



Challenges & Opportunities

Summary Report of the On-line Consultations with Toronto's Green Industries

REPORT
JULY 2019

Economic Development & Culture
Sector Development Office - Green

About the Sector Development Office & Clusters

The City of Toronto is committed to advancing the competitiveness of key sectors of Toronto's economy in collaboration with sector partners. The City uses the principles of cluster development to create, support and sustain robust networks of companies and partner organizations. The City of Toronto's Sector Development Office is unique in Canada and provides many services to help companies in the city's key sectors grow and prosper.

“Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include suppliers of specialized inputs such as components, machinery, and services and providers of specialized infrastructure. Clusters also extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies, or common inputs. Finally many clusters include governmental and other institutions – such as universities, standards setting agencies, think tanks, vocational training providers, and trade association.”

Michael Porter, 1998. “Clusters and the New Economics of Competition”

Challenges and Opportunities for Toronto's Green Industries
Summary Report of the On-Line Consultations March 24 – May 5, 2019

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Sector Development Office – Economic Development & Culture
CITY OF TORONTO

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1. Introduction

As the world transitions to a low-carbon economy, Canadian cleantech and green firms are positioning themselves to meet rapidly increasing demand for innovative solutions. The global cleantech market is expected to grow to US\$2.5 trillion by 2022¹ with, as examples, the solar market increasing by more than 10% annually² and electric vehicles sales doubling every two years.³

Canada already ranks fourth on the Global Cleantech Innovation Index and scores first when it comes to funding available for start-ups, innovation and investments.⁴ This low-carbon shift is also evident in Toronto where the green sector is growing twice as fast as the local economy (4.2% versus 2.1%).⁵

Yet even with all this potential, our green sector faces challenges to remain competitive while fostering growth. Canada's market share in the global clean tech industry has fallen 12 per cent in the last decade⁶ and with only a few cleantech cluster development organizations scattered across the country. The City of Toronto's Sector Development Office is working with green sector stakeholders in Toronto to help overcome those challenges to growth.

The Toronto Green Industries Growth Roadmap (TGIGR) initiative is a multi-year collaborative process to develop key actions to maximize the growth of the green sector in Toronto with 3 distinct phases:

1. Understand (collect, engage and question)
2. Learn (survey, discuss, analyze)
3. Decide (collaborate, consider, agree)

This on-line consultation is part of phase 1 and is intended to get a sense of what the industries and stakeholders feel are the important issues that drive economic growth for the green sector. This will help craft a more detailed analysis and survey which is part of phase 2.

This consultations report consists of two separate sections – this Summary Report and a separate Survey Responses Report which lists all of what we heard.

¹ Export Development Canada - <https://edc.trade/canada-cleantech-export-potential/>

² Zion Market Research - <https://globenewswire.com/news-release/2018/11/06/1646187/0/en/Global-Market-Size-of-Solar-Panel-Industry-Will-Reach-USD-57-5-Billion-by-2022-At-10-9-CAGR-Zion-Market-Research.html>

³ International Energy Agency - <https://www.iea.org/newsroom/news/2018/may/strong-policy-and-falling-battery-costs-drive-another-record-year-for-electric-ca.html>

⁴ Cleantech Group - <https://i3connect.com/gcii>

⁵ City of Toronto, Economic Development and Culture, Sector Development Office

⁶ Smart Prosperity Institute - <https://institute.smartprosperity.ca/library/publications/canada-s-next-edge-why-clean-innovation-critical-canada-s-economy-and-how-we>

Quotes from the responses can be found throughout the report highlighted in boxes:

- *No One is listening to our message.*
- *Listen to us.*

2. Summary

The analysis of the comments received identified that government involvement and financial issues are considered the primary issues that influence the market for green solutions by respondents. The following key issues and themes are what the green industries in Toronto feel are important.

1.	The Role for Government	Governments have a significant role to play in stimulating (or stunting) the growth of the green sector. This theme is also found in a number of points below. There appears to be a double edge thinking about government's involvement – i.e. "remove government interference and over-involvement" vs. "regulate in our favour." This requires further investigation.
2.	Financial Investment & Policies and Regulation	Financially investing in developing the market for green technologies is considered most important by the participants (using the key word search analysis) and in the question on how to make the sector more competitive (using the categorization of comments by key drivers to growth). However policies and regulations are considered most important as an opportunity (using the categorization of comments by key drivers to growth). This contradiction may be due to the experience of the green industries of changing market development programs in the past with the feeling that regulations may be a more stable platform for support in the future.
3.	Leadership, Vision & Politics	There is a call for strong, courageous leadership (in political leaders, in the government bureaucracy, and in industry organizations) to create long term, well thought out plans to grow the sector (and hence to reduce our impact on the environment).
4.	Key Drivers for Growth	Governments have key roles in market development and policies & regulations while industry needs to lead in advocacy, collaboration building, and marketing. Workforce development is not considered a major issue.
5.	The Need for Certainty	Stakeholders who participated in the survey identified that the constant changes in government policies, programs and initiatives are a significant barrier to the growth of the industry. Politically unstable incentives and regulatory regimes only provide market uncertainty which is the death knell to business planning.
6.	Cooperation and Collaboration	There is a need for increased cooperation and collaboration which is articulated by respondents and throughout the questions. This was expressed numerous times in numerous ways. Building consensus

		through the industries and through the value chain of companies, academia, industry groups, environmental advocacy groups and others is needed on the desired policies, programs in all the key drivers for sector growth.
7.	Innovation and the Toronto "Advantage"	Participants feel Toronto has the innovation skill sets to be a global leader in green technologies. The challenge is how to harness this opportunity effectively.

The on-line consultations was not intended to identify specific path forwards or recommend to stakeholders specific and concrete actions. It was successful in identifying themes and issues that need to be explored further in the broader survey and consultations in phase 2 and phase 3 of the Toronto Green Industries Growth Roadmap Initiative.

- *This is a great start, asking for our suggestions. Keep the lines of communication open.*

3. Process and Distribution of Survey

The consultation was done as an online survey which was posted on the City's webserver on March 14th and was closed on May 5th, 2019.

The survey consisted of a total of 10 questions. Two questions identified the respondent's position in the green sector: 1) the green sector segment (i.e. clean energy); and 2) the part of the supply/value chain (retail, manufacturing, etc.) they worked in. Then 8 open ended or qualitative questions on challenges, opportunities and what stakeholders could do to support economic growth of the sector in Toronto. The survey questions can be found in the Appendices.

Economic Development and Culture (EDC) at the City of Toronto had just started developing an effective contact record management (CRM) database when the consultations began and as such we relied mainly on green sector stakeholder groups and social media to promote the survey:

- Live Green Toronto posted in their monthly newsletter (April 5)
- TAF posted it in their monthly newsletter (April 9)
- A number of stakeholder groups such as the Canadian Green Building Council – GTA chapter also circulated the notice to their members.
- It was posted on LinkedIn.

Two mass emails were sent out to stakeholders on April 23 and April 29 using contacts in the CRM database identified as being in the green sector and contact in a separate green sector database that EDC staff maintain.

The survey covering page was viewed 636 times and a total of 164 surveys were completed with 752 unique responses (comments) to the 8 open-ended questions.

4. Methodology of Analysis

As the survey was based on qualitative responses we analyzed the data a number of ways to identify key issues:

1. Key words were searched for to see if there was consistent themes over the 8 questions.
2. Responses were categorized using the 6 key drivers that influence an industry's or cluster's growth.
3. The responses were separated into the five individual industry segments that make up the green sector in Toronto along with a category of responses who said they were not part of the green industry. Trends in responses were looked at in these 6 categories.
4. Finally we tried to look for trends on issues identified throughout the survey that may not have been captured using the above methods.

Note: The survey software used (CheckMarket) provided a word cloud generator that identified words that appear most frequently in the replies. The most popular words used were mostly generic in nature and did not provide any significant insights. The word clouds can be found in the separate survey responses report.

5. Respondents' Role in the Green Sector

Question 1 asked the respondent to identify what type of organization they represented while completing the survey. The two highest categories were industry (33% of respondents) and the public (29%).

1. Are you a member of ...	Responses	
Industry	54	33%
The Public	48	29%
NGO	16	10%
Government or Utility	14	9%
Research or Business Support	11	7%
Other	10	6%
Education/Training	7	4%
Industry Association	4	2%
Total respondents:	164	

Question 2 asked the respondents in what segment of the green sector they worked in. There was some confusion on this as a number of respondents who had indicated that they were a member of the public identified here with one of the segments of the green sector.

What is the primary Green segment you are involved in?	Responses	
Clean Energy	26	25%
Green Buildings	22	21%
Resource Management & Environmental Protection	17	16%
Sustainable Transportation	12	11%
Green Professional Services (i.e. engineering)	11	10%
Bio-economy	9	8%
Other (i.e. government, not focused on one segment)	9	8%
Total respondents:	106	

6. Themes Identified Using Key Words

Sector Development Office staff had identified a number of potential issues or "themes" which we checked to see if they were also rated at important as reflected in the comments by participants. In order to verify and rank the themes, key search words related to the theme were used to do word counts. The key words that we used appeared 1,032 times.

Theme	Number of Mentions		Search Words
Governments	360	35%	government, governments, city, province, provincial, federal, Toronto, Ontario, Canada
Financial Support	279	27%	incentives, rebates, financing, grants, money, support, funding, financial, program, tax, subsidies
Leadership and Vision	83	8%	leadership, uncertainty, lack of support, political will, vision, strategy, commitment, consistent, change
Regulations and Codes	67	6%	policies, regulations, codes, bylaws, laws, zoning
Costs of Green Solutions	56	5%	cost, expense, affordability
Education and Awareness	43	4%	education, communication, marketing, awareness, outreach, engagement
Thinking Globally	34	3%	trade, exports, countries, markets, globally, international
Investment	34	3%	Investment, invest, investing, savings
Politics	27	3%	interference, misinformation, fake, false, trust, political, truth
Collaboration	19	2%	collaboration, cluster, cooperation, coordination, working together
Workforce Issues	18	2%	workforce, skills, labour, trades,

Carbon Pricing	12	1%	carbon tax, carbon pricing, cap and trade
Total Mentions	1,032		

As some respondents may have used the same key words numerous times this makes it challenging to use this as an indicator of what the 164 respondents felt were the level of importance of these themes. Nevertheless there are clearly two themes that emerge:

A Role for Government

With over 360 mentions by the 164 respondents it is evident that they feel that governments have a significant role to play in impacting the growth of the green sector economically. Whether this is by proactively impacting (either positively or negatively) or by simply getting out of the way.

- *Provincial government should stop dismantling any policy/program that yields environmental and economic benefits and instead, expand those."*
- *"Government's role is to pass effective regulations and to help shape behaviour through public education and leading by example. Toronto's green sector is growing twice as fast as the local economy."*

Financial Support

Respondents also clearly think (279 mentions) that financially supporting the growth of the market for green solutions is an important issue. While financial support is commonly thought of as a subsidy to companies, for example the \$3.3 billion of subsidies that the Canadian oil industry receives annually⁷, the support that green industry stakeholders call for tend to focus more on market expansion (i.e. reducing costs to the buyer) – this market expansion can create "economies of scale" which stimulate price reductions (eliminated the need for long term support). For an infant industry with few large companies it may be more correctly thought of as an investment in the future economy of the region.

- *I think it's important to put in the right market signals to induce the right decisions. I think the carbon tax put in place by the feds is an example of the type of signal the market needs to drive the right behaviour. I would encourage the city to consider the right combination of inducements and penalties to drive demand for 'green' solutions. That combination could be inducements to use green building methods (i.e. accelerated permitting of net zero in-fill buildings, modification to codes to accelerate adoption of efficiency technology but also penalties that reduce waste to landfill and further drive decision making to low carbon alternatives."*

⁷ Estimate by Environmental Defense - <https://environmentaldefence.ca/report/the-elephant-in-the-room-canadas-fossil-fuel-subsidies/>

Leadership, Vision and Politics

The combined themes of Leadership, Vision and Politics are also mentioned a significant number of times (110 mentions). This extends across both what government, politicians and industry organizations can do.

- *I think one of the greatest challenges is the political will and having the different levels of governments and different political parties working together.*
- *Lack of political leadership.*
- *Courageous politicians.*

Carbon Pricing

While carbon pricing and its value for changing market forces has received considerable media, public and political attention – it may not be viewed as a top key element to growth of the sector by the sector, either as a challenge or an opportunity, based on the number of mentions in this consultation. There was only 12 mentions of carbon pricing in 752 responses to the 8 questions. Carbon pricing seems to be considered as an import base in which effective policies and market development mechanisms can be built on but by itself is not an "issue" except for the continuing uncertainty that the debate creates.

- *Carbon tax is a good step but only part of the mix. Toronto government needs to take meaningful steps to develop a new tax regime that incentivizes residential energy and water sustainability retrofits and upgrades and hits people who don't make the changes harder with increased taxes.*
- *A stable and predictable carbon pricing regime is critical, whether at federal or provincial level. All levels of government can help stimulate demand through retrofitting their own building portfolio and the broader public sector.*

7. Key Drivers for Sector Growth

Economic Development practitioners at the sector or cluster level tend to break activities and actions that support economic growth into six key factors or drivers.

- Advocacy
- Collaboration Building
- Market Development
- Marketing and Promotion
- Policy & Regulations
- Workforce Development

More details on these key drivers can be found in the appendices

These drivers are often interlinked (i.e. advocating for policies, creating a network of academia and industry to develop training programs) and tend to be "macro" issues that may be different than the factors that influence an individual firms growth such as the "cost of doing business" (i.e. the cost of space, taxes, etc.).

For this report we attempted to categorize the 752 responses into one of the six key drivers of growth. In some cases responses had multiple comments that fit into a number of drivers and these were then counted multiple times - once for each category it fit into. Where responses did not fit into the 6 key drivers (usually as it related to specific business level issues) it was attempted to categorize them into additional headings or not counted.

A number of responses submitted were very company specific (i.e. the advantage of its products) and therefore not included in this analysis.

Questions	Challenges	Opportunities	Role of Governm'ts	Role of Industry Orgs.	Becoming More Competitive	Other Suggestions
Key Factors to Cluster Growth						
Advocacy	3%	2%	2%	32%	5%	
Collaboration	13%	7%	4%	32%	5%	8%
Market Development	18%	10%	42%		38%	8%
Marketing	21%	6%	11%	35%	10%	23%
Policy & Regulations	15%	19%	33%		19%	15%
Workforce Development	2%	2%				
Business Specific						
Investment capital and business taxes	3%				5%	
Innovation and R&D	1%	1%	7%		5%	
Supply chain and labour costs	4%				0%	
Other Issues						
Leadership & politics	11%	15%			14%	15%
Pollution	5%					
Risk aversion	2%					
Cost competitiveness	3%	2%				
Specific project ideas		35%				31%
Total Mentions in this Question that were Categorized	106	88	45	31	21	13

Challenges for Toronto's Green Sector (Q. 3 & 4)

Challenges in 4 of the key drivers to growth were identified fairly equally (13% to 21%) with marketing (i.e. awareness of green solutions) having slightly more mentions than the others.

- *Lack of visibility. People think of retailers selling green products, or renewable energy, but many other important aspects of the green sector aren't recognized or appreciated enough.*

Pollution, such as carbon emissions, was identified a number of times as a challenge to the green sector. It may be that the respondents were considering the question from an overall social-economic level while the intent of the question was to understand what is holding back the growth of the sector in providing solutions to pollution and other environmental issues.

- *Reducing carbon emissions to mitigate climate change.*

Opportunities for Toronto's Green Sector (Q. 5 & 6)

Respondents had many (35% of categorized comments) ideas on opportunities or areas to focus on which could not be easily categorized under any one of the key factors.

- *Continuing to green transit and encourage use of greener transportation. Making public transit cheaper, more accessible to people with disabilities (install more elevators in stations), and more frequent in underserved areas will assist more people in being able to use public transit.*

The respondents clearly believe that the greatest opportunity for supporting growth of the industry lies in developing policies and regulation (19% of responses) versus other key factors such as market development which was identified only half as often (10%). This is a different conclusion for the analysis using key words where market development (financial support) had more mentions.

- *To implement stringent building codes that mandate development of environmentally friendly solutions including the use of cleaner technologies in roads/sidewalks and building construction both commercial and residential. This must not be optional and bold measures must be adopted.*
- *It is proven that the most immediate impact to reducing the carbon footprint in Ontario is the switch to Electric Vehicles. We need the city to start enforcing EV only zones such as the downtown core.*

Leadership and politics were mentioned fairly equally as a challenge (current state) and as an opportunity (future state) and this may link into advocacy and support for political change.

- *Challenge: I think one of the greatest challenges is the political will and having the different levels of governments and different political parties working together.*
- *Opportunity: Remove government interference and over regulation*

Role for Government (Q. 7)

Clearly the respondents felt that governments' primary role should be in helping develop the market for green solutions (42%) and the introduction of policies and regulations (33%) that encourage (or require) the adoption of green solutions.

- *All levels of government should be on board to support the green sector. Incentives, tax breaks, investments all need to be embraced. A strong legislation with penalties for non compliance of polluters must be implemented.*
- *Creating nodes or innovation parks at subsidized rents to green startups or small scale businesses would help.*

Role for Industry Organizations (Q. 8)

Respondents believe that the role of industry organizations is complimentary to the role of government with the most mentions that they should be engaged on advocacy (32%), collaboration building (32%) and marketing (35%). These are the other key drivers and not mentioned in the role for government. Note that advocacy is an enabler so could be targeted at the key drivers that government should focus on (policies & regulations, and market development).

- *Lobby all levels of government. Prove that the citizens do want to change to a circular economy through studies and petitions. Support political candidates who are green.*
- *Combine efforts. Reduce duplication of effort. Mitigate competition by many organizations for the same pools of funding and revenue. Increase partnerships and innovation will increase.*
- *Build consensus in green industry around desired government policies and program, and clearly iterate recommendations. Communicate the multiple benefits of green industry to the public and politicians. Speak up against short-sighted policy decisions that threaten the future growth of the green industry. Engage with politicians across all parties to make climate change a non-partisan issue.*
- *Be bold, be loud, be brave!!!*

It should be noted here that while workforce development is one of the 6 key drivers to growth it had very few mentions by the respondents in any question.

Becoming More Competitive (Q. 9)

There was a significant focus (38%) on market development when respondents were asked what was needed to make the industry more competitive. Increasing sales was considered the most important element.

- I think it's important to put in the right market signals to induce the right decisions. I think the carbon tax put in place by the feds is an example of the type of signal the market needs to drive the right behaviour. I would encourage the city to consider the right combination of inducements and penalties to drive demand for 'green' solutions.*

Other Suggestions (Q. 10)

Like the questions on opportunities, a significant portion of responses had very specific ideas not easy to categorize under the six key drivers of growth.

- I've recently noticed more campaigns from Live Green Toronto on the TTC and in other public spaces. I think campaigns like this encouraging or promoting the green sector would be helpful in reaching and educating a large audience.*
- This is a great start, asking for our suggestions. Keep the lines of communication open.*

8. Responses by Industry Segments

How we define the different segments of the green sector can be found in the Appendices. The small number of responses when broken out by sector segment makes it difficult to draw conclusions on overall issues in a specific segment. There were some notable possible trends as outlined below.

Bio-Economy (9 responses)

Unsurprisingly, with the City government being a major part of the supply chain for the urban wood cluster, a significant number of comments were made on how the City's Urban Forestry office and other City offices could contribute more effectively to strengthen the growth of the sector.

- Toronto is booming, we have money and we can spend it to benefit a future minded economy. We have world class designers and creators and people looking to use their money to invest in our collective future.*

Clean Energy (26 responses)

This green sector segment has been most impacted from the changing policies of government over the last 40 years. Since the 1980s the clean energy segment has seen numerous boom and bust

cycles that have been the direct result of government interventions (both to the boon and detriment of the companies). Many comments by stakeholders in this segment focused on the need of consistent government policies, the impact of political interference and the politicization of the debate surrounding climate collapse.

- *Uncertainty around, and capriciousness of, government policy and programs. Constant political interference in energy prices. Uncertainty over carbon pricing. Sudden cuts to conservation programs. Constant change in renewable energy policy (e.g. ending FIT and large renewable procurement, ending virtual net metering before it even began, cancellation of renewable energy contracts).*

Green Buildings (22 responses)

The high cost of housing, and buildings in general, in Toronto was identified by a number of respondents as a barrier to green buildings as building "green" was acknowledged by many respondents as costing more than current practices.

- *Stop the rising cost of housing as homeowners disposable income is being pressed so that they are seeking cheap solutions.*
- *It is clear industry will innovate to deliver the performance levels required for international competitiveness when the domestic market requires that level of performance. Government incentives can never be adequate to motivate broad transformation. Companies require a market for the products they develop, and without a clear path to high performance buildings, companies do not invest in the required innovation.*

Resource Management (17 responses)

This is one of the most diverse segments of the green sector – encompassing companies in water, waste, recycling, remediation, pollution reduction, etc. As such there were no specific themes found amongst the responses.

- *There is a fundamental lack of understanding of how each individuals' actions have an impact on the environment. Without people realizing their own impacts, it is very challenging to get them to change their behaviors to those that are less harmful to the environment.*

Sustainable Transportation (12 responses)

While this segment had a very small sampling there seemed to be more comments on concrete actions compared to the other segments of the sector.

- *Help small businesses get access to full service advanced manufacturing facilities that can do fabrication and production on a contract basis. We cannot do this individually, but it is needed to rebuild the industry.*
- *Our technology is available NOW but no one in Toronto is listening. We have customers around the world but not here in our own home city.*

The Public and Others (48 responses)

A significant percentage (29%) of the respondents identified as being in the public. In comparing their comments to "industry stakeholders" a number of themes appeared to be more prevalent: 1. the cost of green technologies; and 2. the need to change the societal level of acceptance to greening the economy (similar to the transformation to adopt recycling as the new "normal").

- *It is still expensive to purchase greener goods and services, making it hard to obtain buy-in from the public.*
- *The resistance of people to change. I think people are caught up in what was always 'easy' versus trying something new. It seems that most 'green' products are also a lot more expensive which discourage the general public from participating in this economy.*
- *There is a fundamental lack of understanding of how each individuals' actions have an impact on the environment. Without people realizing their own impacts, it is very challenging to get them to change their behaviors to those that are less harmful to the environment.*

9. Key Themes Found Throughout

A number of themes appeared consistently through the comments:

The Need of Certainty and Continuity in Government Actions

There were numerous comments on the lack of certainty in what government is going to do next. This extends beyond just the current provincial government. Having to change business plans based on the new economic policies of the newly elected ruling party, where those policies are heavily influenced by political vision rather than sound economic theory, creates lost business opportunities and significant costs for businesses. There is a cost to hiring staff and renting new space to grow and there is a cost to firing staff and cancelling leases to shrink. This makes these business caught in the changing policy landscape less competitive compared to firms that are in a more stable environment in other jurisdictions such as in Europe or Asia. Innovators forced to shut down their dreams due to constantly changing government decisions are mostly lost to the economic eco-system forever.

- *Lack of government long term, consistent, financial and regulation support.*
- *Growing the sector requires investment, and people are hesitant to invest without confidence in the government policy/program landscape.*

Cooperation and Collaboration

There is an urgent call for cooperation and collaboration throughout comments. While not reflected in the key word search as a major theme this low ranking may be attributed to the wide variety of words used to describe this need. There is a need for collaboration at all levels: between industry groups; between businesses; between different levels of government; and between different segments of society.

- *Bring people together*
- *Lack of unity*
- *Implement the policies and incentives necessary to nudge local Toronto businesses into collaborating across enterprise boundaries.*
- *It is unrealistic to expect a 'green sector association' to come to be a singular voice for such disparate industries (think waste management and recycling alongside artificial intelligence companies that make buildings smarter so they use less energy).*
- *Innovate through industry/university cooperation*
- *Combine efforts. Reduce duplication of effort. Mitigate competition by many organizations for the same pools of funding and revenue. Increase partnerships and innovation will increase. Place more emphasis in their work on simple solutions that are easy for people to understand and implement.*
- *Lack of coordination. A lot of different stakeholders with an overarching goal (green growth) but with slightly diverging interests (the green sector is big and represents many people).*
- *Work together, do plans on larger scale, not piece meal.*
- *We seem to be a tipping point. All organizations, companies and individuals with skills, knowledge and technologies need to rally around a small handful of concrete actions that our citizens can understand and take action on and promote the hell out of them.*
- *Develop collaborative groups that foster peer to peer collaboration, sharing of knowledge and best practices, and networking - provide one-on-one programming supporting to green sector organizations to help them address the challenges they face*
- *Cooperate and be open. Collaboration beats competition if we're to achieve our goals.*

Innovation and the Toronto "Advantage"

Throughout the comments can also be found ideas and suggestions that articulate that we have the innovation capacity in Toronto and in Canada to be global leaders in developing solutions to environmental challenges. We just need to identify how we can harness this:

- *Promote the creativity and originality that comes from Canada. Canada has so many resources, when combined with as much of the design and fabrication in Canada keeps the most value here. Promote Canadian businesses and give them the tools to scale at their pace to create something sustainable to last generations.*
- *Create the conditions for innovation by accepting and then managing perceived or real risk.*
- *There are a lot of innovative people and businesses in Toronto*
- *Toronto is booming, we have money and we can spend it to benefit a future minded economy. We have world class designers and creators and people looking to use their money to invest in our collective future.*
- *Leverage Toronto's moment in innovation, which is being recognized internationally. Collectively map/parse out the industries we have and how these can meet major challenges being faced in Toronto and around the world.*

Working Together to Make Toronto's Green Industries Globally Successful

While there was no specific question that precisely asked what the City should do to bring stakeholders together, there were a number of comments related to this:

- *Provide guidance on how best the stakeholders of the Toronto green sector should interact. Maybe have City of Toronto act as an overarching organization assembling and guiding those different stakeholders.*
- *More collaboration - the City can help 'brand' the growing green sector in Toronto and help these small businesses promote Toronto as a green innovation hub (NOT just in tech)*
- *Pressure on the province. Toronto could start a municipal trend toward supporting its 'green' sector by organizing a summit, ongoing meetings - anything to make the sector and jobs therein more visible.*
- *More awareness of the significance of the Green sector in Toronto's economy, and the potential for further growth, would be very helpful.*
- *Toronto can help bring together and support small businesses and social enterprises;*
- *Political will to make bold changes to legislation. I believe that the people of Toronto want the city to be a leader in Green industry/technology. A key would be a strong in your face but simple communication plan. Toronto has a climate action plan and no-one I know knows about it!*

The Challenge in the Politicization of Environmental Issues

The politicization of environmental issues and how it's increasingly used as a "wedge issue" in political debates is a concern that is highlighted by a number of comments.

- *I think one of the greatest challenges is the political will and having the different levels of governments and different political parties working together.*
- *Positioning climate change and sustainability as non-partisan issues.*

- *Political will for a different, less environmentally impactful way of operating our society. Funds to make that new vision possible. Good luck! Count me in to support this important work!*

How an issues that has so many real benefits to society and is, in reality, just part of the continuum of innovation seen throughout the history of civilization (replacement of stone with iron, replacement of horses with cars, etc.) can be so hotly debated brings to mind the comic had has circulated for years.⁸



⁸ Use with permission of the artist – Joel Pett. "The cartoon that has been seen around the world."
<https://www.kentucky.com/opinion/op-ed/article44162106.html>

10. Appendices

Survey Questions

1	Are you a member of: (Public, Industry, Industry association, NGO, Government, government agency or public utility, Education/training organization, Research organization)
2	Check off the primary segment of the green sector you're in (Bio-economy, Clean Energy, Green Buildings, Resource Management & Environment Protection, Sustainable Transportation, Green Professional Services (i.e. legal, engineering providing support across a number of the segments), Other (i.e. government, training institutes not focused on one of the above segments)
3	What do you think is the greatest challenge facing Toronto's green sector?
4	What are the best ways to overcome these challenges?
5	What do you think are the best opportunities for Toronto green sector?
6	What are the main barriers to achieving these opportunities?
7	How might governments (please identify what level) support the growth of the green sector in Canada?
8	What can green industry organizations and stakeholders in Canada do to best support the growth of the green sector in Canada?
9	Do you have suggestions on what would help Toronto's green sector become more competitive?
10	Please provide any additional comments or suggestions on what you feel is needed to support the growth of Toronto's green sector.

Key Drivers to Sector/Cluster Growth

Key Driver	Description
Advocacy.	Advocating for changes in government support for all the other "levers" listed above is often a key element of sector wide collaboration. This includes the lobbying for programs, policies and regulations that support the growth of the sectors and the changing of policies/regulations that hinder their growth.
Collaboration Building.	A critical element is identifying key strategies to drive local economic growth for the whole cluster. This includes creating strong networks for the sharing of information, creating opportunities for collaboration, and building consensus on priorities.
Market Development.	The expansion of the total market for a product or company by entering new segments of the market, converting nonusers into users, and/or increasing usage per user. Examples of this would include the Feed-in Tariff program and international trade missions
Marketing and Promotion.	Marketing is about communicating the value of a product, service or brand to customers or consumers for the purpose of promoting or selling that product, service, or brand. The provincial government's "Ontario Wood" campaign is an excellent example of a marketing program.

Policy & Regulations.	The policies and regulations are the "environment" that businesses must operate in and are generally in place for the "common good" for society. Immigration policies used to attract skilled workers, the Building Code and CSA (Canadian Standards Association) standards are examples of these.
Workforce Development.	Talent development and building skills in the workforce are crucial for companies to compete. This includes developing sector specific training programs, helping businesses hire employees and gain access to talent and attracting youth into the industry.

Defining the Green Sector in Toronto

Bio-Economy	Urban sawmills, furniture made from urban wood, green chemistry (bio-plastics), bio-fuels.
Clean Energy	Solar, wind, batteries, district energy, smart thermostats, LED lights.
Green Buildings	Energy efficient windows, green roofs, builders.
Resource Management & Environmental Protection	Water supply and sanitation, recycling, solid waste, soil remediation, pollution controls, environmental monitoring.
Sustainable Transportation	Electric vehicles, bikes, scooters, buses, trains, and public transit.