



Women in Engineering

An employer's guide to a more diversified,
inclusive and equitable workplace



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The Ordre des ingénieurs du Québec wishes to express its gratitude to **Engineers Canada** for graciously assuming responsibility for the English translation of the guide

OVERVIEW



Engineering has one of the lowest rates of women in its ranks of any profession in Québec—just **15%**.

This is regrettable, as diversity has many potential benefits, including:

- contributing to greater business innovation
 - ensuring that engineering products are better adapted to the needs of the people using them
 - helping employers access the best talent—especially in the context of a labour shortage.
-

Various initiatives have been put in place in recent years to encourage women to choose a career in engineering. Despite those efforts, women engineers continue to face challenges from within the profession itself that can impede their professional advancement.

- ▶ **Nearly half (45%) of all women engineers** report having been the victim of gender-based discrimination during their career. That is **three times the rate for women in the general population (15%)**.
 - Although the situation appears to improve over the course of a career, it is still troubling: **more than one woman engineer in four (26%)** reports having experienced discrimination **in her current job**.
 - ▶ Work–family balance has a major impact on career advancement for women engineers, who are **twice as likely as their male counterparts** (58% versus 28%) to identify it as an impediment to their professional advancement.
-

Employers have a role to play in providing a work environment that allows all engineers to achieve their full potential.

That is why the Ordre des ingénieurs du Québec created this guide, which is intended to promote the establishment of fully inclusive workplaces.

About the Ordre des ingénieurs du Québec

The Ordre des ingénieurs du Québec (OIQ) brings together some 65,000 engineering professionals in all fields except for forest engineering. The OIQ's mission is to regulate the practice of engineers and support the development of the profession in the interest of protecting the public.

ing. Ordre
des ingénieurs
du Québec

FOREWORD

About the guide

This guide was developed on the basis of best practices observed in the literature and on the ground and using the results of the surveys completed by the Ordre des ingénieurs du Québec's members. The content was produced with the collaboration of members of the OIQ's working group on women in engineering and of individuals with expertise in the areas of women in engineering, equity, diversity, inclusion and human resources.

Target audience

The guide is intended for managers, senior executives and human resources specialists whose employees include men and women engineers.

Such employers include **large companies, SMEs, engineering consultant firms, municipalities, universities, clients and various government ministries**. These organizations operate in a wide range of sectors, including construction, the environment, energy, agri-food and biomedical sciences.

The tool was designed to be adaptable to the multiplicity of work environments and industries in which members of the engineering community are actively involved.

How to use the guide

The guide is intended to make employers more aware of issues experienced by women engineers, to encourage them to review their current practices and, ultimately, to take action to encourage greater diversity, inclusion and equity.

Some examples of diversity initiatives and inclusive practices are provided in the guide to demonstrate how employers can proactively foster diversity.

It should be noted, however, that :

- **no one universal solution exists to deal with the challenges of diversity:** the obstacles to a more inclusive and equitable workplace depend on each employer's specific context;
- **the difficulties women face can vary depending on their career path, especially if they belong to a minority group** (because of their ethnicity, origin, religion, sexual orientation, physical disability or other such personal attribute). Employers need to take into account women's specific situations in their organization if they are to implement practices that respond to actual needs.

Other than supporting women, can the guide help to promote other forms of diversity in engineering?

Some of the examples presented in the guide can also contribute to promoting the inclusion of other marginalized groups, such as visible and ethnic minorities, Indigenous people, neuroatypical persons, or individuals with a physical disability. Better representing these groups is equally important and makes for a stronger society.

It should be noted, however, that each group has specific characteristics that **employers must consider when introducing measures aimed at fostering a harmonious, respectful integration that honours the talents of each and every employee.**

INTRODUCTION

Québec has nearly 65,000 engineers, making it the province's second largest profession. Of these tens of thousands of highly qualified individuals, only 15% are women.

This means that engineering is missing out on a large pool of promising candidates. Given that the profession defines itself through innovation and excellence, the engineering community has a duty to seek out the best talent if it is to contribute fully to a flourishing society.

Attracting girls to engineering...

To this end, the Ordre des ingénieurs du Québec has embraced the Engineers Canada initiative “30 by 30,” whose goal is to achieve a rate of 30% women among new engineers by 2030.

To reach that goal, the OIQ has introduced initiatives targeting girls at key moments in their academic path and showing them little-known sides of engineering.¹ The main goal **is to show them that engineering is a fulfilling profession and to encourage them to consider a career in the field.**

As a follow-up to these measures, the OIQ also launched a mentorship program to support women engineering students and young women professionals throughout the integration process leading to the title of engineer.

... and retaining them

These initiatives encourage girls to choose engineering as their field of study, which is an important first step in ensuring greater gender diversity in the profession. Yet winning conditions must also be put in place if these young women are to remain and develop professionally on a par with their male colleagues once they have entered the workforce.

For this reason, the guide is intended to be a logical follow-up. **More specifically, it was prepared to respond to concerns reported by women engineers and to issues they face at different stages of their career.** The OIQ hopes this tool will make employers more aware of the challenges experienced by women engineers and motivate them to take action in creating a more diverse, inclusive and equitable workplace.

Why prepare a guide specifically about women in engineering?

Women working in occupations with higher percentages of male workers report lower professional wellbeing than other women in the workforce.² They also face additional challenges that can impede their professional advancement.³

Engineering is no exception. In a survey of members of the Ordre des ingénieurs du Québec, 84% of women say that they are happy in their current job. In itself, that is very good news. **However, nearly half (45%) of women engineers report having been victims of some form of gender-based discrimination during their career.⁴ That rate is three times higher than for women in the general population (15%).⁵**

Additionally, mothers in the workforce still assume the lion's share of parenting responsibilities, yet they are held to the same professional expectations as men. **More than half of all women engineers (58%) consider work–family balance to be an impediment to their professional advancement, whereas only half as many of their male counterparts (28%) report this.⁶**



Engineering and women by the numbers

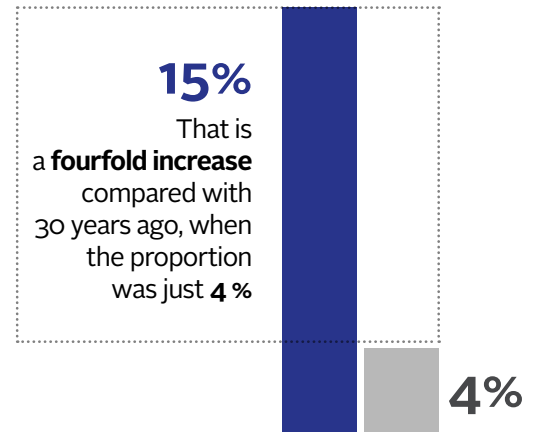
Unless otherwise specified, the data reported in this section comes from the following sources:

- An Ipsos survey of 3,754 members of the Ordre des ingénieurs du Québec concerning career enrichment and the satisfaction of engineers with their work, conducted from August 12 to 30, 2019. The survey was weighted by age, region and field of engineering to reflect the profile of the OIQ's membership.
- An Ipsos survey of the general public conducted from January 25 to 29, 2021, based on a sample of 901 respondents representative of the overall Québec population.

A GROWING REPRESENTATION

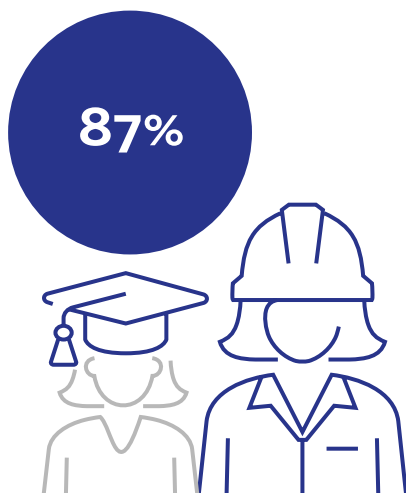


In Québec, one of every six engineers is a woman (15%).



This upward progression seems to be continuing, as women now represent **more than 20%** of candidates to the engineering profession.

A HIGH LEVEL OF WELLBEING IN THE PROFESSION...

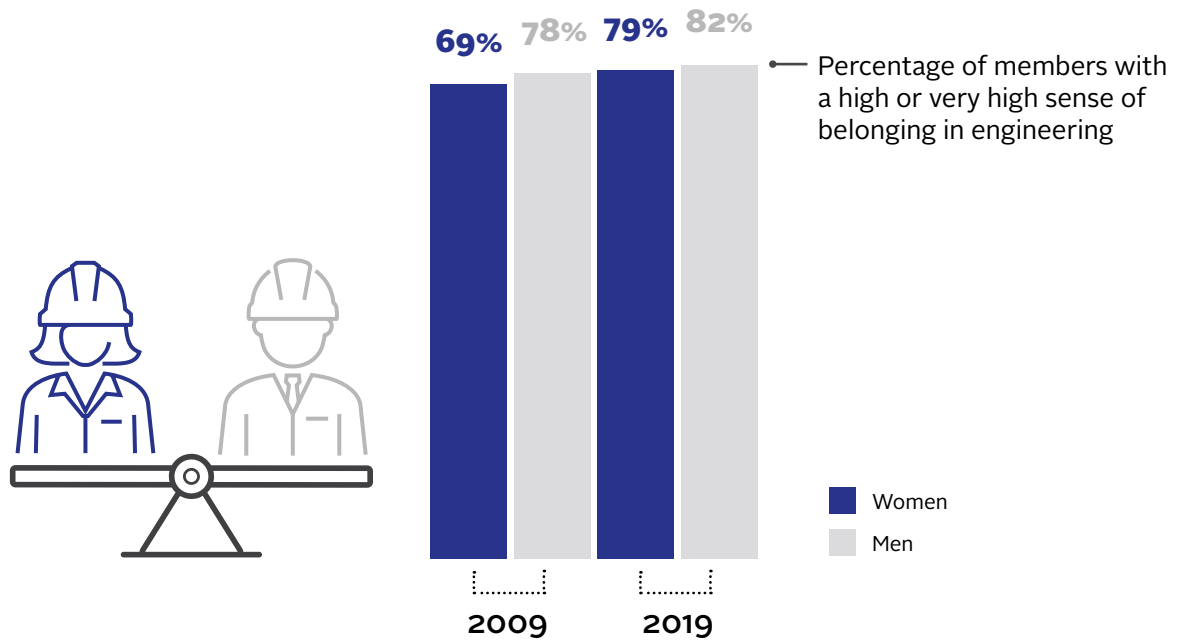


Nearly 9 women engineers out of 10 would recommend engineering to their daughter.

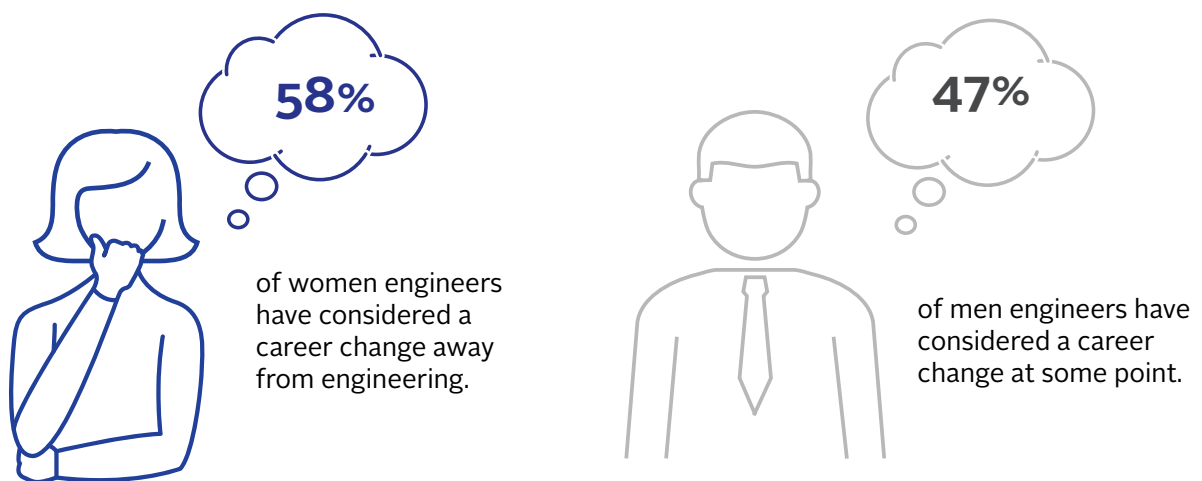


84% say they are happy in their current job.

A GROWING SENSE OF BELONGING, WHICH IS COMPARABLE TO MEN

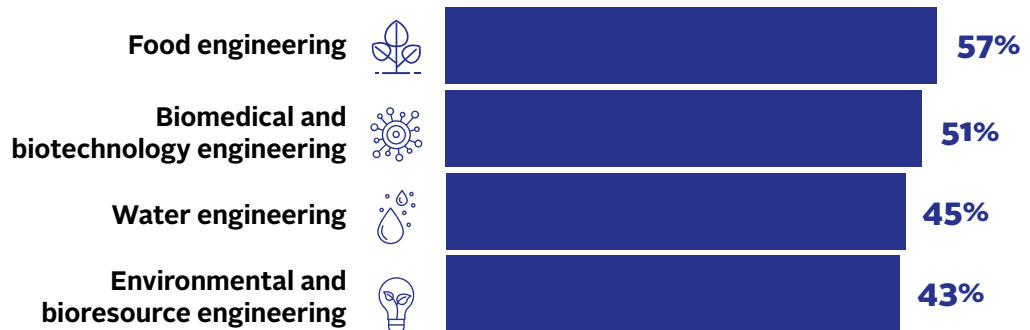


...YET MORE WOMEN THAN MEN ARE CONSIDERING A CAREER CHANGE

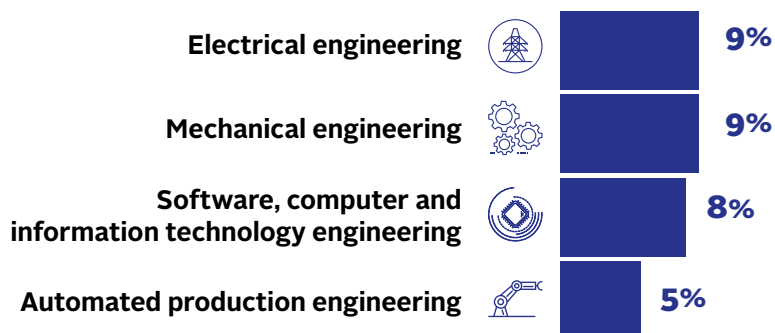


WOMEN IN DIFFERENT FIELDS OF ENGINEERINGⁱ

ENGINEERING FIELDS WITH THE MOST WOMEN



ENGINEERING FIELDS WITH THE FEWEST WOMEN



ⁱ The percentages represent the proportion of members of the Ordre des ingénieurs du Québec who held a degree in these fields as of February 1, 2021, who were women.

A woman wearing a beige hijab and a white lab coat is focused on looking through a white and black compound microscope. She is wearing blue nitrile gloves. The setting is a laboratory with white tiled walls and other scientific equipment visible in the background. A rack of test tubes with blue and yellow liquids is on the table next to the microscope.

**What makes
diversity
an asset?**

Research and data prove it: diversity can contribute to creating stronger teams for the greater good of both employers and the population. Here is an overview of some of the main potential benefits of diversity in the workplace.

A force for innovation

Teams that perform better

The greater a team's diversity, the more its members have different references and experiences. Heterogeneous teams are therefore more likely to come up with a greater number of solutions to a given problem, which increases the probability of finding the best one.⁷

Moreover, this variety of perspectives is what makes diverse teams better at problem solving than homogeneous teams.⁸ Furthermore, by developing a greater variety of strategies, such teams are better equipped to innovate. A positive correlation does exist between the diversity of business management teams and their overall innovation.⁹

Businesses with a higher proportion of women on their management committee are more likely to have **a higher rated financial performance** than those whose management team comprises primarily men.¹⁰

A driver for collaboration

Research shows that women tend to collaborate more than men,¹¹ which has a favourable impact on teams by facilitating discussion among the group's members.¹²

When asked what benefit women in engineering have to offer, members of the Ordre des ingénieurs du Québec—both men and women—agree that one of their main contributions is providing a complementary way of doing things. **a complementary way of doing things.**⁴

This distinctive perspective makes it possible to approach problems in new ways and therefore to consider them in greater depth. Again, in the opinion of the OIQ's membership, women engineers also stand out for their listening skills, sense of collaboration and attention to detail—all of which are more pronounced than in men.

A brief diversity glossary

Diversity should not be interpreted simply as a statistic that enhances an organization's image. To benefit from the full potential of diversity, employers must also introduce practices that promote **inclusion** and **equity**.

Diversity : Diversity refers to the presence [...] of people from different groups, which promotes the expression of diverse perspectives, approaches and experiences, including those of underrepresented groups.

Inclusion : Inclusion refers to the establishment of practices that allow all members of the research community to be and to feel valued, supported and respected, paying particular attention to underrepresented groups [...].

Équité : Equity refers to fair treatment, including the elimination of systemic barriers that disadvantage particular groups. Fair treatment is not necessarily the same for everyone, but takes into account personal realities, both present and historical, to provide all individuals with access to the same opportunities for promotion and support [...].

Source : Fonds de recherche du Québec – Nature et technologies¹³

Access to the best talent

In the context of a labour shortage, attracting workers is an important issue for employers, who need to stand out from the competition. This is especially true in sectors such as engineering that require highly qualified employees.

Organizations that offer equal access are more likely to have employees of diverse backgrounds and, for that reason, have a larger talent pool at their disposal. This ensures that they can recruit the best talent.

Note, as well, that businesses with a higher proportion of women in senior management positions are more attractive to women candidates, while having no effect on men's interest.¹⁴

Two-thirds of people looking for work, regardless of their gender, consider employee diversity to be an **important factor in deciding** whether they are going to apply for a position posted by a company.¹⁵



Organizations that reflect society

Responding better to the needs of the public and clients

The more a team is composed of people with diverse backgrounds, the more comfortable it will be in taking everyone's experience and situation into account. For this reason, a workplace that values inclusion and is sensitive to societal diversity responds better to the needs of all its clients. The entire population benefits.

A woman travelling in a car is 73% more likely than a man to suffer serious or even fatal injuries in the event of a head-on collision, according to a study by the University of Virginia. A majority of policies and automobile safety studies were designed using an average man as the anatomical standard.¹⁶

Many of the “women” dummies used are simply a smaller version of the male dummy and are placed in the passenger's seat (not the driver's) for collision tests. Moreover, the dummies do not take into account biological differences in the anatomy of men and women.

The need to develop better technologies

Diversity plays a critical role in the development of new technologies in various fields of engineering. This includes artificial intelligence, which is increasingly used to automate and optimize information analysis in order to accelerate decision making.

Artificial intelligence relies on data that may include subjective human behaviours and therefore reflect social inequalities. As a result, decisions based on artificial intelligence may not only reproduce discrimination but actually amplify it.¹⁷

Organizations operating in the field of artificial intelligence could contribute to reducing these biases by including people from diverse backgrounds on their teams. By sharing their respective experiences, they could increase teams' awareness of potential biases related to data and technology.

Amazon had to set aside an automated system that used artificial intelligence to sort resumes. The algorithm was intended to identify, among resumes received, the most promising candidates based on data related to hiring over the previous ten years.

Despite the company's good intentions, the algorithm discriminated against women applying for software developer positions. **Since those positions are largely held by men, the algorithm learned to identify “promising” candidates from examples of men's resumes.**

Among other issues, the algorithm gave a lower ranking to candidates from a women's university, since none of the resumes used as models made any reference to those institutions. For the same reasons, any resume containing the word “women” (e.g., “captain of the women's chess club”) was also ranked lower by the algorithm.¹⁸

Challenges facing women in engineering

Unless otherwise specified, the data reported in this section comes from the following source:

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- An Ipsos survey of the general public conducted from January 25 to 29, 2021, based on a sample of 901 adult respondents representative of the overall Québec population.

Despite a growing recognition of the potential benefits of diversity, the career path of women engineers still includes many challenges.



30%

of women in engineering feel that their gender puts them at a disadvantage in the profession.

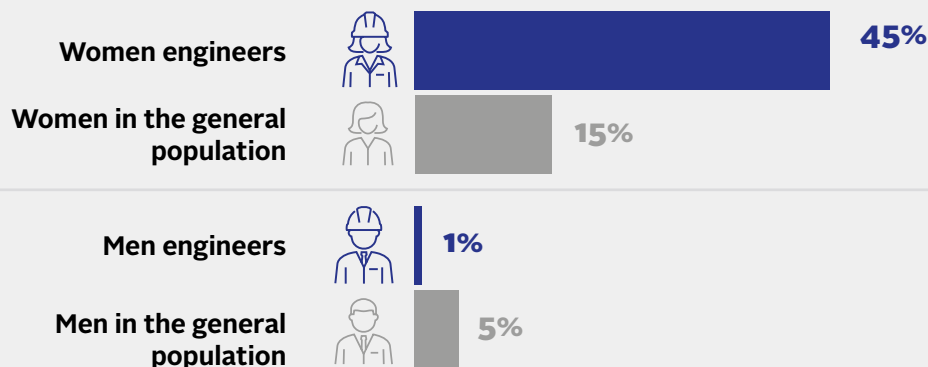


1 in 2 women engineers

reports having been the victim of some form of genderbased discrimination during their career (45%).

► **This is 3 times more than women in the general population (15%).**

PROPORTION OF PEOPLE REPORTING HAVING EXPERIENCED GENDER-BASED DISCRIMINATION DURING THEIR CAREER



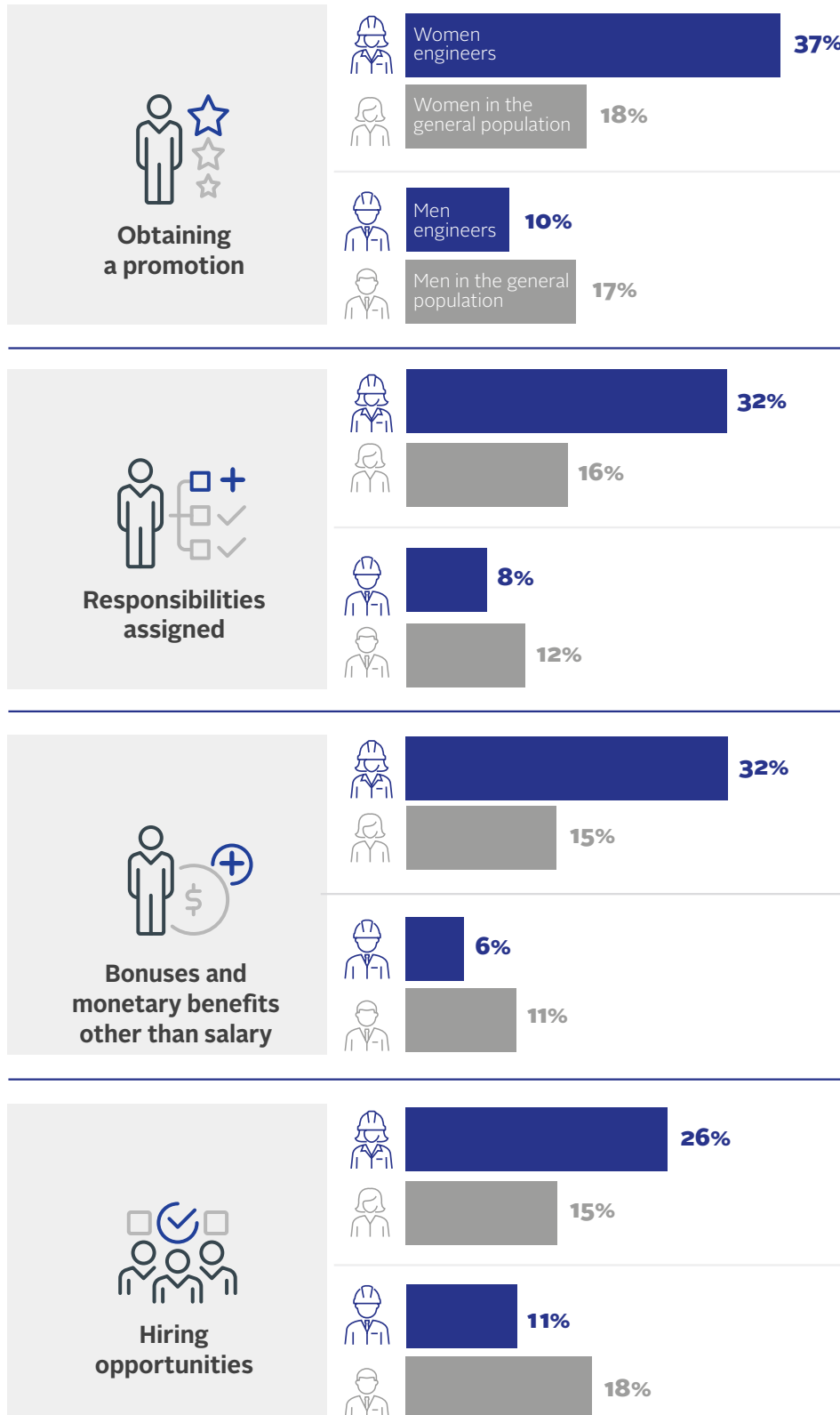
1 woman engineer in 4

reports experiencing gender-based discrimination in her current job (26%).



► **Therefore, while the situation appears to be improving with time, it is still troubling.**

MAIN TYPES OF DISCRIMINATORY TREATMENT EXPERIENCED BY WOMEN ENGINEERS DURING THEIR CAREER



Several factors may be causing this situation and impeding the career advancement of women engineers. These include unconscious bias, work–family balance and a lack of models.

Unconscious biases and their impact

Our brains receive so much information that they cannot process it fully. In order to deal with the high volume of information and make decisions quickly, our brains sometimes take shortcuts by simplifying and structuring the world around us. These shortcuts may be tainted with certain stereotypes, known as “unconscious biases,” which can lead to various forms of discrimination.

As the name would suggest, unconscious bias is not an explicit idea that we have about an individual or group of people. Moreover, our unconscious biases can sometimes even be diametrically opposed to our own values. Acknowledging the existence of our unconscious biases and being willing to question our own decisions allows us to be more vigilant in dealing with situations impartially.

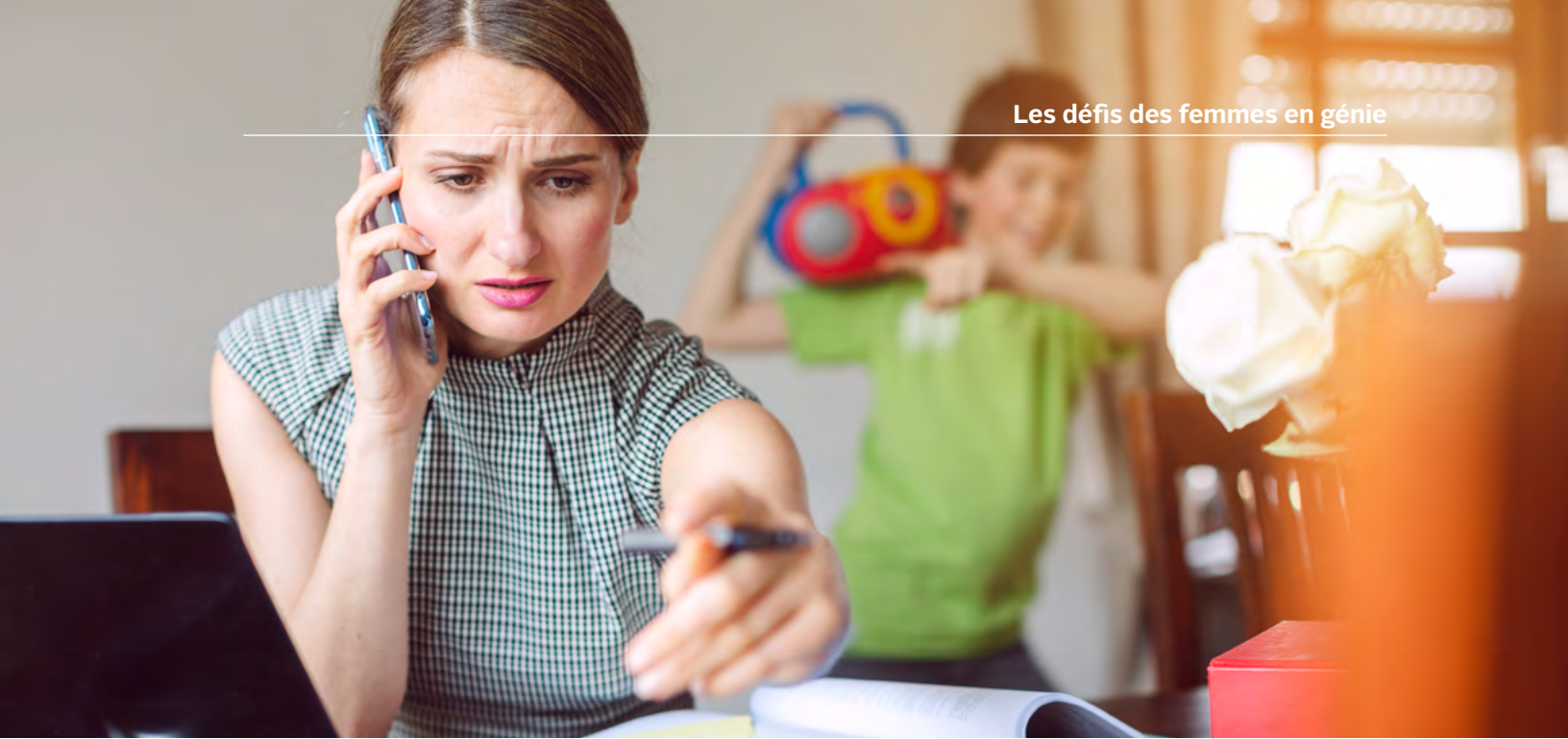
It is not by denying or minimizing the existence of biases that they will disappear. On the contrary, certain studies suggest that such an attitude actually causes them to persist. **Groups who recognize that some biases penalize women are more likely to treat men and women candidates equally** without showing favoritism for either.¹⁹

Impacts on professional advancement

Biases play a role in the discrimination faced by women, especially in decision-making positions and in fields traditionally dominated by men, including engineering.

According to a Yale University study, two otherwise identical applications will be judged differently if one bears the name of a man and the other a woman. In the study, applications bearing a typically feminine name were deemed less competent. Moreover, **women applicants were, on average, offered a salary 13% lower than men, as well as fewer mentoring possibilities.**²⁰

In Canada, women vice presidents **are twice as likely** to have their decisions questioned by their peers as are their male counterparts.²¹



Challenges around work–family balance

Despite encouraging progress, the responsibility for balancing work with home life continues to fall mainly to women.

A majority of women are still the primary care providers for their children and family members with health issues. For this reason, they need to remain more available to assist loved ones than do men.

In 2015, Canadian women devoted **nearly 20 hours per week** to household chores, compared with 14 hours for men.²²

The COVID-19 pandemic acted like a catalyzer on this situation, as school closings led to additional tasks for women. Within couples, 64% of women were primarily responsible for home teaching and providing assistance with homework, compared with 19% of men.²³

A very real issue for women engineers

As is the case with other women working in a profession traditionally dominated by men, women engineers identify work–family balance as a main concern.²⁴

More than half of women engineers with children (58%) consider that work–family balance restricts their professional advancement. Their male colleagues are less than half as likely (28%) to share this opinion.⁶

Twice as many women engineers who have considered leaving the profession, as compared with men (26% versus 13%), identified work–family balance as one of the reasons for reassessing their future.⁴

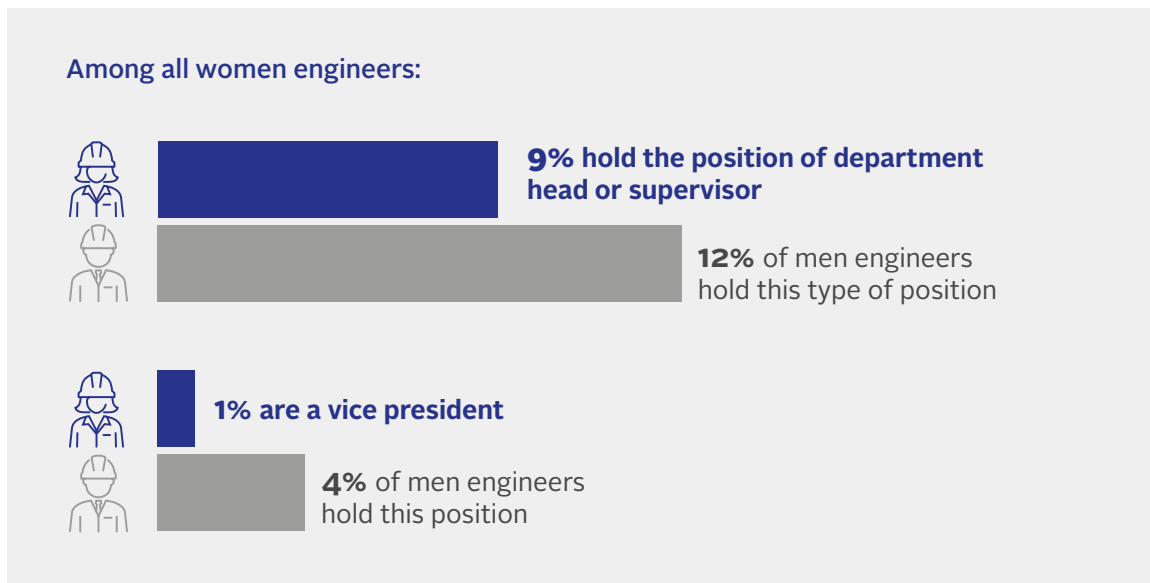
Employers can play a critical role in helping employees—both men and women—fulfill their family and professional obligations.

Measures that facilitate work–family balance include developing policies conducive to flexible work schedules and remote work, offering telemedicine services, and making subsidized cafeterias and daycare available in the workplace. Such measures contribute to retaining workers and promoting professional development.

A lack of women models

Unlike men engineers, women in the profession have few models with whom they can identify.

This phenomenon is even more pronounced as they climb the corporate ladder. In addition to making up just 15% of the profession, women engineers also appear to be underrepresented in decision-making positions. The 2020 Genium360 study on remuneration describes the situation.²⁵



While women can certainly benefit from the advice of a mentor who is a man, this tends to happen less spontaneously. According to a study conducted in the United States, people wishing to be a mentor in a professional setting are more naturally drawn to support someone of the same gender or background (a phenomenon known as the “mini-me syndrome”).²⁶ Given that decision-making positions are primarily held by men, informal support systems can further disadvantage women.

The presence of models, professional support and mentoring can be an important influence throughout a person’s career. Individuals who receive mentoring from colleagues with more experience or authority within the organization are more likely to request additional responsibility. As a result, their professional advancement proceeds faster and is more satisfying.²⁷

Among members of the profession who have considered leaving engineering, **1 woman in 7**, compared with **1 man in 10**, identifies the lack of mentoring or sponsorship as one of the reasons for looking at a career change.⁴

A woman with dark, curly hair and a bright smile is the central figure, wearing a white long-sleeved top and pointing her right hand towards the viewer. In the background, two men are visible but out of focus; one on the left wears a blue button-down shirt, and one on the right wears a dark suit jacket over a white shirt. The setting appears to be a modern office with large windows in the background.

Taking action

Every organization can and should take action to offer a work environment better adapted to addressing the challenges faced by women engineers.

Among key factors for success, the desire to offer a more diverse, inclusive and equitable workplace should be the first priority clearly set out by senior management. For this reason, initiatives and commitments targeting a company's diversity, equity and inclusion must be integrated into the business strategy in order to get everyone on board and make sustainable progress in this area.

The next section presents a sample roadmap to help you get ready to initiate this change in direction.

1

CONDUCT A SITUATIONAL ANALYSIS

Begin by taking stock of the current situation in your company. Conducting a thorough analysis will enable you to target measures that can concretely help you to face your organization's unique challenges.

To achieve this, the involvement of a neutral third party without any conflicts of interest (e.g., a consultant with expertise in diversity and inclusion or in management) could help you arrive at an impartial diagnosis of your internal practices.

To develop a complete and accurate portrait of the situation, remember that your analysis must not only address **diversity** (presence of women) but also consider the notions of **inclusion** (practices that enable women to be valued, supported and respected) and **equity** (fair treatment taking into account the different situations faced by women) within your organization.



Encourage a participatory approach

Look beyond your own personal experience by sharing your intentions with members of your staff: a collective approach will enable you to arrive at the most accurate findings possible concerning your organization's current situation.

For example, you could gather comments from your employees through discussion groups open to everyone, as well as organizational surveys. Establishing a climate of trust and encouraging dialogue will put you in a better position to recognize the challenges women face in your organization.



Support your analysis with facts

In addition to feedback from your employees, internal data can round out your assessment of the situation. Just as an example, here is a non-exhaustive list of information that can help make your analysis more complete.

Attracting and recruiting employees

- ✓ When posting jobs, is the proportion of women to men applicants comparable with their proportion in your activity sector?
- ✓ Is the proportion the same among:
 - Applicants called for an interview?
 - Those who are hired?
- ✓ Do job descriptions use inclusive language?
- ✓ Are application evaluation criteria based on a typical career path or do they also take into consideration qualified candidates with an atypical trajectory?
- ✓ For a given position, are the entry-level salary and work conditions the same for women and men applicants?

Managing performance, remuneration and employee retention

- ✓ What is the proportion of women to men within your organization?
- ✓ Does this proportion correspond to:
 - The proportion of women to men in your activity sector?
 - The proportion at every level of your company (including executives and the management committee) and within the various decision-making committees?
- ✓ Is the composition of your board of directors within the parity zone?ⁱⁱ
- ✓ Do you have diversity, equity and inclusion targets?
 - Are the targets based solely on diversity (presence of women) or do they also incorporate the notions of inclusion and equity (e.g., targets based on surveys of the wellbeing reported by employees and on reviewing certain processes to make them more equitable)?
 - What have you implemented so far to reach those objectives?
 - Are you making progress towards achieving the objectives?
- ✓ Is there a significant difference in the annual evaluation results between women and men employees?
- ✓ What is the employee turnover rate for your organization?
 - Is the turnover rate comparable for men and women?
 - What reasons do employees give for leaving?
 - Are you aware of the challenges faced by your organization's employees? Are mechanisms in place to identify them?

ⁱⁱ The parity zone is generally defined as at least 40% women.

- ✓ Is the satisfaction rate among your employees comparable for women and men?
- ✓ What are your mechanisms for dealing with harassment and discrimination?
- ✓ Do you have a harassment policy?
 - When was it last reviewed?

Promotions and professional development

- ✓ Do the women and men on your staff advance to decision-making positions at the same rate? If not, why?
 - Are there opportunities for advancement in your organization?
 - How long does it take and what are the criteria for a current employee to be considered for a higher position? How are the criteria determined?
- ✓ Has your organization implemented a structured mentoring program?
 - If so, do women take advantage of the program at the same rate as men?
- ✓ Do women in your organization have the same opportunities as men to speak for and represent the company in business relations situations?
- ✓ Do you offer continuing education to your employees (including reimbursing tuition fees and a program for executives)?
 - Do women and men take advantage of those opportunities at a proportional rate?

2

SETTING TARGETS

The situational analysis will enable you to define the main issues requiring action. You can then structure your approach by setting **objectives**, **targets** and **indicators**. While the targets are intended to clearly set out your aspirations and vision, they are not prescriptive in nature. This step will make it possible to implement measures to progress steadily towards achieving your goals.

Example 1

In Québec, 35% of people with a degree in chemical engineering are women. Suppose that, on average, when you post a job in chemical engineering, 20% of the applicants are women and that an even lower percentage are invited for an interview.

- One of your objectives might be to broaden the pool of women applicants for the chemical engineering jobs you post.
- Your target could be to increase the proportion of women applying and invited to an interview to 35% within the next two years.
- Your indicator would therefore be the percentage of applications received from women.

Example 2

Suppose that an organizational survey of your staff shows the engagement level of women to be lower than that of men.

- One of your objectives could be to increase the engagement of women employees.
- The target might then be to improve the engagement level and turnover rate among women so that it is statistically comparable with that of men in the organization.
- Your indicators could include the overall performance rate in terms of mobilization and turnover.

3

IMPLEMENT AN ACTION PLAN

Define solutions and measures to ensure progress in achieving your goals. To do this, develop a plan that includes measures to be implemented and targets those measures are aimed at reaching. Implementation will also introduce a sense of accountability.

To help you begin to consider this step, a few practical examples are provided below to serve as a guideline. They offer an overview of approaches that may be integrated into human resources programs and processes to foster a more diverse, inclusive and equitable work environment. Please note, however, that a given practice may work very well in one organization but not necessarily be applicable in others. Each employer needs to develop and adapt practices that respond well in their respective context.

Attracting workers, recruiting and staffing

Attracting and hiring workers are critical steps for an organization. This is the point at which your employees are introduced to the corporate culture. These first impressions can play a decisive role and even influence the commitment of employees toward their new employer.



Practical ideas

Defining and presenting the job offer

- When preparing the job description, use **inclusive language free of stereotypes**.
- Define the job requirements in advance **in accordance with the actual needs** so that all applicants can be evaluated objectively.
- **Avoid automatically defining criteria** based on the profile of the person who previously held the position.
- **Use a wide range of communication channels** for promoting available positions so that you reach out to new target audiences.

Did you know?



Using terms associated with male stereotypes (such as “leader,” “determination” or “ambition”) can dissuade women candidates from applying. On the other hand, using terms with a feminine connotation (such as “community,” “engagement” or “hope”) has no negative impact on men.²⁸

Further examples of expressions with a gender connotation in job offers can be found in **a leaflet published by Westcoast Women in Engineering, Science and Technology**.²⁹



Practical ideas

Limit unconscious biases right from the recruiting stage

- During job interviews, **put the same questions** to all applicants in order to give them a fair chance to demonstrate their abilities.
- Before issuing a job offer, **use a job evaluation tool that is based on objective, neutral criteria** and rooted in the job's level of difficulty, constraints and required level of experience in order to define salary scales in advance.
- **Avoid asking applicants their current salary** to determine the offer you make, and instead base it on the applicant's skills and salary scales in effect.

Did you know?



Women usually wait until they meet all criteria for a job offer before applying, which does not seem to be the case with men.³⁰ For this reason, women apply for fewer positions than men.³¹

Job descriptions that list more requirements than the position actually requires therefore dissuade women from applying, even when they are fully qualified.

Performance management, remuneration and employee retention

Employers play a key role in helping their employees to perform well, especially by inviting feedback and providing fair working conditions, as well as a work environment that meets their needs. By establishing favourable employment conditions, organizations encourage employee retention and contribute to employees' personal and professional fulfillment.



Practical ideas

Evaluations and employment conditions

- Adopt a performance evaluation system that uses **clearly defined criteria** in order to reduce the risk of bias when it comes to promotions and remuneration.
 - Evaluate which behaviours and values contribute to the success of the organization.
 - Lay out expectations clearly to employees.
 - Ensure that promotion criteria are fair and serve to identify a candidate's skills.
 - Recognize inclusion and diversity management as a valuable skill.
- Train managers **in employee evaluation skills and see that they are aware of biases that may sneak** in during evaluation—unconscious biases in particular.
- Introduce an **equal-treatment policy to provide a framework for access to privileges and practices around commissions and bonuses**, and inform all employees of the policy.



Did you know?

Women are much less positive than men when they self-evaluate, even when they know that an employer will be using their self-evaluation to decide whether to hire them or to determine their wage offer.³²

Women can therefore tend to exclude themselves from promotion opportunities because they minimize their performance in their own eyes and those of their employers, who are not aware of that particular bias.



Practical ideas

Employee wellbeing

- Create an **equity, diversity and inclusion committee** open to all employees.
- Issue a **statement on equity, diversity and inclusion** in order to demonstrate the organization's commitment to employees and stakeholders and encourage their engagement in turn.
- Consider **implementing certain flexibility measures**, such as reducing or compressing the work week, in order to help your employees fulfill their professional and family responsibilities.
- **Make sure that policies contributing to work–family balance are clearly understood** (for example, the remote work policy or guidelines around flexible and compressed schedules) by all employees, and encourage them to take advantage of those policies.
- Solicit the opinion **of both men and women in the choice of activities intended to promote social life in the workplace** and, when organizing those activities, take into account the different needs of men and women employees.
 - For example: women generally need to take family responsibilities into account more than men, which affects their availability outside normal working hours.
- If not already in place, implement **harassment policies**, see that they are updated periodically and communicate them to all employees.
- **See that all employees are specifically made aware** of unconscious biases and microaggressions, including through training.
- Explain the mechanisms in place for **dealing with situations of discrimination**, harassment and intimidation without fear of reprisals.

Did you know?



Women find that the opinions they express in their field of expertise are called into question more often than those of men. This means they may be called upon to **provide greater proof to demonstrate their skills**. The phenomenon is even more frequent among Black women.³³

This type of treatment is an example of **microaggression**, an act, often unconscious, that subtly expresses prejudice against a group. Exposure to microaggressions can increase the risk of depression,³⁴ reduce productivity and negatively impact problem-solving skills.³⁵

Did you know?



One third of women engineers (34%) report having been the subject of bullying during their career, compared with only 7% of men engineers.

Over and above the women who are victims of such acts, the organization itself suffers the effects of discrimination and bullying. **More than one of every two women engineers** who has been the victim of discrimination or bullying has considered a career change.⁴

When organizations put mechanisms in place to manage incidents of bullying and discrimination, they report that such situations are taken seriously and that corrective measures are implemented. This approach encourages the retention of women in professions where the context is conducive to instances of bullying.³⁶

Promotion and professional development

Investing in professional advancement benefits not only the employee but also the employer, who can count on staff being engaged and skills being continually updated.

Professional development also fosters the advancement of employees interested in management positions. By staying on the lookout for motivated employees with high potential, the company can prepare a roadmap to help them acquire the skills required for a managerial role.



Practical ideas

Career development

- When a position with decision-making responsibility opens or a new position is created, **launch an official call for applications and post it internally** so that all eligible women employees have the opportunity to express an interest.
- Develop **well-documented and equitable policies around promotions** and communicate them clearly to everyone who may be interested in applying.
- Define and communicate **evaluation criteria and the qualifications required** so that applicants can be evaluated on the basis of a fair comparison.
- Use **an objective and neutral tool when deciding who receives training** and has opportunities for development.



Did you know?

Men tend to be judged on their **potential**, whereas women are generally evaluated on **the basis of their past achievements**, especially during recruitment for management positions.³⁷ Women applicants therefore have a greater obligation to “prove” that they meet the qualifications for a position.



Practical ideas

Establish a culture of leadership

- Offer leadership training **expressly designed for the needs of women** to employees looking to progress into a management role as part of their professional advancement.
- Offer the possibility of training **during office hours** to make professional development possible for all employees.
- Set up a **mentoring program or official sponsorship system** within the organization to ensure that this opportunity is available to anyone who would like to take advantage.
- **Promote mentoring programs outside the organization** so that mentored employees have access to a wider diversity of mentor profiles and can work with someone with a better understanding of the issues and obstacles they experience.
- When evaluating the company's future needs, **set an objective for identifying women candidates with strong potential** for management positions and cultivate their trust and interest in progressing towards those positions.
- Showcase **a range of successful women models**.



Case studies

Many organizations are already working to promote a more diverse, inclusive and equitable workplace. Here are a few examples.

Hatch

OPENNESS TO DIVERSITY STARTING WITH RECRUITING

Hatch has more than 9,000 employees around the world, including more than 3,800 in Canada and a strong presence in Québec. The engineering firm set an objective of at least 40% women employees by 2023.

To reach that objective, the company specifically aims for **one-third of applicants who are given a hiring interview for an experienced-professional position to be women**. The company also set a target that **half of applicants interviewed for intern or young professional positions be women**.

The targets motivate managers to explore a pool of candidates that they may not otherwise have decided to interview, being used to recruiting from their network of primarily men. The process also challenges Hatch to find new channels to advertise positions to be filled in order to encourage more diverse candidates to apply. Since this measure was implemented, the number of women hired has risen considerably.

“Diversity and inclusion are key values for any company wishing to take on the most complex challenges and stimulate innovation among its teams. As a member of the Hatch community for more than twenty years now, I am proud that my employer is actively engaged in creating an environment where all can grow and contribute to our mission.”

– Marie Drinkwater, Eng., Control, Automation and Electricity Engineer, Hatch



STANTEC

UNCONSCIOUS BIAS – EVERYONE’S BUSINESS

Stantec is an international engineering firm with 22,000 employees on six continents, including 1,500 in Québec. In 2014, the company launched an inclusion and diversity program whose objective is to build a motivating and inclusive work environment in order to attract, support and develop the best talent.

Stantec’s senior managers took training on unconscious biases to help them identify and take into consideration the potential impact of their own biases. They were also given tools to limit the influence of unconscious bias in their decision making.

Raising managers’ level of awareness was just the first step in a more large-scale process. The company believes that unconscious bias should be everyone’s business. For this reason, and with the collaboration of the Canadian Centre for Diversity and Inclusion (CCDI), interactive training on unconscious bias was specifically designed for all Stantec employees. Since 2018, more than 2,200 employees (men and women) have received the training, which will also be given internationally.

“Women have the power to change things and push our industry forward. More than ever, we realize that the profession needs to be fully inclusive and diverse if we are to meet current and future challenges. All of society will benefit as a result.”

– Isabelle Jodoin, Eng., Stantec’s Senior Vice President for Québec

ADFAST

DIGITAL TRANSFORMATION AS AN OPPORTUNITY TO PROMOTE DIVERSITY

Adfast has 130 employees specialized in the production of sealants and adhesives. Four of the nine engineers on the company’s development team are women, and a majority of management committee members are also women.

Adfast is constantly looking for opportunities to **promote collaborative and inclusive innovation**. To this end, the company has benefited fully from its industry 4.0 plant. On one hand, the versatility and automation of its production chains allow Adfast to offer work schedules conducive to work–family balance. The company also reviewed the ergonomic aspects of certain positions to eliminate the need for employees to lift loads of 50 pounds or more. In addition, Adfast demonstrated its support for families during the COVID-19 pandemic by reimbursing employees for all daycare expenses.

“Ultimately, the measures implemented by Adfast are beneficial not only for the employees but also for the company itself. By listening to the varied needs of our workers—including those of women—and by ensuring that we adapt to their situation, we are able to attract and retain the best talent, which allows us to stay competitive on the market.”

– Marie-Odile Touchette, Eng., Vice President of Production for Adfast.

HYDRO-QUÉBEC

RAPID DEVELOPMENT OF NEW TALENT WITH HIGH POTENTIAL

Hydro-Québec is one of Québec's largest employers of engineers (men and women), which number more than 2,000 on staff. The crown corporation is firmly committed to promoting the diversity of its employees. Women currently comprise 21% of the company's engineers, which is significantly more than the Québec average of 15%.

Hydro-Québec's commitment to diversity is reflected in many of the organization's business practices. For example, Hydro-Québec introduced a program specifically aimed at explaining their management context to students with high potential graduating university in engineering and administration. Operating on an 18-month cycle, each year the program welcomes about ten students for a practical internship, meetings with the heads of various units, visits to facilities and a mentoring experience with an experienced manager.

Where candidates have equal skills, priority access to the program is given to applicants from minority groups, including women, visible or ethnic minorities and Indigenous peoples. Since the program was launched in 2018, women have comprised 57% of participants (whereas women currently represent 26% of Hydro-Québec executives), with one-quarter of them being engineering candidates.

"Hydro-Québec's program for new graduates provided me with a concrete opportunity to dive into the day-to-day, real-life situations of an executive in order to acquire management and leadership skills. The initiative helped me to see myself as a future executive and to seek out the skills required to pursue my professional advancement."

- *Stacy Morris, Eng., former participant in the recent graduates program and Manager, Production and Mechanical Maintenance, Hydro-Québec*



Useful resources

USEFUL RESOURCES

► General reference

[**Resources for Implementing Equity, Diversity & Inclusion in Research**](#) – produced by the Chair for Women in Science and Engineering

These leaflets provide accessible illustrations of various diversity issues and provide recommendations for confronting them better. Although the tools address the context of research teams more specifically, they offer several avenues that can be applied more generally by employers.

[**Guide pour outiller les PME – Relations interculturelles et gestion de la diversité**](#) (French only) – produced by the Institut de recherche sur l'intégration professionnelle des immigrants and Conseil emploi métropole

Designed for employers, this guide is intended to be used as a tool to raise awareness about issues pertaining to intercultural relations, and also presents practices that have been tested in the workplace.

[**Industry resources on gender diversity in science and engineering**](#) – produced by Westcoast Women in Engineering, Science and Technology

These leaflets on gender diversity provide an overview of various themes pertaining to diversity in science and engineering and answer currently relevant questions on the issue.

► Unconscious bias

[**Biais inconscients et recrutement : nouveaux outils disponibles**](#) (French only) – produced by the International Observatory on the Societal Impacts of AI and Digital Technology, IVADO, Réseau interuniversitaire québécois EDI and Université de Montréal

This leaflet provides information on unconscious biases, situations where they have the greatest impact and examples of best practices for reducing that impact.

[**Harvard University Implicit Association Test**](#)

This test assesses the subconscious associations the subject makes between various concepts. It can play a role in making your teams aware of their own implicit stereotypes and unconscious biases.

► Harassment

[**FinAuHarcelement.com**](#) – (French only) – produced by the Ordre des conseillers en ressources humaines agréés (CRHA)

This website contains several resources to equip employers to deal with harassment in the workplace and foster a healthy work environment.

► Certification program

[**Women in Governance Parity Certification**](#)

The Women in Governance Parity Certification program helps organizations conduct an in-depth evaluation of their values, priorities, policies, programs and practices in order to define their strengths and areas for improvement in promoting the professional advancement of women.

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