



**Report on the Proceedings of the
Advancing Women in STEM Community
Leaders Forum & Strategic Recommendations**

January 29th, 2018
3:00-7:00 PM
SAP Labs
111 Duke Street, Montreal

PREPARED BY THE ASSOCIATION FOR CANADIAN STUDIES (ACS)
ON BEHALF OF YOUTH EMPLOYMENT SERVICES (YES)



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Part I: Report on the Community Leaders Forum

Held on January 29th, 2018 from 3:00-7:00 PM at SAP Labs, 111 Duke Street, Montreal

Background

YES Montreal is currently leading one of 20 initiatives funded by Status of Women to advance gender equality in Canada. *Advancing Women in STEM* is a three-year grant project (2017-2020) that aims to address and identify solutions to a number of systemic challenges hindering women's retention and access to leadership positions within the STEM industry. This initiative follows from two previous ones; in the inaugural project (2012-2015), YES conducted three annual gender-based analyses of Quebec's technology sector and in the second project (2015-2017) developed a tailored mentorship model for women in Montreal's STEM industry.

The overarching goal of the *Advancing Women in STEM* project is to create systemic change within STEM companies by shifting institutional practices to promote inclusivity and leadership opportunities for women. Successfully achieving this goal is dependent on the collaboration and support of industry and community leaders, particularly the project's advisory committee that consists of fifteen outstanding women leaders who are highly engaged in this initiative and its outcomes (see [Appendix A](#) for full list of members). With their guidance, the main objectives of this initiative are to:

- i. Increase the understanding of systems and institutional practices in the corporate culture that affect women in the STEM industry;
- ii. Provide access to strategies, tools and frameworks that harness inclusive workplace environments and ensure women's retention and access to leadership roles; and
- iii. Support a team of "change agents" within select pilot companies as they: (a) create internal initiatives to support female employees and (b) influence organizational functions and structures that hinder inclusivity and equal access to opportunity.

In support of these objectives, YES Montreal hosted the *Advancing Women in STEM Community Leader's Forum* on January 29, 2018 in Montreal. With leaders from STEM, business, legal and academic sectors, participants at this milestone event engaged in a series of dynamic discussions and identified several policy recommendations and practical solutions to a number of persisting challenges facing women's retention and advancement in the industry. Recommendations generated from the Forum's participants will be piloted by four Montreal companies (IC Axon, CAE, eSignLive and G-Soft) in the upcoming year. These companies will select recommendations to be implemented and identify internal initiatives to support and empower female employees in their respective companies. These recommendations will also be shared at a national level through a federal pan-Canadian network to advance gender equality.



Forum Design

The *Advancing Women in STEM Community Leader's Forum* was designed with the intent of harnessing the vast knowledge and experience of the event's participants in order to generate practical recommendations and solutions to the following four key challenges facing women in the STEM industry:



Challenge 1: The STEM industry environment

Challenge 2: Conscious and unconscious bias against women in STEM

Challenge 3: Barriers to the path of leadership

Challenge 4: Top-down systems of advancement and support

Over 60 local stakeholders from the STEM field (i.e., industry leaders, government officials, businesses, academics and HR specialists) participated in the event. Once the opening remarks and keynote speech was delivered, the group was split into six breakout sessions. Each group tackled one of the four challenges over the course of two breakout sessions. Participants were assigned to contribute to the discussion of two challenges depending on their preference. The STEM industry environment and path to leadership were two themes of extremely high interest to participants and therefore, two rooms were allotted for each of these challenges. Ensuring diversity as it related to gender and industry representation from participants was also a key component in the design of each breakout room.

In order to ensure the breakout discussions focused on generating practical recommendations that could be implemented by STEM companies to advance women in the industry, each room was assigned a facilitator. Facilitators were provided with a guide that suggested questions to pose to the group as needed. Two note-takers were also assigned to every room to guarantee detailed documentation of the proposed recommendations and solutions (see [Appendix B](#) to find a list of session facilitators and note-takers). At the end of the breakout sessions, closing remarks and a summary of the recommendations that surfaced were highlighted by the lead facilitator Dr. Wendy Cukier. This was then followed by a networking cocktail (see [Appendix C](#) for the full Forum agenda).

Opening Remarks and Keynote

The Forum kicked off with opening remarks by Doris Juergens, YES' Board President. She welcomed attendees and provided a brief overview of YES and the valuable work they do in the Montreal community and the Quebec regions. She then introduced Elizabeth Laett, the chair and national lead of the *Advancing Women in STEM Advisory Committee*. In her opening remarks,

Elizabeth acknowledged the women leaders on the advisory committee who were present in the room, thanked the YES staff for their efforts in organizing the Forum and described the background of the *Advancing Women in STEM* initiative. After expanding upon the initiatives' efforts with regards to mentorship and the retention of women in the STEM field, a special thanks was given to the projects funder, Status of Women Canada. Elizabeth then introduced Dr. Wendy Cukier, the Forum's lead facilitator for the day (see bio in [Appendix D](#)).



Opening remarks with YES Board President Doris Juergens

Dr. Cukier took a few minutes to discuss how the topic of advancing women in STEM has been widely researched and discussed for over 30 years now, but insufficient progress has been made. She pointed out the lack of action taken to truly impact the lives and progress of women. Over the course of her presentation, she drew particular attention to entrepreneurship, making space for women of colour, the imposter syndrome women face as they are unable to internalize their accomplishments and fear being exposed as a 'fraud', as well as the influence of society and organizational cultures (see [Appendix E](#) for full presentation).

Dr. Cukier then introduced the Forum's keynote speaker, Dr. Amy Pinchuk (see [Appendix D](#) for her full bio). Dr. Pinchuk's keynote address focused on her personal path to success within the STEM field. Success for her meant achieving her personal goals in terms of career, lifestyle and family, without compromising any one aspect for the other. Inspired by the 1970 Peggy Seeger song "I'm Gonna Be an Engineer," Dr. Pinchuk walked through the course of her career, from her education at McGill University, to her entrepreneurial success in launching InField Scientific Inc., and then her role as a working mother (see [Appendix F](#) for her full presentation).



From left to right: Iris Unger, Executive Director of YES Montreal; Doris Juergens, YES Board President; Dr. Wendy Cukier, Lead Facilitator; Dr. Amy Pinchuk, Keynote Speaker

Breakout Sessions



Breakout Session: Top-down systems of advancement and support

After the keynote speech ended, Dr. Cukier briefly instructed participants on the structure of the breakout sessions. Participants entered their assigned rooms to tackle one of the four key challenges with the aim of generating practical solutions for STEM companies. Although participants were focused on four different challenges, there was significant overlap with regard to the strategic recommendations that were proposed. Each of the challenges and their associated recommendations addressed the interconnected dilemmas of women's

retention and access to leadership within the STEM industry. Given the return on investments for companies to overcome these challenges, the second report presented herein (see page 6 below) captures the recurrent strategic recommendations (1-28) put forward by Forum participants for STEM companies to implement in their local settings.

Forum Wrap-up: A Successful Event

Upon the conclusion of the breakout sessions, Dr. Cukier wrapped up the Forum by providing a quick summary of the key recommendations that stood out to her, emphasizing the fact that success for women in STEM is defined in multiple ways. She then kicked off the cocktail reception by making the observation that after attending dozens of similar events, she was very impressed by the high level of participant engagement and quality of the discussions at the forum.



Women in STEM Advisory Committee Members, YES Board & Staff Members, and other participants at Community Leaders Forum



Post-Forum Evaluation

In order to determine which aspects of the Forum were best received, all participants were sent a post-forum evaluation survey via an email link. The survey was used to assess participants' levels of satisfaction and engagement with the event. The following results were compiled from the sample of 18 responses received.

Response to the Forum, overall, was highly positive:

- 83% of respondents were very satisfied and 17% somewhat satisfied.
- 72% were also very satisfied with the breakout sessions, with 17% somewhat satisfied.
- 72% of respondents were very satisfied with the content presented by the speakers and 17% somewhat satisfied.

The majority of respondents felt that the Forum helped them in terms of generating new ideas (39% strongly agreed and 50% agreed). The vast majority of respondents also intended to share the lessons learned at the Forum with their networks and colleagues (44% agreed strongly and 50% agreed). Similarly, most respondents aimed to have the recommendations and solutions implemented at their workplace: 29% strongly agreed and 47% agreed. Respondents also found the event to be highly beneficial in establishing new contacts, with 56% strongly agreeing and 33% agreeing.

It was also encouraging to see that an overwhelming majority of respondents (94%) were interested in engaging further with the *Advancing Women in STEM* initiative. A few additional comments that were shared regarding the forum include:

"We need more of these [Forums] and a follow up (like in one year) from people who have implemented ideas and [learned from] their experiences, outcomes etc."

"Wonderful initiative, extremely well organized. It was refreshing to see so many smart and motivated individuals working together to tackle this issue! Congrats!!"

"Great forum and great organization. I appreciate the 'formule' with the workshop and cocktail."

See [Appendix G](#) for a full break down of survey results.

The success of the event was also showcased in the Montreal Gazette on February 14, 2018. Cindy Fagen, a member of the project advisory committee, shared her thoughts with the Gazette on the actions needed to keep women in STEM careers (see [Appendix H](#) for full article).



Part II: Strategic Recommendations Report

Overview

The following set of recommendations were provided by participants at the Advancing Women in STEM Community Leaders Form on January 29, 2018. The recommendations are grouped by several recurrent themes that emerged from the discussions, which include the following: (1) get girls interested in the STEM field; (2) implement hiring strategies that increase the likelihood of women landing the job; (3) guarantee wage parity; (4) encourage the maintenance of a healthy work-life balance; (5) develop a corporate structure that supports women; (6) ensure women have individuals within the company to support them; (7) champion the professional development of women; and (8) conduct evaluations in a way that is mindful of the diversity and inclusion of women. Participants also identified a number of external resources to share with employers and women in the STEM industry. From this comprehensive set of recommendations will follow a more concise list for STEM companies to adopt and implement in local settings (*report forthcoming*).

Get girls interested in the STEM field

1. *Socializing girls.* The perception of STEM as “something that only boys do” must change. From a young age, parents and teachers need to expose girls to STEM and demonstrate that they too can be interested in science and technology. Girls need to feel confident in their abilities and parents and teachers should encourage them to participate in the STEM field at an early age.



RESOURCE: *GIRLsmarts4tech*. Sponsored by SAP Vancouver, this one-day workshop at the University of British Columbia is built for girls in grade 6 and 7 to provide them with hands-on coaching through basic programming, design thinking, cyber security, HTML and design, social gaming, computer hardware, as well as user experience and user interface. Visit <http://www.cs.ubc.ca/girlsmarts4tech/index.html> for full details. Parent seminars were also held as part of this program so they could learn about the importance of role models and encourage their children, particularly daughters, to be interested in the STEM field.

2. *Companies can outreach to girls in high school.* At the secondary school level, companies should reach out to teachers and girls to educate them about career opportunities in the STEM field. A 2016 STEM professional learning program by the Toronto District School Board sheds light on the fact that educators are unaware of how to learn more about STEM



careers. The program also highlighted the extremely limited teaching activities involving cooperative opportunities with businesses, site visits and robotics.¹ Accordingly, companies can attend science, career and university fairs to share the types of job opportunities and projects available within the STEM field. Additional events can also be held where students and the community at large listen to presentations by female role models so as to learn about different companies and the contributions of women to STEM.

3. *Companies can encourage female enrollment in STEM university programs.* In Canada, women are less likely than men to pursue studies in a STEM program at the post-secondary level. The 2011 National Household Survey (NHS) demonstrates that 40 percent of men who went to university opted for a STEM program, compared to only 20 percent of women. Even when women excel academically in the maths and sciences, they are still less likely to pursue an education in STEM relative to men. Only 23 percent of women in the top three categories (out of six) of the Programme for International Student Assessment (PISA) chose a STEM program, compared with 39 percent of men in the three lowest categories of scores.² To overcome this challenge, companies can work with universities in their area as they recruit students into their programs, demonstrating placement potential in industries such as coding, programming, gaming and technical fields as well. Non-traditional STEM jobs should also be showcased to recruits, particularly those future roles that will need to be filled by the time these females graduate. Companies can also use their connections to recruit female talent from universities upon their graduation, particularly at campuses that have higher than average female representation in their STEM programs. In this way, companies can meet their own corporate targets for female hires.



RESOURCE: *CAE Community Social Responsibility*. CAE collaborates with over 15 Canadian universities and colleges while also supporting numerous educational initiatives to develop excellence and interest among young people in science, technology and engineering. CAE provides scholarships to science and technology students at various educational institutions and supports women in engineering programs at Canadian engineering faculties to promote and advance women in science and

¹ Sinay, E., Jaipal-Jamani, K., Nahornick, A., & Douglin, M. (2016). "STEM teaching and learning in the Toronto District School Board: Towards a strong theoretical foundation and scaling up from initial implementation of the K-12 STEM strategy." *Research Series I*. (Research Report No. 15/16-16) Toronto: Toronto District School Board.

<http://www.tdsb.on.ca/Portals/research/docs/reports/TDSBSTEMStrategyResearchRpt1.pdf>.

² Hango, D. (2013). "Gender differences in science, technology, engineering, mathematics and computer science (STEM) programs at university." *Insights on Canadian Society*. Statistics Canada Catalogue no. 75-006-X.

<https://www.statcan.gc.ca/pub/75-006-x/2013001/article/11874-eng.htm>.



engineering. CAE also sponsors Kids Code Jeunesse and the FIRST Robotics program. Go to <http://www.cae.com/about-cae/social-responsibility/community/> to learn more.



RESOURCE: *Ubisoft's CODEX*. This is a group of initiatives undertaken by Ubisoft Montreal to target all levels of education, encouraging young people to think of video games as a source of motivation and as a learning engine. Ubisoft Montreal works with 20 partners in education (including universities) and has 17 different initiatives that encourage and stimulate young people's love of learning by building on video games' assets. One initiative is pairing young women up with mentors to see them through school. This touches on CODEX's objective to promote diversity in various science and technology fields. Visit <http://montreal.ubisoft.com/en/codex-program/> to find out more.



RESOURCE: *Job Futures Quebec*. With data from Service Canada, this website provides information on occupations and how they are evolving in Québec. However, data tends to be dated (by 5 years), with updates required to the tools and national occupation classification as well. See <https://www.jobbank.gc.ca/content/pieces-eng.do?cid=10813>.

Implement hiring strategies that increase the likelihood of women landing the job

4. *Companies can recruit via women's networks.* With women representing just 23 percent of all full-time STEM positions,³ companies need to actively seek out female talent. Women's networks are an effective way to do so as job openings can be shared through women's groups, conferences and newsletters to increase the number of female applicants. Local MEETUP groups are a good place to start. There are also benefits in peer-to-peer networking for women as internal references via personal networks are an efficient way to fill positions.
5. *Companies can recruit internationally.* Canada's immigration system can allow for express entry to fast track women in STEM from other countries under Canada's current Global Skills Strategy.⁴ Targeting women in certain countries where the STEM field is rapidly evolving such as Iran, India and China can be beneficial and could assist women when it comes to attaining visas.



RESOURCE: *Tech Ladies Job Board*. This is a worldwide community with 20,000 members. It connects women with the best opportunities in tech and companies benefit from the best techmakers. Go to <https://www.hiretechladies.com/> to find out more.

³ Caranci, B., Judge, K., & Kobela, O. (2017). "Women and STEM: Bridging the Divide." *TD Economics*. <https://economics.td.com/domains/economics.td.com/documents/reports/bc/wistem/Women-and-STEM.pdf>.

⁴ Government of Canada. (2017). *Global Skills Strategy*. <https://www.canada.ca/en/employment-social-development/campaigns/global-skills-strategy.html>.

6. *Companies can ensure that job descriptions attract female applicants.* Language and vocabulary in job postings influence the type of individuals who apply to a position. Women are much more likely to apply to positions with the word 'assistant' in the job title as opposed to 'director.' STEM companies can thus remove job titles from job descriptions and share them during the interview phase. Additionally, most women do not apply for positions unless they have 100 percent of the desired skills despite the fact they may have several transferable skills, while men have a tendency to apply even if they only have 20 percent of these skills. Companies must then ensure job descriptions state that equivalent experience is also considered. Referencing strong on-boarding strategies with quotas, objectives and goals would also be more attractive to women.



RESOURCE: *Textio*. Textio is a writing platform that creates highly effective job listings. The program predicts the performance of the job listing and provides real-time guidance on how to improve it. One impressive feature of this tool is its 'tone meter,' designed to help employers understand whether the overall tone of the posting is likely to attract more women or men when compared to the industry average for similar postings. Content that is neutral in tone is more likely recruit the most diverse pool for candidates. This program can also rate companies' social media and communication platforms to ensure gender neutral language is being utilized. For more information on the tool, visit <https://textio.com/>.

7. *Companies can actively try to reduce hiring biases.* This can be done by transforming how applicants apply to positions, either by using a standardized form or by simply removing any identifying factors (e.g., applicant name and sex) from CVs and resumes. STEM companies need to also ensure that women are represented on the hiring committee.
8. *Companies can employ affirmative action hiring practices for women.* Resumes can be reviewed with the intention of hiring a woman from the highest to lowest level positions within a company. STEM companies can attempt to meet a pre-determined quota for the number of female interviewees for a position, ideally 50/50 for men and women. Women of colour must also be considered within this quota. Interview questions must assess both technical as well behavioural skills, the latter of which women have a higher rate of excelling at relative to men. SAP currently has a directive that when an internal position opens up, both a male and female candidate must be considered. Quotas however may be ineffective if there are no suitable candidates for the selection, which should always be based on merit.



Guarantee wage parity

9. *Companies can enforce specific parity pay scales.* Although in Canada women earn higher wages within STEM occupations relative to most other fields, they still earn less than men after controlling for education, experience, geographic location and other factors.⁵ Consequently, salaries from the time of hiring must be based on a predefined set of standards. Determining algorithms in line with a job family matrix (see below) is one way to ensure equal pay scales among men and women.
10. *Companies can ensure salary transparency among its employees.* While company salaries are available on government databases and glassdoor.com, this is fairly limiting for start-ups and small businesses. The data also has a tendency not to be entirely accurate. This can be resolved by enforcing wage transparency between men and women in similar positions within STEM companies. Equitable salary ranges (with a minimum, median and maximum) can also be shared in internal and external job postings.
11. *Companies can hold or send employees to workshops to learn how to negotiate salaries and promotions.* Research indicates that women are 25 percent less likely than men to ask for a particular amount the last time they negotiated their salary. Women also generally do not have a salary request at the time of hiring, whereas men usually come with dollar amounts.⁶ This is amplified for women of colour, as they are more likely to be unaware of how to ask for fair compensation. STEM companies should train employees on how to approach this at the time of applying for jobs and requesting/receiving promotions. This type of training would help women self-promote and self-advocate. Training provided should encourage women to request 20 percent more salary than they actually require during the negotiation.

Encourage the maintenance of a healthy work-life balance

12. *Companies can implement policies to ensure the retention of employees after parental leave.* A lot can be done by STEM companies to differentiate themselves from others in terms of work-life balance for their employees. They can demonstrate that their office environments are family friendly and that employees who raise families are supported. Companies can establish parental leave strategies and share them with new recruits at the time of hiring, particularly to young women to show that the company supports their personal life. Men must also be encouraged to take paternity leave.

⁵ Caranci, B. et al, 2017.

⁶ McKinsey & Company, & LeanIn.org. (2017). *Women in the Workplace*. <https://womenintheworkplace.com/>.



RESOURCE: *SAP's 'Stay in Touch' program*. This program is a retention strategy for new parents. SAP ensures that when employees return to work after a sabbatical or parental leave, they do not feel behind on their work. The company tries to stay engaged with the employee as the manager assigns a single point of contact or a 'buddy' within their team. Women who themselves have experienced career breaks for personal reasons are often chosen to play the role of a buddy, staying in touch with the absent employee on a regular basis, updating them on new developments at the workplace and addressing their concerns. This allows for the continuous nurturing of the relationship between the employee and company while they are away so they still feel part of group upon return. This program is available for any type of extended leave, including long term disability, and has had very positive results to date.

13. *Companies can provide flexibility in terms of work conditions*. Professional women for the most part take on greater responsibility at home despite having high expectations on the work front as well. As men move up the corporate ladder, they tend to have a partner to support them in their role outside the office. Only 38 percent of men in more senior roles have partners who work full-time, relative to 57 percent of women.⁷ STEM companies can provide additional support to career-oriented women by allowing for more flexible schedules in good faith which can include anything from reduced hours, working from home one or two days a week, being able to take time off for appointments and/or open vacation. Work-related social activities must also be flexible in terms of diversity and inclusivity, but most importantly scheduled at different times during the day to accommodate for women who may have family responsibilities after work.

14. *Companies can equip women with resources to resolve challenges in life as a working professional*. One way in doing so would be to provide a concierge service (be it a hotline or front desk service) to provide support for personal things, allowing more time and energy to be devoted to work.



RESOURCE: *Glee Factor*. This personal and professional development resource assists businesses who wish to improve their leadership ability by promoting happiness and establishing the perfect blend of work and life. Through talks, activities and tools, Glee Factor encourages growth by triggering conversation, connection and play. Go to <http://www.gleefactor.com/> to learn more.

⁷ McKinsey & Company, 2017.



Develop a corporate structure that supports women

15. *Companies can uphold corporate missions, mandates, objectives and philosophies that embrace diversity and inclusivity.* The business case for diversity has been made time and time again. Yet in the STEM field, the masculine culture and gender bias create a host of problems for women, leading many to leave the industry.⁸ This culture must evolve and support women, which all starts by the tone and language used to describe STEM companies. Instilling a philosophy and corporate culture of life-long learning within STEM companies can also be beneficial as it demonstrates a preparedness and willingness to invest in women and their professional growth. Putting women on high-visibility projects can showcase their value, keeping them motivated and engaged. Mindfulness with regards to visual representation must be considered as well, ensuring there is a diversity of women represented when showcasing the company. Employee portraits in a section of a company website is one humanizing way to highlight the benefits of the company from a different perspective that in turn empowers female staff.
16. *Companies can effectively apply their codes of conduct.* In several instances, company codes of conduct exist but are unfamiliar to employees and rarely applied. Employing them can demonstrate positive corporate values and a women-friendly culture, both ensuring a human-centered approach and embracing diversity. All employees must be knowledgeable about the codes of conduct. This is particularly important when complaints arise, which often times get hushed. Therefore, codes of conduct must be comprehensive, transparent, applied and lived so that employees have the right tools when required. These codes need to also outline expectations and consequences. Creating safe spaces for employees to come forward in instances of sexual harassment must also be of highest importance to companies as there must be zero tolerance for this type of behaviour. It should be noted though that company codes of conduct are different from legal codes of conduct.
17. *Companies can develop useful human resource approaches.* Given that a mere 34 percent of women indicate that disrespectful behavior towards females is quickly addressed in their company⁹, stronger and more efficient human resource approaches can be developed within STEM companies. Human resources personnel must be systematically trained to address and resolve complaints regarding diversity and inclusion. They must know how to deal with reports of sexual harassment and address them appropriately. Alternatively, as opposed to

⁸ Gauthier, C. *Quebec Women in IT: Is the Situation Different?*
<https://salons.erudit.org/en/2017/10/23/quebec-women-in-it/>.

⁹ McKinsey & Company, 2017.



internal human resources, external assessments of formal complaints can provide the opportunity for neutral third-party assessments and remove bias from the process.

18. *Companies can strive for equal representation of women and men at the managerial level and higher.* Around 39% of companies in Canada have no women directors and 38% have no female executive officers.¹⁰ With less than a third of companies setting gender targets for representation¹¹, quotas must be set to attain equal representation within the higher levels of STEM companies. The perception of what it means to be a leader must be diverse and inclusive, changing the work culture and the type of role models seen within companies. Boards need to have equal representation as well since only 26 percent of open board positions are filled by women candidates.¹² Incentivizing departments and the highest level executives or providing government tax credits to achieve 50/50 gender parity at leadership levels are ways of achieving this. They also decrease the pressure put on women to challenge systemic norms.
19. *Companies can set-up a job family matrix.* This transparent matrix standardizes career progression within companies. It allows for succession planning, establishing pre-defined requirements, competencies and salaries at each position within a company from the entry level to executive. Equivalency for different types of experiences needs to fall within the criteria as well. Depending on the size and resources of a company, each department can have its own matrix so managers and employees know how to attain a promotion and track progress. Such a matrix within STEM companies removes biases, establishes a level playing field with equal opportunity and reassures women about their future within the company. IC Axon currently has a similar program set up by human resources.
20. *Companies can actively address unconscious bias.* Only 30 percent of women report that their managers regularly address gender-biased language and behavior when it happens in the workplace.¹³ One way of increasing these numbers is by hosting or sending STEM company leaders to seminars that address unconscious bias. These seminars can make leaders aware of their own biases and how they influence their daily work style, from hiring practices to providing feedback to employees. Emotional intelligence on part of leaders, the tendency to interrupt women and the notion that women have to compromise their feminine side to attain a leadership role must also be addressed in these seminars. By doing

¹⁰ Canadian Gender and Good Governance Alliance. *Directors Playbook*.

https://irp-cdn.multiscreensite.com/df49ced3/files/uploaded/CGGGA_Playbook_10.2017_EN.PDF.

¹¹ McKinsey & Company, 2017.

¹² Canadian Gender and Good Governance Alliance.

¹³ McKinsey & Company, 2017.



so, awareness of the types of images that are projected and openness towards diversity can be increased. Workshops on mindfulness and coaching are other ways to address unconscious biases people hold against women.



RESOURCE: *Deloitte's unconscious bias and diversity of thought initiative*. Deloitte currently has an awareness program on unconscious bias. Employees often learn about the biases they hold even when they think they are being fair through training, self-reflection and interactive group exercises. The program has received much positive feedback and will be employed systematically across Deloitte. To learn more, visit <https://www2.deloitte.com/ca/en/pages/human-capital/articles/inclusion-diversity.html>.

21. *Companies can establish diversity and inclusion committees*. Such committees can encourage and support women in STEM while raising awareness about diversity. Membership should be comprised of both men and women who are active and committed.



RESOURCE: *SAP Diversity & Inclusion*. SAP has a strong commitment to diversity and inclusion as part of its innovation strategy. SAP's chief diversity officer demonstrates that the company has a diversity agenda supported by upper management that not only includes gender, but is all encompassing. To find out more information, visit <https://www.sap.com/corporate/en/company/diversity.html>.

22. *Companies can have internal safe spaces for women to network informally*. Internal women's networks are another way to have built-in support for STEM women. These networks must be financially sustained by STEM companies and run and managed by both men and women. Employee work hours must be allocated towards the development and maintenance of such networks. These networks can organize various activities for female staff including breakfast meetings, case competitions, speed dating events, forums to learn how to balance personal life, as well as peer support groups for female leaders. These are all places where women can openly discuss their work and brainstorm with one another. Even in the hiring phase, if women are recruited in cohorts, they will have a built-in network to support one another. Whisper networks (a chain of information privately passed between people) outside the office must also be encouraged in order to give women an opportunity to talk about their grievances in a safe setting.



RESOURCE: *SAP's Business Women's Network*. This network aims to help women advance their careers by building strong networks in and out of SAP, share professional insights, develop technical and leadership skills and encourage visibility as women seize



opportunities to develop their career at SAP. An inclusive atmosphere is fostered for women through this network. See <https://blogs.sap.com/2016/12/13/sap-business-womens-network-who-we-are-and-what-we-do/> for full details.

Ensure women have individuals within the company to support them

23. *Companies can build sponsorship programs.* The likelihood of women attaining promotions increases when those in the higher ranks of a company advocate for them, giving them stretch assignments and advising them on how to advance. Women who receive this type of support and interact regularly with senior leaders are more likely to aspire to be a top executive.¹⁴ As a result, if STEM companies can ensure that their high-potential women have dedicated sponsors to advocate and open doors for them, they will move up in ranks. In addition to highlighting their achievements (which women tend to be weak at doing), sponsors can also encourage talent development among women and persuade them to apply for positions outside of their pool. The Bank of Montreal and SAP have programs like this with both men and women acting as sponsors. However, female sponsors are valuable in order to demonstrate that women can support and promote one another.
24. *Companies can encourage mentorship among its female employees.* This can be done by establishing company mandated mentorship programs for women. Mentors who have desirable skills to transfer can be assigned to female employees. These mentors must receive training and be made to feel confident that they can take on the role, particularly women. STEM companies must invest time and resources into the program and ensure that the expectations of mentees and mentors are well established. There must also be mentors at every level of leadership, including the executive level for high potential women. Companies need to encourage women to seek out external mentors as well so they can help in times of navigating the job application process, determine how to apply one experience from another and speak to recruiters. Mentors can come from different fields with varying experiences. Although it is not necessary for women to have female mentors, the same gender may be helpful in terms of understanding experiences and visions for success.

¹⁴ Ibid.



Champion the professional development of women

25. *Companies can assist women to reach their full potential through talent development programs.* Women in STEM tend to over-represent technical roles, with men occupying only 21 percent of these positions.¹⁵ Accordingly, companies must identify emerging female talent to ensure women attain leadership positions as well. Depending on the size of the company, a quota can be put in place for the number of women they would like to create new opportunities for, who could then be tracked regularly to see their progress. Internal training needs to be provided, which can include public speaking with peer reviews, guidance on how to run meetings, as well as lunch and learns. External training/education can also be encouraged, and at minimum, should be partially reimbursed by companies. Management training is also important as women have a more difficult time developing this skill set when compared to men. Women will be supported through such initiatives and then made responsible to lead projects in complex environments to determine how effective these programs have been. In turn, these females will have more confidence to self-promote, share their achievements and apply for higher positions. It must also be considered that not all women want to manage people, so technical/subject-matter training needs to be provided too, potentially leading to the role of Chief Technical Officer. Women tend to receive even less support in this regard relative to men when they wish to further develop their technical skills.



RESOURCE: *SAP's LEAP program.* SAP's Leadership Excellence Acceleration Program (LEAP) is a year-long journey for high-potential women who strive towards taking on more leadership opportunities. The program aims to develop women by providing them with a set of portable skills, showcasing their contribution to SAP, helping them achieve their career goals and enabling others to succeed. This development model covers various topics including self-awareness, career development and planning, network and branding, capability building and mentoring and sponsorship. To learn more, visit <https://news.sap.com/leap-into-your-career/>.



RESOURCE: *L'effet A.* This initiative aims to propel women's professional development, give them the courage to excel and take concrete action towards their career goals. L'effet A offers an extensive professional development program to both businesses and women designed to reveal women's talent. Their 100 Day Challenge provides a unique experience to strengthen confidence by pushing women outside their comfort zone and dispel the impostor syndrome, teaching women how to manage risk strategically with

¹⁵ Caranci, B. et al, 2017.



the right attitude and negotiation skills, as well as build a strong business network. Visit <https://effet-a.com/> to find out more.



RESOURCE: *Toastmasters*. With over 300,000 members worldwide, Toastmasters empowers individuals to gain self-confidence in becoming more effective communicators and leaders. Members can improve their speaking and leadership skills by regularly giving speeches, gaining feedback, leading teams and guiding others to achieve their goals in a supportive atmosphere. There are thousands of clubs worldwide, but to find out more about Montreal's chapter, go to <https://www.toastmasters.org/Find-a-Club/00009361-montreal-toastmasters-club>.

Conduct evaluations in a way that is mindful of the diversity/inclusion of women

26. *Companies can systematically evaluate employee performance.* Having standardized employee performance reviews at every level within a company is one way to ensure men and women are evaluated in the same way and equally considered for promotions. Employee evaluations in the STEM field must not only consider technical skills but interpersonal skills as well such as personal values and emotional intelligence (i.e., empathy, collaboration, communication). Women are more likely to perform better in the latter relative to men. These performance assessments can have reference points for the requirements needed to move up within the company, often coupled with a job family matrix. Given that only 39 percent of employees say their managers make sure a diversity of voices is represented in decision-making or prioritizes gender diversity,¹⁶ managers must also be evaluated. This can ensure accountability in their managing style and measure how well they promote diversity and the career goals of their employees. A spotlight can be placed on managers who perform well in an attempt to establish best practices. Employee performance evaluations can be completed on a quarterly basis with a tool as simple as Survey Monkey if the proper ground rules are established. The data generated can help identify high potential women who qualify for leadership positions or require additional support to get to this stage.



RESOURCE: *SAP Talk*. SAP has implemented a continuous performance conversation with on-going constructive feedback. Employees speak with their managers as frequently as they desire and managers continuously coach and develop their employees, discussing projects and career development. For more ambitious individuals, they can be prepared and speak to management any time they want and know how to move to the next level.

¹⁶ McKinsey & Company, 2017.



For more information, visit <https://assets.dm.ux.sap.com/previewhub/canada-digital-transformation/pdfs/jamie-aitken-saptalk-final-june-2017v2.pdf>.

27. *Companies can implement reverse mentorship programs.* In such programs, STEM company employees (ideally emerging talents) can be asked to mentor someone at that managerial or executive level, providing feedback on their leadership style within a safe and confidential environment. Ground rules must also be set with this though to ensure it is carried out in a constructive and thoughtful way. This allows for a different type of evaluation, one where older, more experienced employees can brainstorm, collaborate and view things from the perspective of younger employees. Feedback can be given on their approach to diversity and inclusion in an innovative and fresh way.
28. *Companies can evaluate the performance of their own departments.* When company leaders show a high commitment to gender diversity, employees are more committed themselves. However, only half of all employees place a high personal priority on the issue and men are much less committed than women.¹⁷ This of course impacts the performance of the departments employees work in. Therefore, departmental teams must also be evaluated as a whole so as to enhance support for women. These evaluations can have a section on diversity awareness and inclusion that assess whether male and female employees are treated equally within the team and determine if women are merely tokens, singled out or fail to receive credit for their work. STEM companies can measure this in multiple ways, be it through their enterprise resource planning system, key performance indicators, risk assessments or simple surveys via Survey Monkey.



RESOURCE: *Office Vibe*. This program monitors employee satisfaction in real-time, giving employees a way to express their feedback honestly and anonymously. This proactive approach allows for the transformation of issues into conversations and conversations into solutions before problems form. Office Vibe provides simple, visual weekly reports that identify issues specific to the workplace while pairing every identified issue with advice and strategies to overcome it. Visit <https://www.officevibe.com/> for full details.

¹⁷ Ibid.

Actively share useful external resources with women

In addition to the recommendations and solutions put forth above, Forum participants identified a number of additional tools and resources for women in the STEM industry (see below).

| Corporate | Website |
|---|--|
|  <p><i>Adopting Harkness discussions.</i> This is an approach, where conversations are held around a circular “Harkness Table.” Every person sitting at the table must then question, contribute and contemplate in order to learn and succeed. This encourages women to share in an open-minded environment with minimal intervention.</p> | <p>https://www.nido.cl/uploaded/Harkness-Learning-Principles-of-a-Real-American-Pedagogy.pdf</p> |
|  <p><i>B Corporation certification.</i> This is a global private certification issued to for-profit companies that receive a minimum score on an online social and environmental performance assessment. It is a five-point evaluation in which both wage parity and the number of women in executive positions are categories that contribute to the company’s evaluation. This assessment is very thorough and not only helps businesses identify areas that require improvement, but is a good model for start-up companies as well, particularly when incorporated as a strategic planning exercise.</p> | <p>https://www.bcorporation.net/</p> |
| Organization | Website |
|  <p><i>Montreal Girl Geeks.</i> This is a community that makes tech, skills and networking accessible to women of all age groups and backgrounds. They aim to inspire the next generation of girl geeks to get involved in tech, help women share and develop new skills and increase the visibility of females in tech.</p> | <p>http://montrealgirlgeeks.com/</p> |
|  <p><i>Girls in Tech.</i> This is a global non-profit focused on the engagement, education and empowerment of girls and women who are passionate about technology. A volunteer based organization with members around the world, Girls in Tech creates proprietary, innovative programming and strategic global partnerships.</p> | <p>https://girlsintech.org/</p> |

| Events | Website |
|---|--|
|  <p><i>Hackathon.IO.</i> This social networking site provides information about technology events, mainly hackathons such as the Capital One Hackathon, including information about their attendees, sponsor and projects.</p> | <p>http://www.hackathon.io/events</p> |
|  <p><i>Startupfest.</i> This is global gathering of the world's best entrepreneurs, founders, investors and mentors. It features world-class content across three days of keynotes and interactive sessions. This event provides exposure to those in the field, the ability to acquire new talent and connect with investors and different sectors of the industry.</p> | <p>http://www.startupfestival.com/</p> |
|  <p><i>Grace Hopper Celebration.</i> This is the world's largest gathering of women technologists, encouraging females to further their careers and transform the tech world. This annual celebration provides immense opportunity for women to be inspired by role models and develop mentoring relationships.</p> | <p>https://ghc.anitab.org/</p> |
| Media | Website |
|  <p><i>The Year Without Pants.</i> The author of this book Scott Berkun shares his success story about WordPress.com. The text reveals insights on creativity, productivity, and leadership and shares vital lessons about work culture and managing creativity.</p> | <p>http://scottberkun.com/yearwithoutpants/</p> |
|  <p><i>Sheryl Sandberg (Facebook COO). TED Talk: Why we have to few women leaders.</i> Women have made progress towards equality, but this is not reflected in leadership positions. Female heads of state, parliament members, and board positions are only 13-15%, and these have not improved over the past decade. They also need to make tougher decisions between work and lifestyle – with 2/3 of married men in leadership having children, compared to 1/3 of married women. Sheryl talks about what women can do to stay in the workforce and move towards leadership.</p> | <p>https://www.ted.com/talks/sheryl_sandberg_why_we_have_too_few_women_leaders</p> |



Appendix A: Advisory Committee Members

| | |
|--------------------|---|
| Elisabeth Laett | President, Executive Director, Xaphan Group |
| Cindy Fagen | COO, SAP Labs Canada |
| Sophie Aladas | Strategic Development Manager, CAE |
| Cynthia Grahame | Director of Human Resources, IC Axon |
| Vanessa Cherenfant | Director of Sales and Partnerships, Officevibe - GSoft |
| Veronica Polisi | HR Manager, eSignLive |
| Doris Juergens | Vice-President, Strategy, NATIONAL Public Relations |
| Georgiana Laudi | Principal, georgianalaudi.com |
| Liesl Barrell | Co-founder, ThirdWunder & Executive Director, Montreal Girl Geeks |
| Marie Jasmin | UI Designer, Bethesda Game Studios |
| Mary-Anne Carignan | Co-President, Purkinje Inc. |
| Nancy Cleman | Partner at Lapointe Rosenstein Marchand Melançon |
| Alyson McPhee | Communications Consultant |
| Stephanie Saretsky | Committee Member |
| Cassie Rheaume | Chapter Lead & Teen Code Club Organizer, Ladies Learning Code |



Appendix B: List of Session Facilitators & Note-Takers

The STEM Industry Environment (1)

- Facilitator: Celine Cooper
- ACS note-taker: Melissa Bendayan
- YES note-taker: Kurt Houghton

The STEM Industry Environment (2)

- Facilitator: Liesl Barrell
- ACS note-taker: Tanvi Kadukar
- YES note-taker: Mariana Stabile

The Path to Leadership (1)

- Facilitator: Alyson McPhee
- ACS note-taker: Romy Jedwab
- YES note-taker: Marie-Michele Fillion

The Path to Leadership (2)

- Facilitator: Vanessa Cherenfant
- ACS note-taker: Ashley Manuel
- YES note-taker: Fernanda Amaro

Conscious & Unconscious Bias against Women in STEM

- Facilitator: Elisabeth Laett
- ACS note-take: Paul Holley
- YES note-taker: Elizabeth Araujo

Top-down Systems of Advancement & Support

- Facilitator: Cindy Fagen
- ACS note-taker: Alice Chan
- YES note-taker: Meghan Drennan



Appendix C: Forum Agenda

| | |
|----------------|--|
| 2:30 – 3:00 PM | Registration |
| 3:00 – 3:05 PM | Welcoming remarks, Doris Juergens, President, YES Board of Directors, Elisabeth Laett, |
| 3:05 – 3:15 PM | Remarks and keynote speaker introduction, Dr. Wendy Cukier |
| 3:15 – 3:30 PM | Keynote speech, Dr. Amy Pinchuk |
| 3:30 – 4:30 PM | Sessions commence <ul style="list-style-type: none"> • The STEM industry environment • Conscious and unconscious bias against women in STEM • The path to leadership • Top-down systems of advancement and support |
| 4:30 – 4:45 PM | Break |
| 4:45 – 5:45 PM | Sessions resume <ul style="list-style-type: none"> • The STEM industry environment • Conscious and unconscious bias against women in STEM • The path to leadership • Top-down systems of advancement and support |
| 5:45 – 6:00 PM | Recommendations summary and closing remarks, Dr. Wendy Cukier |
| 6:00 – 7:00 PM | Cocktails and networking |



Appendix D: Speaker Bios

Lead Facilitator: Dr. Wendy Cukier

MA, MBA, PhD, DU (HC), LLD (HC), MSC

Dr. Wendy Cukier is one of Canada's leading experts in disruptive technologies, innovation processes and diversity. She has written more than 200 papers on technology, innovation and management and is coauthor of the bestseller "Innovation Nation: Canadian Leadership from Java to Jurassic Park." She is the Founder of Ryerson University's Diversity Institute, which she founded in 1999 and has led projects aimed at promoting the participation and advancement of underrepresented groups.

Dr. Cukier has assisted organizations in becoming more inclusive through innovative programs such as DiversityLeads funded by the Social Sciences and Humanities Research Council, which tracks the progress, impediments and evidenced-based strategies for promoting diversity in organizations.

Dr. Cukier spearheaded Ryerson's social innovation strategy to help engage faculty and students from across the university in all disciplines in the innovation agenda. This included leading the bid to become Canada's first Ashoka Changemaker Campus. She also created innovative programs to support student learning, experiential learning and applied research (iSTEM, ADaPT, Summer Company, RECODE, RBC) with particular focus on leveling the playing field between Science, Technology, Engineering and Math (STEM), and Social Science and Humanities (SSH) funding and opportunities.

Previously, Dr. Cukier was the first Associate Dean of the Ted Rogers School of Management, leading the development of new MBA programs, dramatically expanding research activities, and gaining accreditation by the Association for the Advancement of Collegiate Schools of Business. She continues to teach and mentor students in several programs at Ryerson University. She was also named one of the University of Toronto's 100 Alumni Who Shaped the Century, was selected in 2013 as one of Canada's Top 25 Women of Influence and in 2010 was selected as one of 25 Transformational Canadians by The Globe and Mail, La Presse and CTV. More recently, she received the Black Business Professional Association's Harry Jerome Diversity Award, and in November of 2016, became a Fellow of the Canadian Geographic Society.



Keynote: Dr. Amy Pinchuk

Founder & President of InField Scientific Inc.

InField specializes in electromagnetic compatibility and interference (EMC/EMI), electromagnetic environmental effects (E3), Radiation Hazards (RADHAZ), and computational electromagnetic analysis. For the past twenty years, the company's primary focus has been electromagnetic analysis, EMI troubleshooting, and testing of military shipboard environments primarily as a subcontractor to major defence companies, for the Royal Canadian Navy and for the New Zealand Royal Navy.

For a number of years, Dr. Pinchuk taught short courses on EMC/EMI/E3 and computational electromagnetics to civilian and military audiences of all levels. She has also taught a Software Engineering course at McGill University. She received her Ph. D. (1988), M. Eng. (1985) and B. Eng. (1983) from McGill University under the supervision of Dr. Peter Silvester. She was a visiting scholar at Cambridge University in England (1985).

Dr. Pinchuk has served on the organizing committee of many International IEEE EMC Symposiums and is a founder and Chair of the IEEE EMC Symposium Youth Technical Program. She was also a member of the IEEE EMC Society Board of Directors, was the Canadian Chair for URSI Section B, is the current IEEE Montreal Section Chair and Chair of the Montreal IEEE EMC Chapter, and is also the author of several children's books which focus on engineering for youngsters.



Appendix E: Dr. Wendy Cukier's Presentation

A graphic on a purple background showing a glowing lightbulb inside a thought bubble. The thought bubble is drawn with a white, chalk-like outline and is connected to other faint outlines of circles and lines, suggesting a process of thinking or innovation.

Advancing women in STEM: Words into Action

Wendy Cukier, MA, MBA, PhD, DU (hon) LLD (hon) M.S.C.
Director, Diversity Institute
wcukier@Ryerson.ca
January 29, 2018

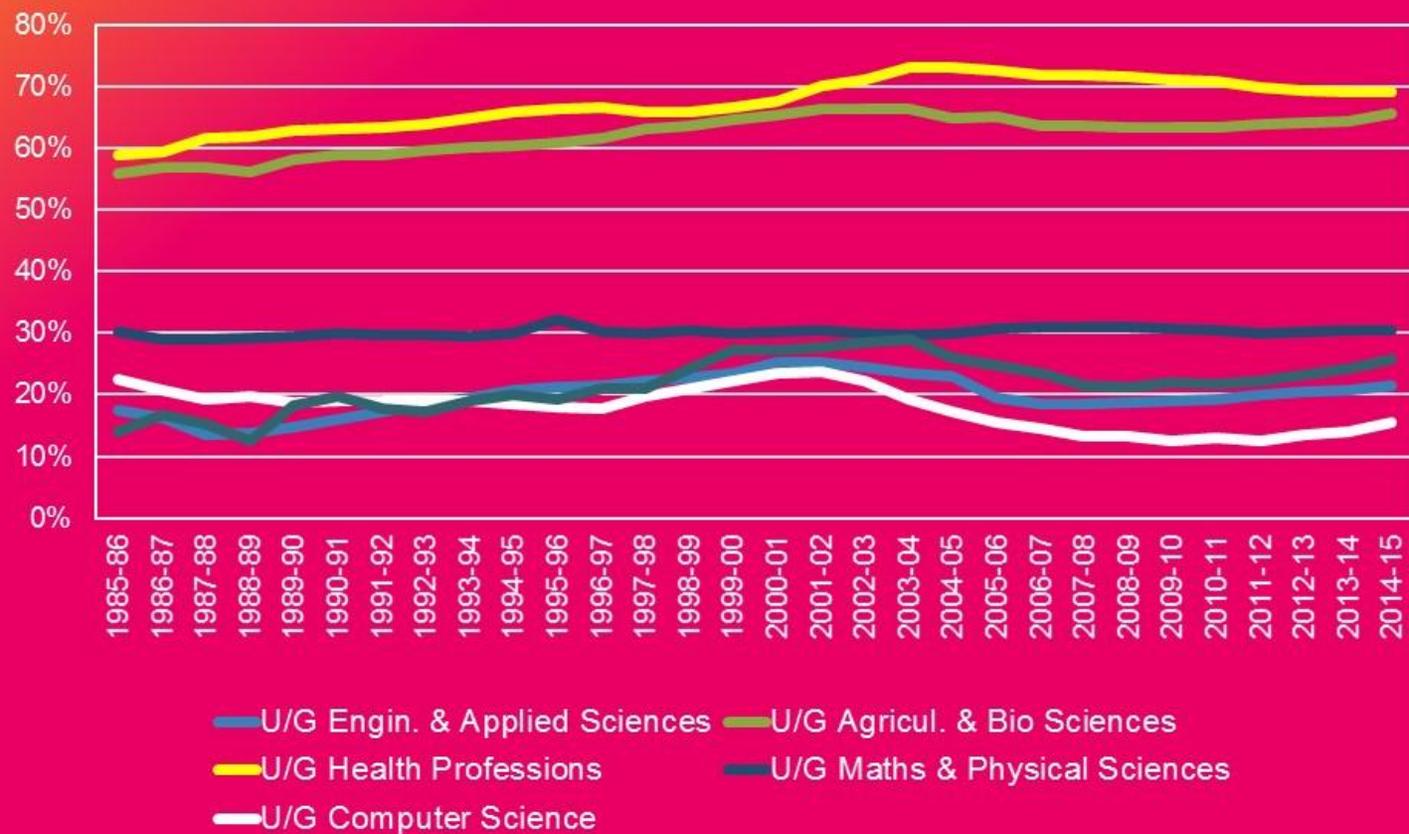
CONTEXT

- STEM is tied to Canada's innovation agenda, social and economic development, and global competitiveness
- Women are still under-represented in STEM disciplines
- Diversity amplifies barriers
- In spite of more than years of activism following the "More than Just Numbers Report", there has little change in the proportion of women in engineering and women in science
- Diversity is closely tied to innovation

What is wrong with this picture?



Women as a Percentage of STEM Discipline Enrolment (Ontario Universities) (1985-2015)



Observations

% of women in engineering is flat: 19.1% female

% of women in computer science has declined: 14% female

Variation by school

- High: Queens (29%)
- Low: UOIT (6.8%)
- Highest growth (2010-2015): UQAM 10.6- 19.1%

The issue is not the pool or quality

Variation by discipline

- Highest: biosystems and environmental engineering have highest proportion of women (40.3% and 41.3%)
- High: chemical and industrial (35%)
- Low: aerospace (<15%) mechanical (10%)

Therefore the issue is NOT ability

Variation by country:

- .30 in Portugal versus .05 in Canada of female population have PhDs in NSE

Gender Breakdown in STEM Sector - Montreal

| Major field of study - 2011 | Total | Male | Female | % Female |
|---|------------------|----------------|----------------|------------|
| No postsecondary | 425,735 | 234,780 | 190,955 | 45% |
| STEM fields of study | 238,660 | 180,115 | 58,545 | 25% |
| Science | 49,835 | 27,130 | 22,710 | 46% |
| Technology, except engineering technology | 5,710 | 3,470 | 2,240 | 39% |
| Engineering and engineering technology | 116,755 | 100,485 | 16,265 | 14% |
| Mathematics and computer sciences | 66,360 | 49,025 | 17,335 | 26% |
| Other fields of study (Non- STEM) | 934,205 | 411,890 | 522,315 | 56% |
| Employed Total | 1,598,600 | 826,785 | 771,820 | 48% |

STEM Workers Léger Marketing Survey

| | % Agree Women | % Agree Men |
|---|---------------|-------------|
| I am satisfied with my job | 84% | 81% |
| My past work experience and/or job skills are useful in my present job | 90% | 85% |
| My place of employment offers good opportunities for family life | 63% | 65% |
| My specific area of education and training were essential to my current job | 65% | 58% |
| I had training to improve my job skills, either at my workplace or somewhere else | 58% | 55% |
| I get along well with colleagues at my place of work | 95% | 88% |
| I network (build a social network to achieve goals) effectively at my place of work | 58% | 55% |

Women in Entrepreneurship

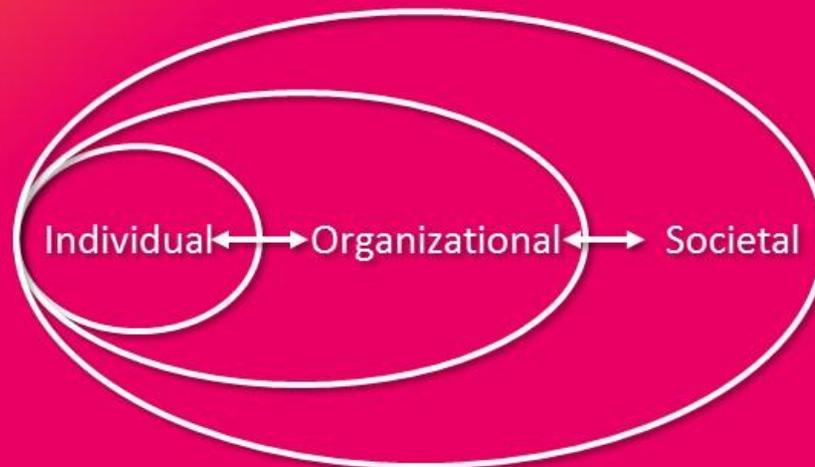
- 💡 A substantial proportion of entrepreneurs are female
- 💡 Women retain majority ownership in 17% of SMEs; only 7% of majority female-owned firms employ more than 99 employees
- 💡 Issues compound with intersectionality
- 💡 Female led entrepreneurial ventures are less likely to get government contracts
- 💡 Female entrepreneurs face systemic barriers, unconscious bias gendered stereotypes and discrimination
- 💡 Limited representation of diverse women on decision-making boards and committees
- 💡 Need gender conscious policy, performance measurement, and resource allocation due to *“the multiplicative effects of gender inequality at the intersection of institutions: university, government, and private sector.”* (Rowe, 2017)

DIVERSITY AND INNOVATION

DIVERSITY/
INCLUSION → INNOVATION

DIVERSITY/
INCLUSION ↔ INNOVATION

ECOLOGICAL APPROACH



Barriers/Drivers and Interventions at each level and between levels

Environment: eg. Socialization of Girls



The confidence gap starts as early as primary school.

Grade 3 girls less likely to say that they are good at math

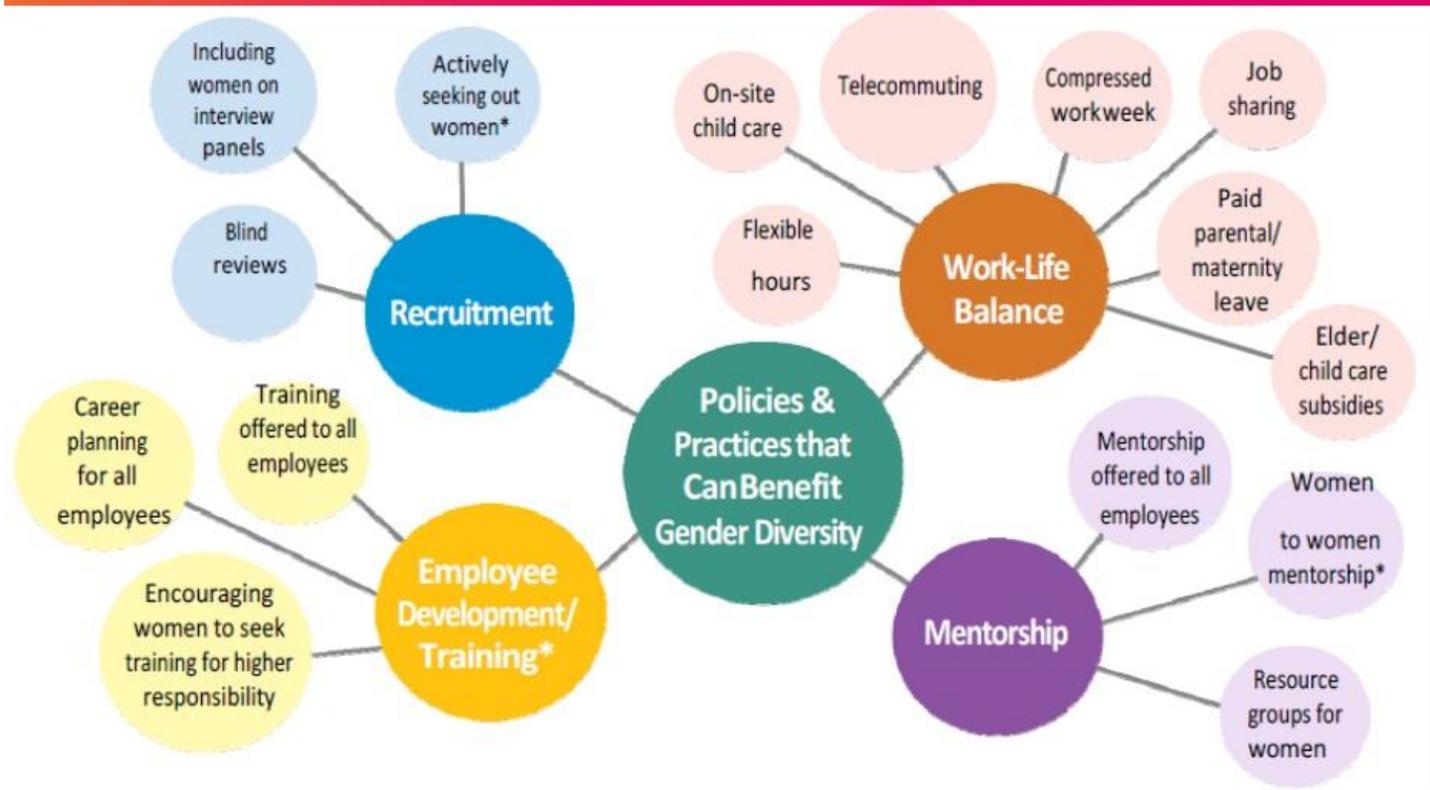
Women tend to drop math in grade **10** and more so after grade **12** reducing career options

Policies, gendered stereotypes, stereotype threats, media representation

Organizational Issues

- 💡 STEM Workers report high levels of job satisfaction, but barriers to advancement.
- 💡 Conscious and unconscious bias
- 💡 Chilly climate
- 💡 Wage gaps
- 💡 Lack of coaching, networking, mentorship.
- 💡 Glass ceilings and glass cliffs
- 💡 Comprehensive diversity and inclusion strategies include metrics, leadership and accountability

Organizational Issues





Alternative Narratives: YES, we can!





thank you

DiVERSITY
INSTITUTE

CONTACT

Diversity Institute
Ted Rogers School of Management
Ryerson University

<http://www.ryerson.ca/diversity>
diversityinstitute@ryerson.ca
416-979-5000 ext. 7268



Appendix F: Dr. Amy Pinchuk's Presentation

Forum on Advancing Women in STEM

ACS & YES

Amy Pinchuk
InField Scientific Inc.
Pointe-Claire, Quebec



© InField Scientific Inc., 2018



I'm Gonna Be An Engineer



Peggy Seeger (1970): I'm Gonna Be An Engineer
From the album: Different Therefore Equal
*When I went to school I learned to write and how to read
Some history, geography and home economy...
And then they had the nerve to ask, "What would you like to be?",
I says I wanna be an engineer*

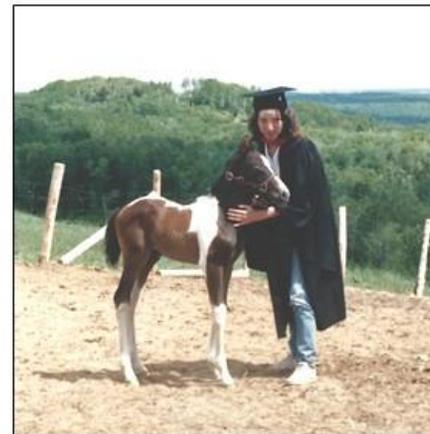
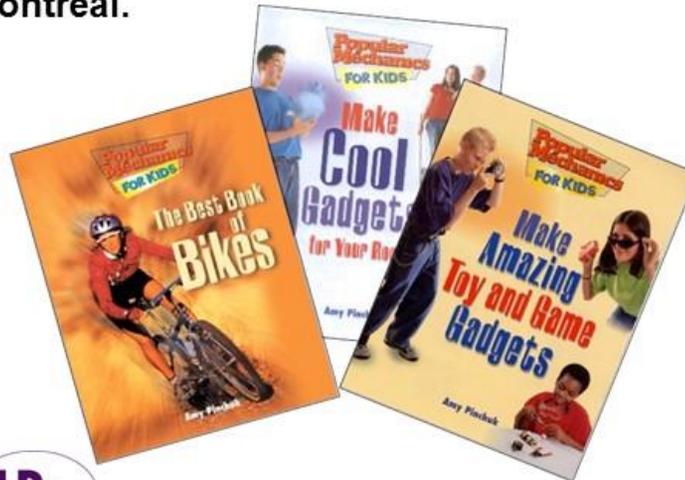
InField Scientific Inc. & IEEE & Me



President of InField Scientific Inc. founded in 1994, Pointe-Claire, Quebec. Niche technical company: Shipboard Electromagnetic Environmental Effects (E3).

Montreal IEEE Section Chair (Institute of Electrical and Electronic Engineers) IEEE largest professional group in the world, almost 500,000 members worldwide. Also an **Iron Ring Warden**.

Me: **Mother** of four (all in, or graduated university). **Author** of three “STEM” books (out of print). Live on a small ferme outside of Montreal.





No Obstructions



Firing Arcs



Coverage & EMI



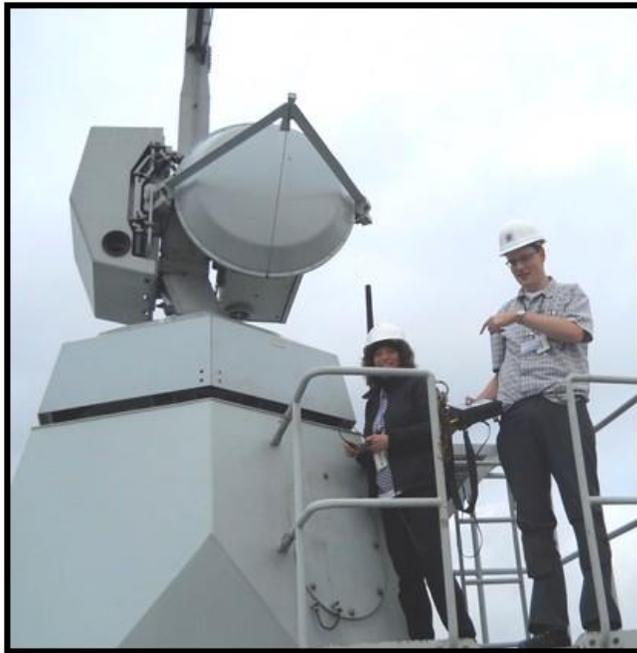
Safety
RADHAZ

Avoid electromagnetic interference (EMI)

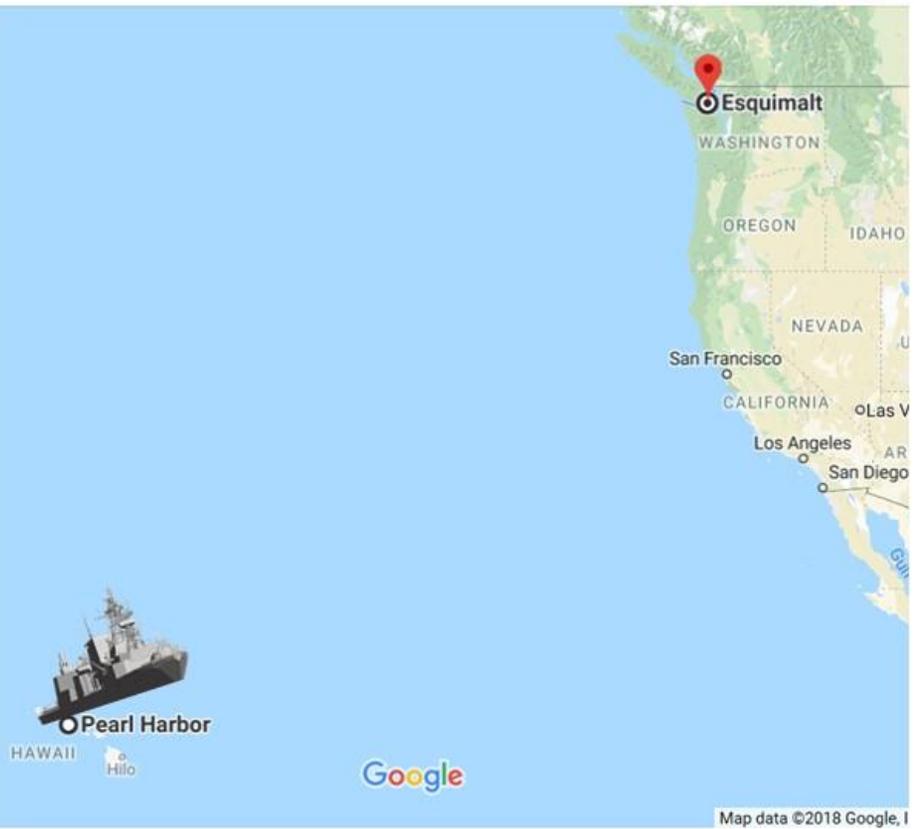
Simulation, Modeling & Analysis



E3 Troubleshooting, Tests and Trials



7 Day Sea Trial from Pearl Harbour to Esquimalt



Peggy Seeger, I'm
Gonna Be an Engineer:
*The duty isn't yours, for
to try and run the world
...Remember, dear, that
you're a girl*

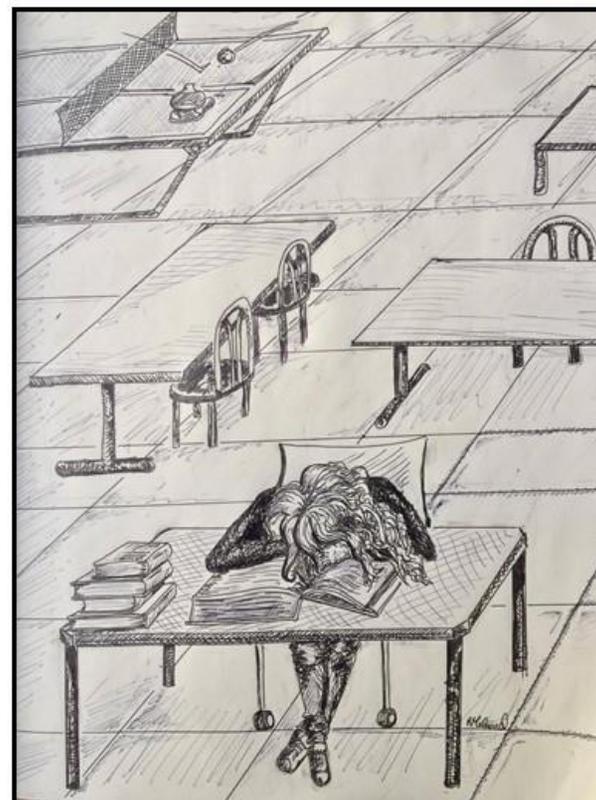


Why Start InField?

- I saw an **opportunity** with the Navy E3 Contract
- After **2 kids** I needed to be in control of my own **schedule**.
- The company did not have much room for my **growth** beyond what I was already doing.
- Do it **my way**.

Peggy Seeger, I'm Gonna Be an Engineer:

*...I'm a third-class citizen,
my wages tell me that
But I'm a first-class engineer*



Rachel Pinchuk Meland

Entrepreneur & Alternative Track



Most important qualities for a company to succeed in STEM (and certainly in other areas as well) is:

- Do good work
- Mutual respect

Alternative Track, rather than the **Fast Track**, was the best and most sustainable path to success.



Peggy Seeger, I'm Gonna Be an Engineer:

*... Every time I turn around there's something else to do
It's cook a meal or mend a sock or sweep a floor or two
...I was gonna be an engineer.*

Maternity Leave!



Amy's perception
Company's perception
Customer's perception



*Call Next inc.
about the report
review.*

Peggy Seeger, I'm Gonna Be an Engineer:
*...The morning that the twins were born, my Jimmy said to them,
Kids your mother WAS an Engineer!*

Assess the Situation



Peggy Seeger, I'm Gonna
Be an Engineer:

*...She's smart, for a
Woman, wonder how
she got that way?*



The Working Mom



Driver House-keeper

Baby Sitter Pet Minder

Activity Coordinator

School Meetings

Home Meals School Meals

Medical Emergency

House Maintenance

Homework Coordinator

Home IT Department (CTO)

**it also takes a
Full staff & CEO & CTO**



Policies of Change



I'm a woman in **STEM** doing **STEM**.
I love my career.

The goal of today's forum is to develop
policies to facilitate this path for **ALL** women.

THANK-YOU!

Thinking Different?



Thinking Differently?



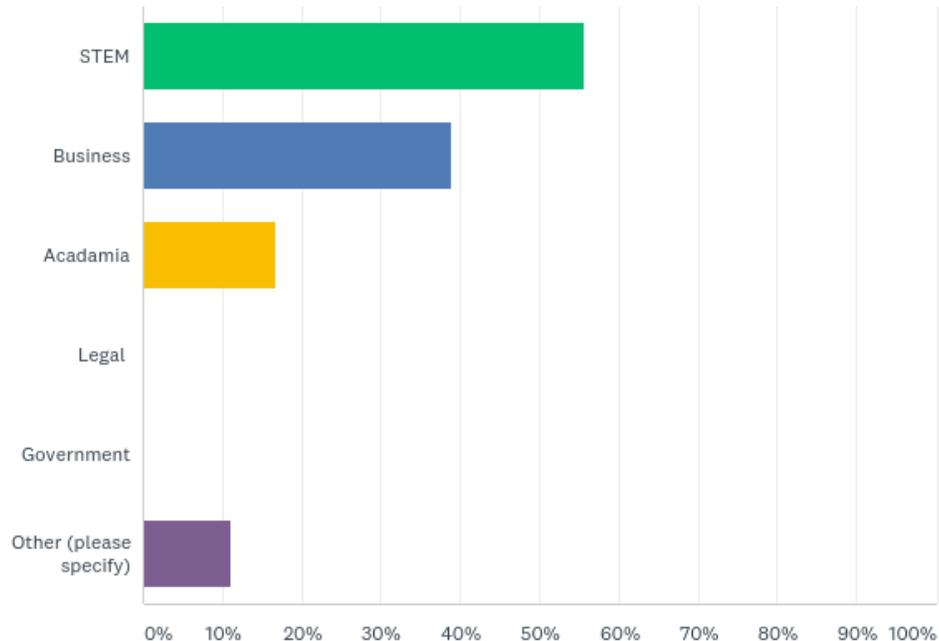
Looking Different?





Appendix G: Forum Evaluation

Q1: Please select your sector:

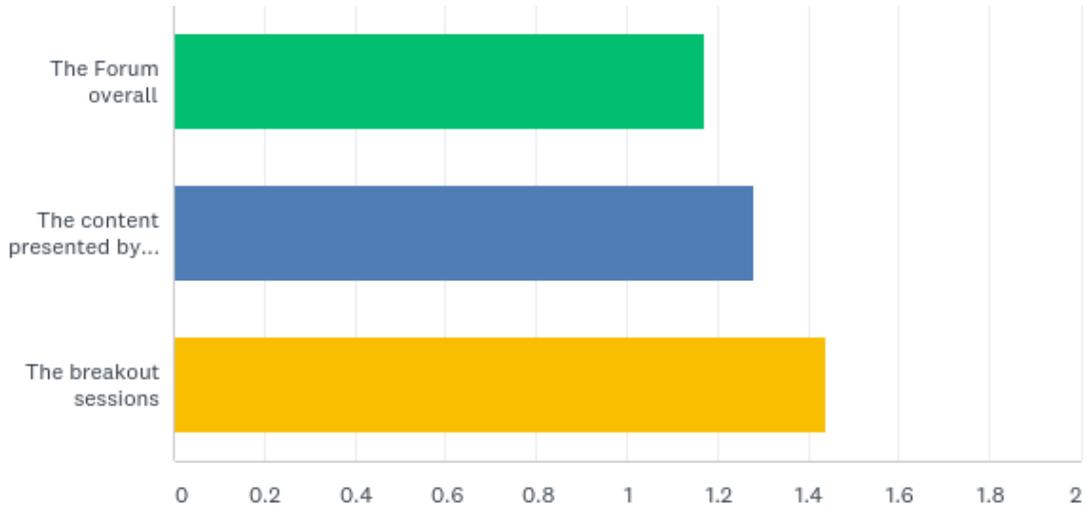


Q2: Please indicate your professional title

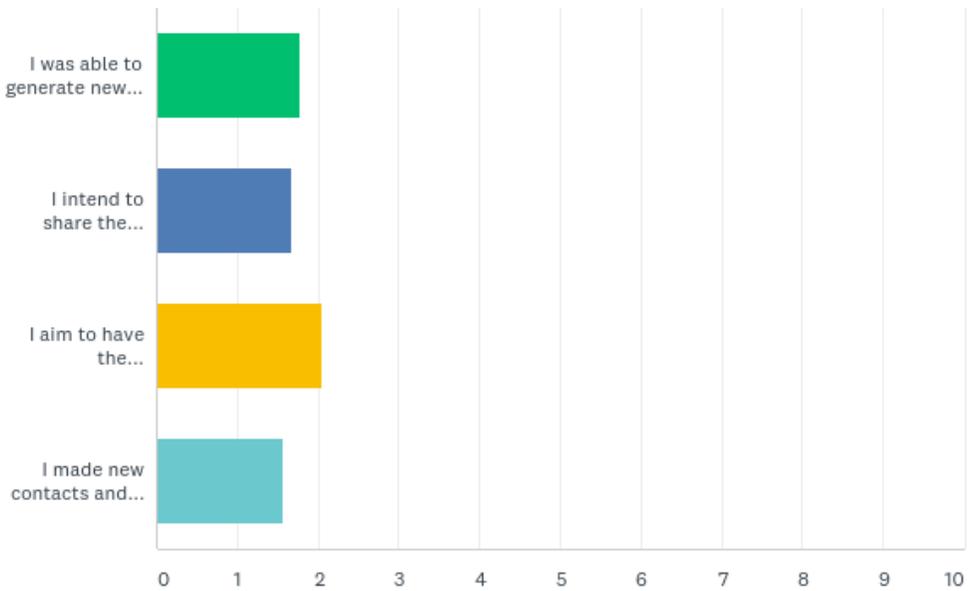
- Happiness Engineer
- Senior Director of Human Resources
- Columnist, Montreal Gazette
- Chapter Lead/ Agente de développement
- Director, Industry Solutions
- CEO
- President
- Creative Director
- Independent Consultant
- Director of Content
- Consultant
- Senior Data Scientist
- Founder of URelles
- Manager
- Founder/Entrepreneur
- Director R&D
- Agency Partner



Q3: How satisfied were you with each of the following (1 being very satisfied)?



Q4: Please rate the extent to which you agree or disagree with the following statements (1 being strongly agree)

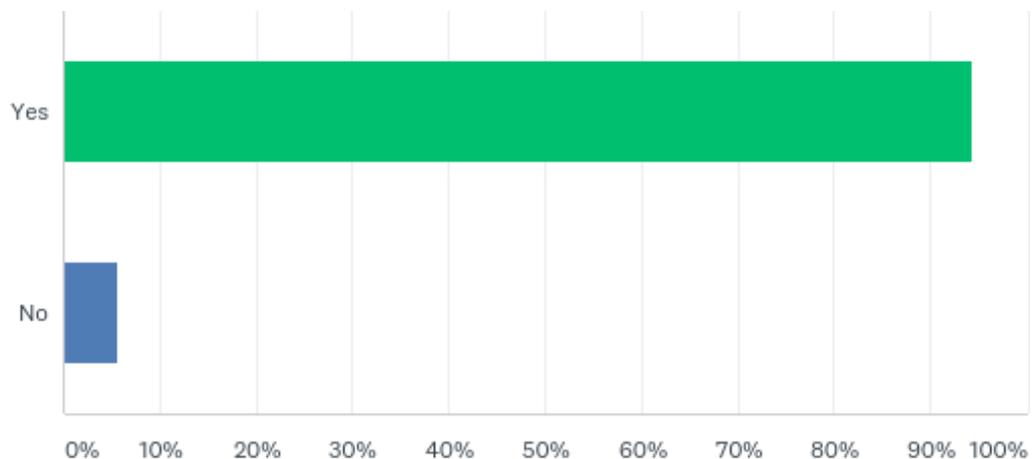




Q5: Please share any additional recommendations or solutions to address the four challenges facing women in the STEM industry as presented at the Forum.

- Some of the breakout session topics were too broad and many of them overlapped. Some people dominated certain sessions; better moderation could have helped.
- I strongly believe that positive discrimination, quotas, objectives are necessary. I hope it was mention in other rooms because in mine we didn't take the time to properly discuss that solution.
- We need more of these and a follow up (like in 1 year) from people who have implemented ideas and their experience, outcome etc.
- The scheduling and use of our time was well planned.
- I was very happy to hear the range of solutions proposed and some of what was being trialed in the private sector already. However, I was a little reticent that a lot of the solutions I heard seemed to place the burden on the backs of women. For instance, having women have to participate to, organize more, in order to have the same opportunities. I wouldn't want to see solutions place the burden back on women to rectify it - I think that's too easy for us to collectively do nothing.
- It was a great conference and brainstorming session.

Q6: Are you interested in engaging further with the 'Advancing Women in STEM' initiative at YES





Q7 Please share any additional comments.

- The afternoon was very well organized.
- Great forum.
- A very well organized forum. Congratulations!
- Beautiful event, well organized, wonderful panelists and crowd. Congratulations.
- Well done YES team!!!
- Great job Doaa.
- Well done!
- Wonderful initiative, extremely well organized. It was refreshing to see so many smart and motivated individuals working together to tackle this issue! Congrats!!
- The sessions could have had more brainstorming activities so that everyone is heard and ideas are actually worked on and developed as opposed to a simple conversation to complain about the challenges. As well, it might be interesting to have a group online (slack, linkedin...) to continue the conversation.
- Great forum and great organization. I appreciate the "formule" with the workshop and cocktail.
- Very good for encouraging the participation and discussion.



Appendix H: Montreal Gazette Article