- Assist in the evaluation of new technologies in the cleantech sector
- More knowledge about entrepreneurship and investment
- Leverage Indigenous networks
- Bring rigour to the table with every project. Push for higher and higher quality of data, of insights, of pushing for 'so-what'
- Be willing to explore options. Consider alternatives to a path during development
- Daily goal to move forward
- Measure action
- Better follow-up
- Advocate what's at risk — include climate, environmental, and social degradation
- Lead realistically
- Be accountable for my staff
- Proactively reach out to cleantech companies I don't have a connection with
- Encourage and train them to spend more time listening to clients and doing market discovery
- Research sustainable finance/capital opportunities in Canada/barriers to finance acquisition, knowledge and skills needed for getting financing, available labour supply and transferable skills
- Work with ERA/Delphi to build on session presentations, insights, and participant feedback
- Present paper integrating session inputs + outcomes to all participants
- Push for greener operations
- Bring knowledge and passion and trust to the market
- Advocate for more collaboration with federal funding agencies
- Communicate enthusiastic optimism
- Find a better way to commute
- Champion innovation in different parts of the organization
- Share insights with colleagues
- Brief/train business advisors
- Research more companies

APPENDIX | Complete List of Commitments Made During the Scaling Cleantech — What's Next for Canada Session

What could you do outside of work?

- Go to events and when they ask me what I do, bring it up
- Learn more about the space/expand my network
- Learn more about BC cleantech companies + share their successes (social media, etc.)
- Find out who is local to my community and meet them
- Enlarge a network of specialists: engineering, researchers, financial experts and investors — to move forward cleantech solutions in various industries, not specifically focused on CO₂ emissions or energy savings but having these goals as other "side effects" of implementing their proprietary technologies
- Responsible investment and responsible consumption
- Exercise and get a hobby
- Learn + educate re: cleantech options
- Consider choosing cleantech solutions in daily life
- Keep building network
- Share ideas
- Listen to ideas of others
- Investing in cleantech/funds. Do these funds exist?
- Mentor
- Use my network to spread the word + ask for action
- Engage the academic realm to encourage more start-ups and commercialization of technologies
- Explain the science — talks, publications, media
- Pull together my network to reduce the number of competing organizations — i.e. create operating /non-operating joint ventures
- Continue to educate and adopt technology
- Negate my carbon footprint and get some solar panels
- Get EV charging at home
- Focus on pragmatic discussions
- Work to better understand the needs of start-ups/SMEs
- Educate friends and contacts on "cleantech" needs + opportunities
- Communicate enthusiastic optimism
- Networking with all clean technology organizations across the community to encourage better collaboration
- Motivate my family to be more aware and change habits
- Ride my bike to work
- Reduce, reuse, recycle
- Engage with the start-up/technology community



EMISSIONS
REDUCTION
ALBERTA

 DELPHI
GROUP

 GLOBE
SERIES