

# Engineering Workplace Experiences & Career Satisfaction Factors in the Consulting Engineering Services Sector in Manitoba

Winter 2015



ASSOCIATION OF CONSULTING  
ENGINEERING COMPANIES  
MANITOBA

**TWICE: Technical Women in Consulting Engineering**

**Objective:** To capture a snapshot of the current status and perceptions of engineering professionals relative to career satisfaction and workplace experiences in the consulting engineering services sector in Manitoba. The findings will constitute current and local data that can be useful to ACEC member firms to understand the experiences of engineering & technical staff.

The survey questions were developed by the TWICE committee, built on prior research on this topic in the engineering profession.

The survey was reviewed by the ACEC-MB Board and the ACEC-Canada President in fall 2014, prior to administration.

The survey was designed to protect anonymity: no personal identifiers and no IP address captured.

The email invitation with the survey information and link was sent to 67 contacts at 30 ACEC-MB Principal Member Firms via the ACEC-MB Executive Director in January 2015.

Principal contacts were asked to distribute the email to all engineering employees and technical staff in their firm: this included EIT/GITs, CETs, P.Eng./P.Geo, environmental scientists, biologists, and other scientists working in engineering firms.

**This represents approximately 850 engineering and technical staff who should have been invited to participate.**

The survey was available for on-line for five weeks.

**Survey responses received: 101**

The survey was developed to gain an overall perspective of people's workplace experiences and perceptions in the consulting engineering services sector.

However, TWICE was also interested to explore potential differences between **male and female respondents** in the survey as part of its committee mandate.

The results were also amenable to looking at differences between **early career (0-7 yrs' experience) and mid- and senior-career (8+ yrs experience)** respondents.

The response rate of 101 in a population of approximately 850 translates into a confidence in the results of +/- 9%, 19 times out of 20.

Thus, the statistical significance of results and of differences between groups is not very strong.

The survey could and should be used to gain qualitative insights into respondents' experiences and perceptions of the consulting engineering workplace.

**Remember the quote,  
*“Torture numbers, and they’ll confess to anything”.***

Numbers can tell us *‘what’* and *‘who’*, but often don’t tell us *‘why’* or *‘how’*. We have to be careful not to ascribe detailed interpretations to the numbers alone.

At the same time, be open to the numbers and what they *do* say. Be ready to accept the affirming findings as well as the challenging findings.

# Respondent profiles

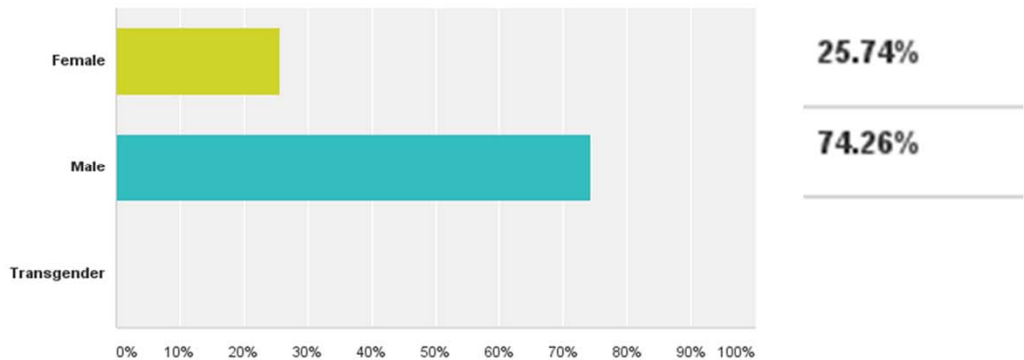
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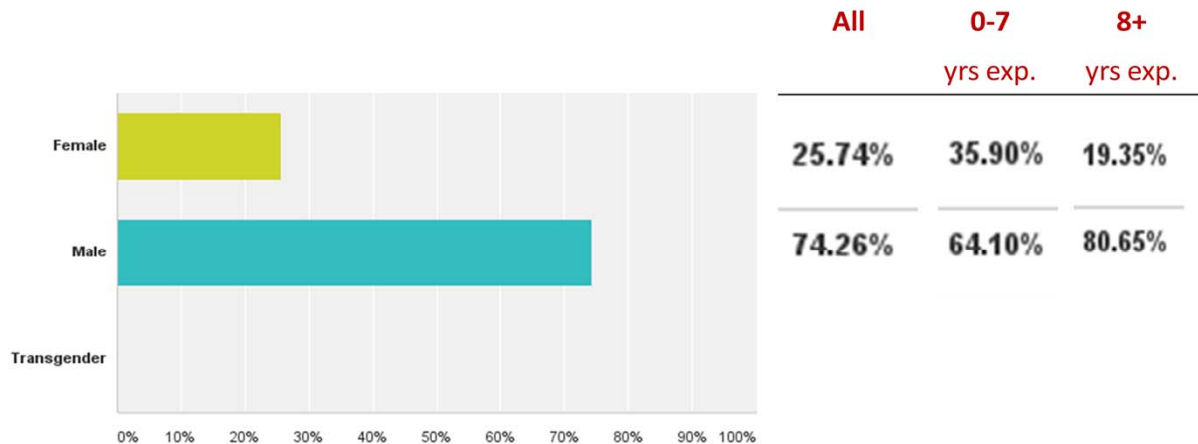
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# I am

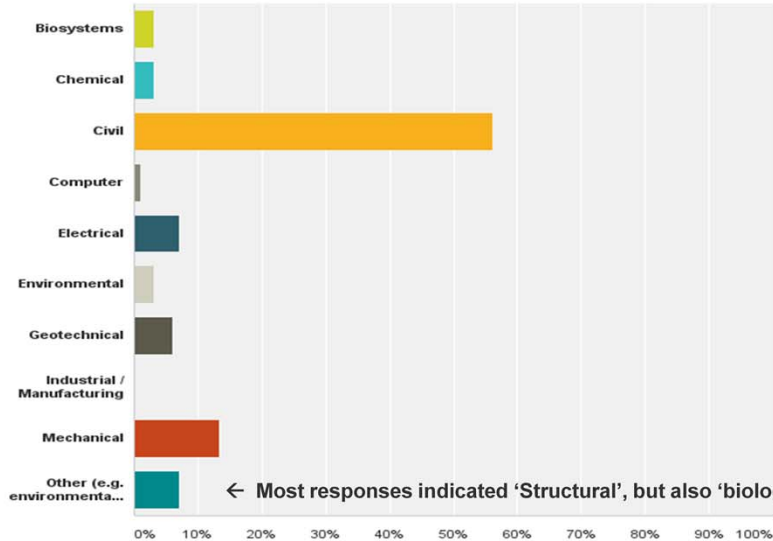




## Survey respondents' gender, by years' experience



## My primary engineering discipline is



← Most responses indicated 'Structural', but also 'biologist', 'technologist', and 'GIS professional'

## My educational credentials include:

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Technology Diploma	25.5%
Bachelor Degree in Engineering	76.5%
Bachelor Degree in a field other than Engineering	8.2%
Master Degree in Engineering	20.4%
Master Degree in a field other than Engineering	4.1%
Ph.D. Degree in Engineering	1%
Ph.D. Degree in a field other than Engineering	0%

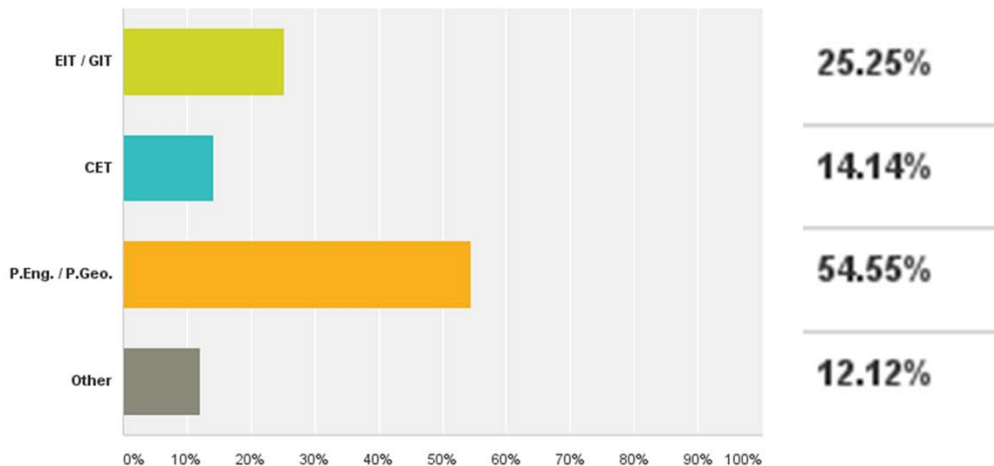
Total adds to >100% due to holders of two or more credentials

## Educational credentials, by gender

	All	Women	Men
Technology Diploma	25.5%	27%	25%
Bachelor Degree in Engineering	76.5%	69%	79%
Bachelor Degree in a field other than Engineering	8.2%	12%	7%
Master Degree in Engineering	20.4%	16%	22%
Master Degree in a field other than Engineering	4.1%	4%	4%
Ph.D. Degree in Engineering	1%	4%	0%
Ph.D. Degree in a field other than Engineering	0%	0%	0%

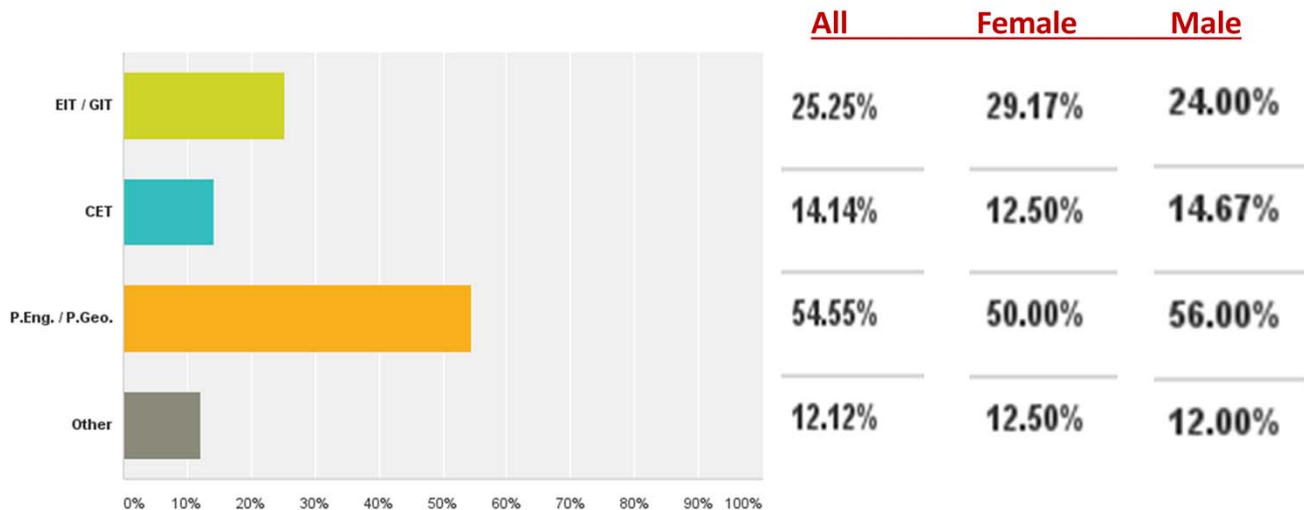
Total adds to >100% due to holders of two or more credentials

## My professional credentials include:



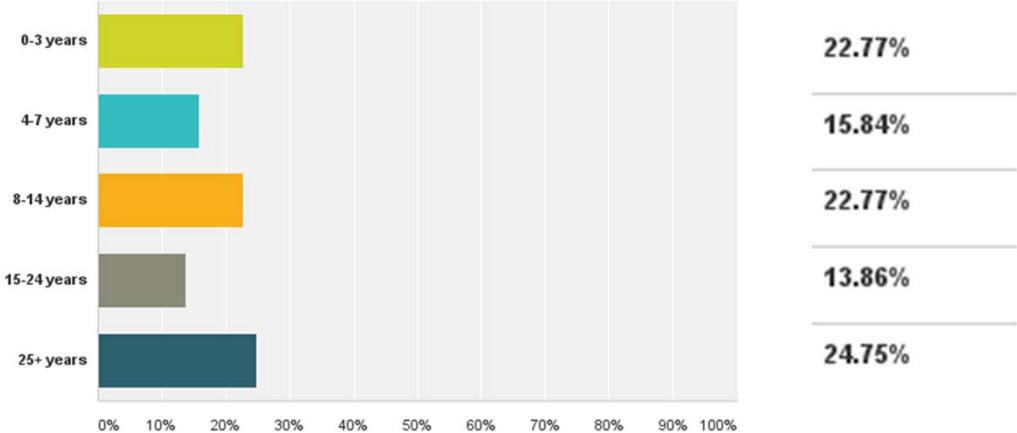
Total adds to >100% due to holders of two or more credentials

## Professional credentials, by gender

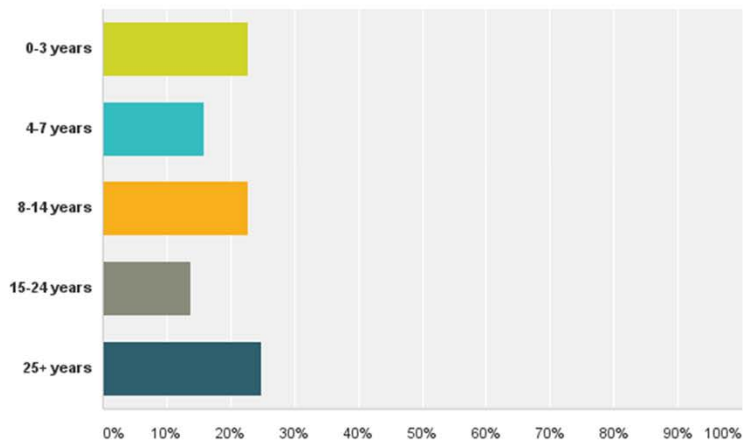


Total adds to >100% due to holders of two or more credentials

# My years of engineering experience (not including time away from the profession or other work experience in a non-engineering field) are:



## Years of engineering experience, by gender



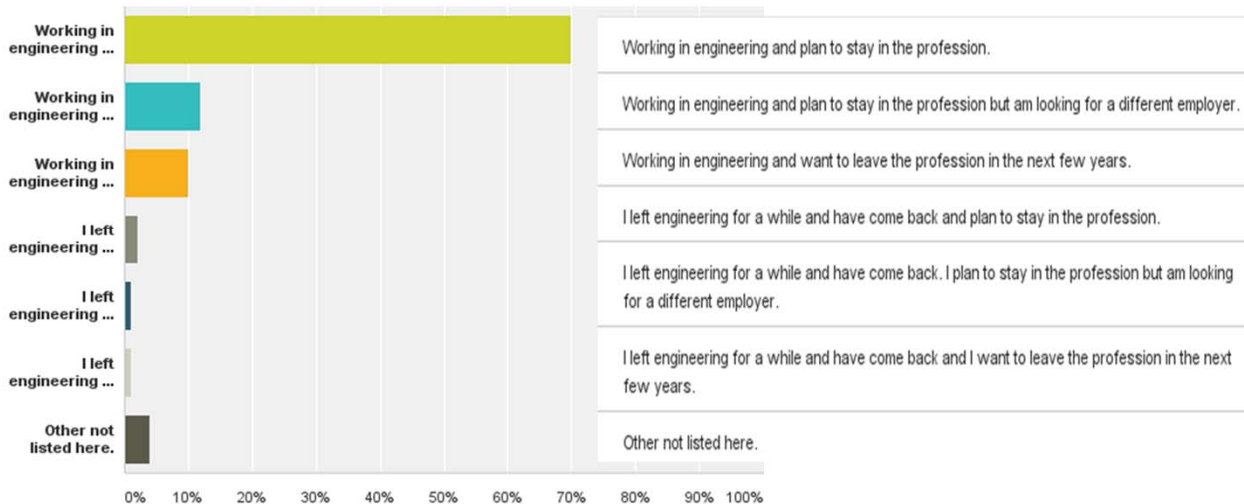
	<u>All</u>	<u>Female</u>	<u>Male</u>
	22.77%	38.46%	17.33%
	15.84%	15.38%	16.00%
	22.77%	30.77%	20.00%
	13.86%	15.38%	13.33%
	24.75%	0.00%	33.33%



## Tell us a bit about your employment history

	Less than 1 year	2-3 yrs	4-7 yrs	8-14 yrs	15-24 yrs	25+ yrs	Total
Length of time at current job	<b>11.88%</b> 12	<b>26.73%</b> 27	<b>22.77%</b> 23	<b>21.78%</b> 22	<b>8.91%</b> 9	<b>7.92%</b> 8	101
Length of time at previous job	<b>27.78%</b> 20	<b>30.56%</b> 22	<b>26.39%</b> 19	<b>9.72%</b> 7	<b>4.17%</b> 3	<b>1.39%</b> 1	72
Length of time at 2nd-previous job	<b>32.00%</b> 16	<b>34.00%</b> 17	<b>22.00%</b> 11	<b>4.00%</b> 2	<b>6.00%</b> 3	<b>2.00%</b> 1	50
Length of time at 3rd-previous job	<b>32.50%</b> 13	<b>32.50%</b> 13	<b>27.50%</b> 11	<b>5.00%</b> 2	<b>0.00%</b> 0	<b>2.50%</b> 1	40

## Which of the following best describes you?



## Career expectations, by gender

	<b>All</b>	<b>Female</b>	<b>Male</b>
Working in engineering and plan to stay in the profession.	70.00%	76.92%	67.57%
Working in engineering and plan to stay in the profession but am looking for a different employer.	12.00%	7.69%	13.51%
Working in engineering and want to leave the profession in the next few years.	10.00%	3.85%	12.16%
I left engineering for a while and have come back and plan to stay in the profession.	2.00%	3.85%	1.35%
I left engineering for a while and have come back. I plan to stay in the profession but am looking for a different employer.	1.00%	0.00%	1.35%
I left engineering for a while and have come back and I want to leave the profession in the next few years.	1.00%	0.00%	1.35%
Other not listed here. ← <b>“Family”; “faith-based ministry”; “keeping options open”</b>	4.00%	7.69%	2.70%

## Career expectations, by years' experience:

	<b>All</b>	<b>0-7 yrs</b>	<b>8+ yrs</b>
Working in engineering and plan to stay in the profession.	70.00%	69.23%	70.49%
Working in engineering and plan to stay in the profession but am looking for a different employer.	12.00%	5.13%	16.39%
Working in engineering and want to leave the profession in the next few years.	10.00%	12.82%	8.20%
I left engineering for a while and have come back and plan to stay in the profession.	2.00%	2.56%	1.64%
I left engineering for a while and have come back. I plan to stay in the profession but am looking for a different employer.	1.00%	0.00%	1.64%
I left engineering for a while and have come back and I want to leave the profession in the next few years.	1.00%	0.00%	1.64%
Other not listed here. ← "Family"; "faith-based ministry"; "keeping options open"	4.00%	10.26%	0.00%

## If you have left engineering practice in the past, what was the reason? (Check all that apply)



24 Respondents in total

## Reasons for leaving the profession, by gender

	All	Female	Male
Maternity leave	30.43%	77.78%	0.00%
Parental leave	13.04%	11.11%	14.29%
Personal leave (e.g. your own health, other interests or pursuits, etc. for yourself)	17.39%	22.22%	14.29%
Leave for other responsibilities (e.g. caregiving to children or parents or others, not including maternity / parental leave)	0.00%	0.00%	0.00%
Work environment (e.g. nature of the work, corporate culture, compensation, career progression, etc.)	17.39%	0.00%	28.57%
Other reasons	30.43%	11.11%	42.86%

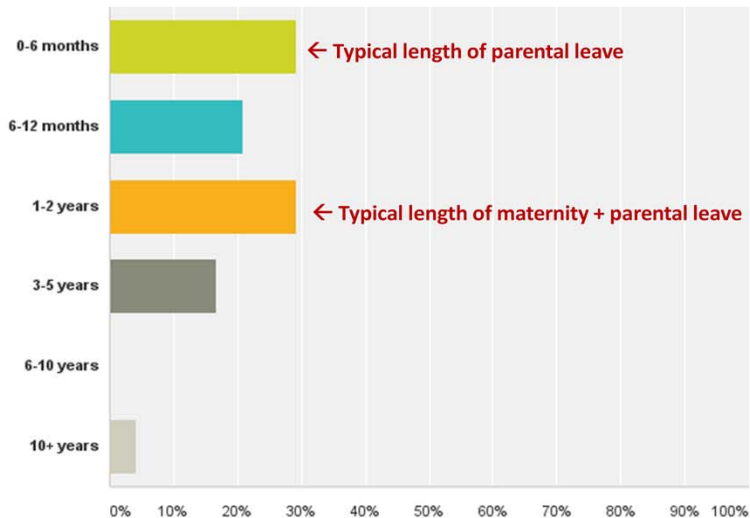
24 Respondents in total

## Reasons for leaving the profession, by years' experience

	<b>All</b>	<b>0-7 yrs</b>	<b>8+ yrs</b>
Maternity leave	30.43%	<b>20.00%</b>	<b>33.33%</b>
Parental leave	13.04%	<b>0.00%</b>	<b>16.67%</b>
Personal leave (e.g. your own health, other interests or pursuits, etc. for yourself)	17.39%	<b>40.00%</b>	<b>11.11%</b>
Leave for other responsibilities (e.g. caregiving to children or parents or others, not including maternity / parental leave)	0.00%	<b>0.00%</b>	<b>0.00%</b>
Work environment (e.g. nature of the work, corporate culture, compensation, career progression, etc.)	17.39%	<b>20.00%</b>	<b>16.67%</b>
Other reasons	30.43%	<b>20.00%</b>	<b>33.33%</b>

**24 Respondents in total**

## Total time away from the profession, by gender

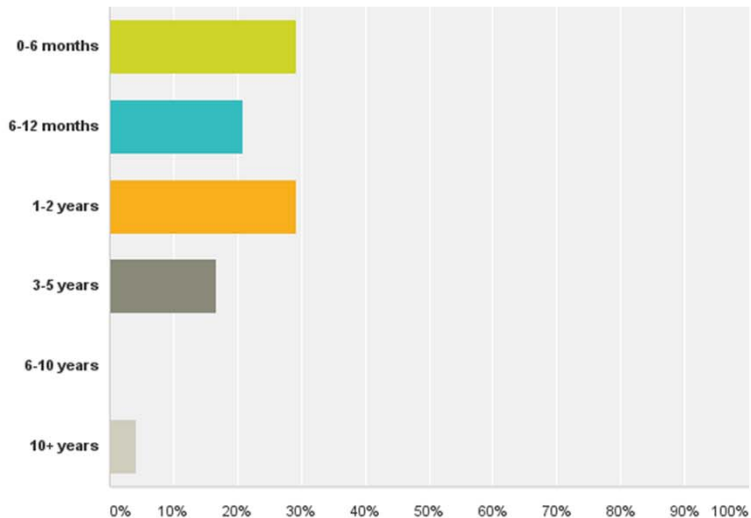


All	Female	Male
29.17%	11.11%	40.00%
20.83%	22.22%	20.00%
29.17%	55.56%	13.33%
16.67%	11.11%	20.00%
0.00%	0.00%	0.00%
4.17%	0.00%	6.67%

24 Respondents in total



## Total time away from the profession, by years' experience



	<u>All</u>	<u>0-7 yrs</u>	<u>8+ yrs</u>
	<b>29.17%</b>	<b>60.00%</b>	<b>21.05%</b>
	<b>20.83%</b>	<b>0.00%</b>	<b>26.32%</b>
	<b>29.17%</b>	<b>20.00%</b>	<b>31.58%</b>
	<b>16.67%</b>	<b>20.00%</b>	<b>15.79%</b>
	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
	<b>4.17%</b>	<b>0.00%</b>	<b>5.26%</b>

24 Respondents in total

# Workplace characteristics

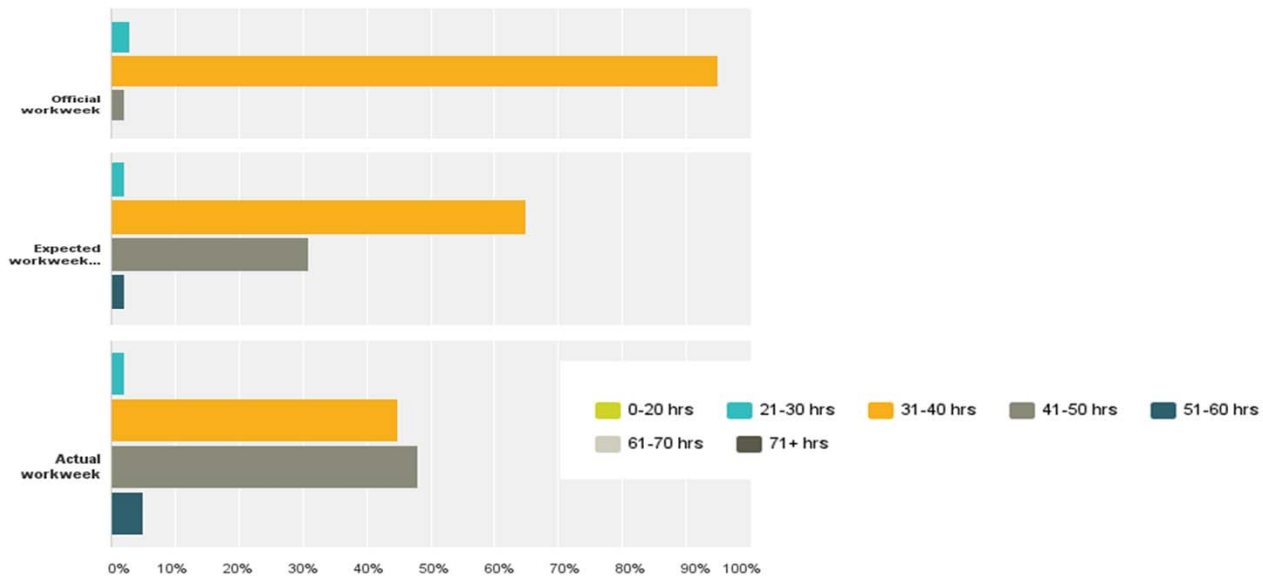
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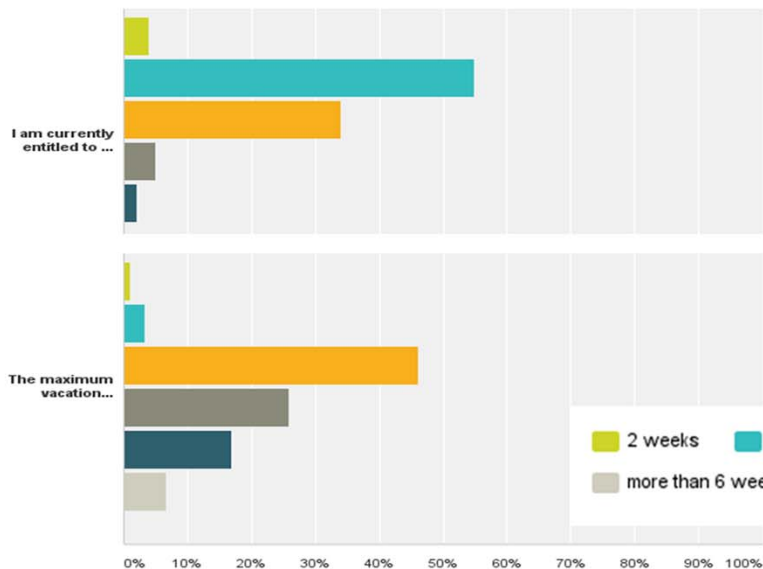
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## Tell us about the length of your workweek.



## Tell us about your vacation entitlement.



I am currently entitled to the following annual vacation.

The maximum vacation entitlement for any employee in my workplace is



**We asked about the *availability, appeal, use, and comfort* in availing oneself of the following benefits.**

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1. Overtime pay
2. Banked time in lieu of overtime pay
3. Bonuses, commissions, profit-sharing, or stock options
4. Paid sick time
5. Life insurance
6. Pension plan or RRSP Plan
7. Short term disability coverage
8. Long term disability coverage
9. Extended health plan
10. Prescription pharmaceuticals plan
11. Dental plan
12. Paid or subsidized continuing education
13. Paid or subsidized job training
14. Paid or subsidized APEGM or CTTAM dues
15. Paid or subsidized technical society dues
16. Paid leave of absence
17. Unpaid leave of absence
18. Parental / maternity leave top-up to EI
19. Flexible on-site working hours
20. Telecommuting options
21. Job sharing
22. Permanent part-time positions
23. Daycare subsidy
24. On-site daycare

Availability: "I have this benefit" Top 5	Appeal: "This benefit is very appealing/meaningful to me" Top 5
Life insurance (98% of respondents)	Dental plan; paid sick time (86% of respondents)
Dental plan (98%)	Pension or RRSP Plan (85%)
Pension or RRSP plan (94%)	Prescription pharmaceutical plan (78%)
Paid sick time (91%)	Flexible on-site working hours (79%)
Short term disability (91%)	Paid/subsidized APEGM/CTTAM dues (79%)
Bottom 5	Bottom 5
Maternity/parental leave top-up to EI (42% of respondents)	Unpaid leave of absence; day care subsidy (28% of respondents ranked as very appealing/meaningful)
Telecommuting (41%)	Permanent part-time positions (26%)
Job-sharing (11%)	On-site daycare (22%)
On-site daycare (4%)	Paid leave of absence (21%)
Day care subsidy (3%)	Job sharing (5%)

Use: "I've used this benefit" Top 5	Comfort: "I always feel comfortable using this benefit" Top 5
Paid/subsidized APEGM/CTTAM dues (86% of respondents, if available)	Pension/RRSP; Dental plan (93% of respondents)
Dental plan (85%)	Paid/subsidized APEGM/CTTAM dues; Pharmaceutical plan (89%)
Flexible on-site working hours; Pension or RRSP (84%)	Extended health plan (81%)
Paid sick time (83%)	Bonuses, commissions, profit-sharing, stock options (78%)
Prescription pharmaceutical plan (80%)	Life insurance (76%)
Bottom 5	Bottom 5
Long-term disability (18% of respondents for whom available, used this benefit)	Unpaid leave of absence (14% of respondents)
Job-sharing; perm. PT positions (9%)	Flexible on-site working hours (10%)
Paid leave of absence (7%)	Banked time; on-site daycare (8%)
Maternity/parental top-up to EI (8%)	Telecommuting (7%)
On-site daycare; daycare subsidy (0%)	Paid or subsidized job training (5%)

## Benefits that I wish I had are:

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- A retirement plan / a better retirement or pension plan (5 respondents)
- Better coverage on health / dental benefits (4)
- More vacation (4)
- Improved educational fund (1)
- Sabbatical options (1)
- Bonuses (1)
- Part -time position options (1)
- Better parking (1)



<b>“This benefit is very appealing &amp; meaningful to me” Top 5 for WOMEN</b>	<b>“This benefit is very appealing &amp; meaningful to me” Top 5 for MEN</b>
Flexible on-site working hours (96% of female respondents)	Dental plan (85% of male respondents)
Pension / RRSP (96%)	Paid sick time (83%)
Paid Sick time (92%)	Pension / RRSP (81%)
Subsidized/paid APEGM/CTTAM dues; dental plan; extended health plan (88%)	Prescription pharmaceutical plan (75%)
Prescription pharmaceutical plan (85%)	Subsidized / paid APEGM/CTTAM dues (75%)
<b>Bottom 5 for WOMEN</b>	<b>Bottom 5 for MEN</b>
Daycare subsidy (43% of respondents ranked as very appealing/meaningful)	Paid leave of absence (32% of respondents ranked as very appealing/meaningful)
Unpaid leave of absence (38%)	Daycare subsidy (26%)
On-site daycare (33%)	Permanent part-time positions (20%)
Paid leave of absence (31%)	On-site daycare (19%)
Job sharing (0%)	Job sharing (9%)

<b>“This benefit is very appealing &amp; meaningful to me” Top 5 for 0-7 Yrs. Experience</b>	<b>“This benefit is very appealing &amp; meaningful to me” Top 5 for 8+ Yrs. Experience</b>
Pension or RRSP; Dental plan (85% of respondents)	Paid sick time; Dental plan (85% of respondents)
Paid or subsidized APEGM/ CTTAM dues (85%)	Pension or RRSP (84%)
Paid sick time (83%)	Flexible on-site working hours (80%)
Paid or subsidized job training (79%)	Prescription pharmaceutical plan (79%)
Overtime pay; flexible on-site working hours (78%)	Extended health benefits (78%)
<b>Bottom 5 for 0-7 Yrs. Experience</b>	<b>Bottom 5 for 8+ Yrs. Experience</b>
Telecommuting options (41% of respondents ranked as very appealing/meaningful)	Unpaid leave of absence (36% % of respondents ranked as very appealing/meaningful)
Paid leave of absence (30%)	Permanent part-time positions (33%)
On-site daycare (29%)	Daycare subsidies (22%)
Permanent part-time positions (23%)	On-site daycare (18%)
Job sharing (9%)	Job sharing (7%)

<b>"I feel conspicuous / experience negative consequences using this benefit " Top 5 for WOMEN</b>	<b>"I feel conspicuous / experience negative consequences using this benefit " Top 5 for MEN</b>
Flexible on-site working hours	Flexible on-site working hours
Telecommuting options	Banked time in lieu of overtime pay
Unpaid leave of absence	Overtime pay
Paid sick time	Unpaid leave of absence
Short term disability	Short term disability

<b>“I feel conspicuous / experience negative consequences using this benefit ” Top 5 for 0-7 Yrs. Exp.</b>	<b>“I feel conspicuous / experience negative consequences using this benefit ” Top 5 for 8+ Yrs. Exp.</b>
Flexible on-site working hours	Banked time in lieu of overtime pay
Telecommuting options	Overtime pay
Unpaid leave of absence	Flexible on-site working hours
Short term disability	Unpaid leave of absence
Paid leave of absence; extended health benefits; long-term disability	Paid or subsidized job training

# Career decision and career satisfaction factors

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## What role do these factors play in your workplace satisfaction and career decisions?

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1. Contradictory or conflicting work requirements/demands
2. Excessive work requirements/demands without adequate or reasonable resources
3. Work that was too difficult without adequate/reasonable support/resources
4. Work that was below my qualifications/level/interests, or work that was incompatible with my colleagues with the same qualifications, level, and interests
5. Excessive travel
6. Slow or unclear advancement; lack of transparency / consistency in advancement
7. Low salary
8. Bad boss
9. Being made to feel conspicuous or non-contributory if flexible work benefits are used
10. Incivility (condescension, undermining, bullying) from colleagues/supervisors that is not addressed
11. Arrogance of others around me
12. Money-driven climate
13. Unethical climate
14. An environment inflexible to new approaches/processes/ideas

## Key career decision factors and their frequency in the workplace

“This factor is <u>absolutely critical</u> to my career satisfaction: – Top 5	“I experience this <u>very often or regularly</u> in my current workplace” – Top 5
Bad boss (66% of respondents)	Excessive work demands/requirements without adequate support/resources (42% of respondents)
Unethical climate (49%)	Contradictory or conflicting work requirements/demands (36%)
Incivility in the workplace that remains unaddressed (45%)	Money-driven climate (35%)
Low salary (44%)	Slow or unclear advancement; lack of transparency / consistency in advancement (34%)
Excessive work demands/requirements without adequate support/resources (40%)	Low salary (27%)

## Key career decision factors, by gender

<b>“This factor is absolutely critical to my career satisfaction: Top 5 for WOMEN</b>	<b>“This factor is absolutely critical to my career satisfaction: Top 5 for MEN</b>
Bad boss	Bad boss
Incivility in the workplace that remains unaddressed	Unethical climate
Excessive work requirements/demands without adequate or reasonable resources	Low salary
Unethical climate	Incivility in the workplace that remains unaddressed
Slow or unclear advancement; lack of transparency / consistency in advancement	Excessive work requirements/demands without adequate or reasonable resources



## Key career decision factors, by years' experience

<b>“This factor is absolutely critical to my career satisfaction: Top 5 for 0-7 Yrs. Experience</b>	<b>“This factor is absolutely critical to my career satisfaction: Top 5 for 8+ Yrs. Experience</b>
Bad boss	Bad boss
Low salary	Unethical climate
Unethical climate	Incivility in the workplace that remains unaddressed
Incivility in the workplace that remains unaddressed	Excessive work requirements/demands without adequate or reasonable resources
Excessive work requirements/demands without adequate or reasonable resources	Low salary

## Frequency in the workplace, by gender

<b>“I experience this <u>very often or regularly</u> in my current workplace” Top 5 for WOMEN</b>	<b>“I experience this <u>very often or regularly</u> in my current workplace” Top 5 for MEN</b>
Excessive work requirements/demands without adequate or reasonable resources	Excessive work requirements/demands without adequate or reasonable resources
Money-driven climate	Contradictory or conflicting work requirements/demands
Contradictory or conflicting work requirements/demands	Money-driven climate
Low salary	Slow or unclear advancement; lack of transparency / consistency in advancement
Slow or unclear advancement; lack of transparency / consistency in advancement	Low salary

## Frequency in the workplace, by years' experience

<b>"I experience this <u>very often or regularly</u> in my current workplace"</b> <b>Top 5 for 0-7 Yrs. Experience</b>	<b>"I experience this <u>very often or regularly</u> in my current workplace"</b> <b>Top 5 for 8+ Yrs. Experience</b>
Excessive work requirements/demands without adequate or reasonable resources	Excessive work requirements/demands without adequate or reasonable resources
Low salary	Slow or unclear advancement; lack of transparency / consistency in advancement
Money-driven climate; Contradictory or conflicting work requirements/demands	Contradictory or conflicting work requirements/demands
Slow or unclear advancement; lack of transparency / consistency in advancement	Money-driven climate
Work that is too difficult without adequate/reasonable support/resources	Low salary

## Other de-motivating factors in the workplace

(reported by overall theme in order of frequency, and representative comments, all respondents)

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### ***Workplace culture***

The profession is dominated by large engineering corporations that seem more preoccupied with quarterly profits than the long-term health and direction of the profession. Local culture is lost, and the local business environment is disregarded by a distant head office. The company sees employees as dollar signs.

### ***Leadership***

Standards of normativity and inclusivity that creates 'clubs' of managers and senior engineers disconnected from junior staff, and 'good old boys clubs' with no female peers as role models in the workplace. Arrogance and hubris among management, lack of transparency and effective communication, lack of mentorship and co-operation from senior employees, managers that don't get to know their team.

### ***Recognition***

Salaries that are incommensurate with responsibilities and contributions, salaries that are unequal among employees in the same firm at the same level, lack of meaningful salary increases (above inflation rate), and the steady erosion of perks and benefits by management.

### ***Personal autonomy***

Pressure to meet unrealistic deadlines without support and without any recognition or compensation, lack of opportunity to influence my own workload, lack of freedom to control my own work schedule.

Please indicate the factors that would be important in your decision to leave an employer and a decision to leave the engineering profession entirely.

<b>“This factor would be critical in my decision to leave an employer” – Top 3</b>	<b>“This factor would be critical in my decision to leave the engineering profession entirely” – Top 3</b>
<b>Bad boss (98% of respondents)</b>	<b>Unethical climate (65% of respondents)</b>
<b>Work that was too difficult without adequate/reasonable support/resources (97%)</b>	<b>Low salary (63%)</b>
<b>Being made to feel conspicuous or non-contributory if flexible work benefits are used (95%)</b>	<b>Excessive work requirements/demands without adequate or reasonable resources (60%)</b>

## Key reasons to leave an employer, by gender:

<b>“This factor would be critical in my decision to leave an employer” Top 3 for WOMEN</b>	<b>“This factor would be critical in my decision to leave an employer” Top 3 for MEN</b>
<b>Bad boss; Work that was too difficult without adequate/reasonable support/resources; Arrogance of others around me</b>	<b>Being made to feel conspicuous or non-contributory if flexible work benefits are used</b>
<b>Excessive travel</b>	<b>Bad boss</b>
<b>Contradictory or conflicting work requirements/demands; Being made to feel conspicuous or non-contributory if flexible work benefits are used; Slow or unclear advancement; lack of transparency / consistency in advancement</b>	<b>Work that was too difficult without adequate/reasonable support/resources</b>

## Key reasons to leave an employer, by years' experience:

<b>“This factor would be critical in my decision to leave an employer” Top 3 for 0-7 Yrs. Experience</b>	<b>“This factor would be critical in my decision to leave an employer” Top 3 for 8+ Yrs. Experience</b>
<b>Bad boss; Work that was too difficult without adequate/reasonable support/resources; Being made to feel conspicuous or non-contributory if flexible work benefits are used</b>	<b>Bad boss</b>
<b>Slow or unclear advancement; lack of transparency / consistency in advancement</b>	<b>Work that was too difficult without adequate/reasonable support/resources</b>
<b>Incivility in the workplace that remains unaddressed</b>	<b>Being made to feel conspicuous or non-contributory if flexible work benefits are used; arrogance of those around me.</b>

## Key reasons to leave the engineering profession, by gender

<b>“This factor would be critical in my decision to leave the engineering profession entirely” Top 3 for WOMEN</b>	<b>“This factor would be critical in my decision to leave the engineering profession entirely” Top 3 for MEN</b>
<b>Excessive work requirements/demands without adequate or reasonable resources</b>	<b>Unethical climate</b>
<b>Money-driven climate</b>	<b>Low salary</b>
<b>Unethical climate; environment inflexible to new approaches/processes/ideas</b>	<b>Excessive work requirements/demands without adequate or reasonable resources</b>



## Key reasons to leave the engineering profession, by years' experience

<b>"This factor would be critical in my decision to leave the engineering profession entirely" Top 3 for 0-7 Yrs. Experience</b>	<b>"This factor would be critical in my decision to leave the engineering profession entirely" Top 3 for 8+ Yrs. Experience</b>
<b>Excessive work requirements/demands without adequate or reasonable resources</b>	<b>Low salary</b>
<b>Unethical climate</b>	<b>Unethical climate</b>
<b>Environment inflexible to new approaches/processes/ideas</b>	<b>Slow or unclear advancement; lack of transparency / consistency in advancement</b>

## **A smaller list of factors was found to be important in fostering career satisfaction in engineering.**

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1. Recognition (formal and informal) of one's value and contributions to the organization
2. Training and professional development opportunities
3. Challenging and interesting work assignments
4. Clear pathways for advancement
5. Supportive climate to manage multiple life role obligations
6. Key supportive people in the organization (colleagues, supervisor)
7. Formal or informal mentorship in the organization

## Key career satisfaction factors and their frequency in the workplace

<b>“This factor is <u>absolutely critical or very important</u> to my career / workplace satisfaction” Top 3</b>	<b>“I have experienced this <u>very often or regularly</u> in my current workplace” Top 3</b>
<b>Key supportive people in the organization (colleagues, supervisor) (92% of respondents)</b>	<b>Key supportive people in the organization (colleagues, supervisor) (75% of respondents)</b>
<b>Challenging and interesting work assignments (87%)</b>	<b>Challenging and interesting work assignments (61%)</b>
<b>Supportive climate to manage multiple life role obligations (84%)</b>	<b>Supportive climate to manage multiple life role obligations (60%)</b>

## Key career satisfaction factors, by gender

<b>“This factor is <u>absolutely critical or very important</u> to my career / workplace satisfaction” Top 3 for WOMEN</b>	<b>“This factor is <u>absolutely critical or very important</u> to my career / workplace satisfaction” Top 3 for MEN</b>
Key supportive people in the organization (colleagues, supervisor)	Key supportive people in the organization (colleagues, supervisor)
Supportive climate to manage multiple life role obligations	Challenging and interesting work assignments
Challenging and interesting work assignments	Supportive climate to manage multiple life role obligations; informal and formal recognition of one’s value and contributions to the organization

## Key career satisfaction factors, by years' experience

<b>“This factor is <u>absolutely critical or very important</u> to my career / workplace satisfaction” Top 3 for 0-7 Yrs. Experience</b>	<b>“This factor is <u>absolutely critical or very important</u> to my career / workplace satisfaction” Top 3 for 8+ Yrs. Experience</b>
Key supportive people in the organization (colleagues, supervisor); Supportive climate to manage multiple life role obligations	Key supportive people in the organization (colleagues, supervisor)
Challenging and interesting work assignments	Supportive climate to manage multiple life role obligations
Informal and formal recognition of one’s value and contributions to the organization	Informal and formal recognition of one’s value and contributions to the organization

## Other motivating factors in the workplace

(reported by overall theme (in order of frequency) and representative comments, all respondents)

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### ***Workplace Environment***

A positive, friendly, and supportive team environment, good space and equipment to do my work, working with people you like, finding good mentorship and friendships, seeing the company involved in the community.

### ***Autonomy***

Having autonomy over projects and time management, having a sense of control over my career direction within the company, flexibility in the work schedule (and seeing supervisors who maintain a work-life balance themselves)

### ***Recognition***

Good pay and benefits, if I'm being profitable then the profits should be shared with me to make more time and quality of life for myself and loved ones, the potential to becoming a shareholder and or an associate in the firm.

### ***Seeing impact***

Working on projects that make a positive difference in people's lives, seeing visible and tangible outcomes of projects, work that has meaning to society is the other reason, seeing client satisfaction.

### ***Personal & career growth***

A growing sense of competency and confidence as I complete work assignments, self-esteem and pride in my work, opportunities to make key decisions and develop multiple roles with respect to engineering projects, and a clear pathway for advancement.

# Experiences and perceptions of engineering identity

Winter 2015



ASSOCIATION OF CONSULTING  
ENGINEERING COMPANIES  
MANITOBA

**TWICE: Technical Women in Consulting Engineering**

## In your experience, has your gender impacted your career trajectory, either positively or negatively?

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### *Responses from Men*

The vast majority of respondents said “No, it has not impacted my career trajectory”, while two respondents indicated that being a white male had likely worked in their favour.

Five male respondents indicated that employment equity had worked against them as men, in which less qualified women were hired over them.

Five other respondents indicated that they recognized that women were discounted and treated differently behind the scenes, that an old-boys-culture still exists in their workplace, and that women had a more difficult time being visible and in the organization when they also carried the majority of their family obligations that impacted their ability to be out of town, for example.



## In your experience, has your gender impacted your career trajectory, either positively or negatively?

### *Responses from Women (with representative comments)*

#### *Yes, there have been negative impacts in the office (6 responses)*

I work in a medium sized engineering firm, and only one department head out of five is a women. Although more women have joined the office over the past 3 years, I don't see the women in this office advancing as fast or as far as the men. I receive offhand comments, such as a manager telling me he "didn't need any more women trying to run his life" and a manager once commenting that he was surprised that his most productive staff were women.

#### *The construction site is a tough place to be female (4 responses)*

Where I have noticed sexism is from contractor employees working on site. I am often treated with a lack of respect. Comments, inappropriate photos in the workplace, and lack of female mentorship have been the primary reasons I feel my gender negatively impacts my career in the construction industry.

#### *No impact (or no impact, yet!) (6 responses)*

I don't think it has had an impact. Being a woman made me eligible for certain scholarships and bursaries during university. I feel respected by my former classmates and colleagues. Being fairly senior in my company, I will occasionally get the odd comment or question about how I deal with being one of the few females, but for the most part, I very rarely get a negative reaction to my gender. Although it hasn't affected me yet, I imagine that maternity leave and parenting may leave me behind my male counterparts in terms of salary and career advancement.

## Besides gender, are there factors that have impacted your career trajectory, either positively or negatively?

### *Responses from Men*

- **Political** views.
- **Health** issues.
- **Ethnicity**: “positive in some aspects, negative in some aspects”
- “**Age** can be a limiting factor when associated with lack of experience” and “I’m young, and am more willing to travel and get experience in every aspect of my job”.
- “Sometimes social requirements appear too much when you have **family commitments**”
- **First Nations**: “I feel that I’ve earned my position and my achievements, but sometimes I think that it may adversely impact my career”.
- “I believe that having **English as a first language** has helped me”.
- “**Ethnicity, age, and sexual orientation** do play a large role. Being a white male, I totally feel that I have felt "first dibs" on things that my other colleagues do not simply because of my privilege. There is still an uncomfortable feeling when "the guys" talk about things at the lunch table or at the water cooler that may make others feel like they are welcome, but not included”.
- “My career has been positively impacted by my **life experience prior to engineering**”.
- “I identify as **gay/ LGBT**. As I’ve gained more experience in my field, I’ve started to "come out" to some colleagues. This has never hindered me, and my employer has diversity policies”.

## Besides gender, are there factors that have impacted your career trajectory, either positively or negatively?

### *Responses from Women*

- **Health:** “I perceive from others around me that this is a ‘weakness’” and “health limits my ability to work long hours, which seems to be expected in early-career”
- **Maternity leave** has an impact on career trajectory. Multiple leave close together make the impacts more severe.
- My upbringing as a **Canadian citizen whose first language was English** has impacted my career trajectory positively, as it meant that I was not limited by language barriers.
- I am of **Aboriginal descent** so I feel that through programs and scholarships, I received additional help on my career trajectory.

## Do you identify engineering work, the engineering profession, and/or the engineering community of practice as part of your core identity?

**Responses from Men** (reported by overall theme in order of frequency, and representative comments)

### *Yes, engineering is inextricable from my core identity (28 responses):*

Engineering is the best way I can contribute to my fellowmen [sic] and improve the lives of people in society. I feel connected to engineering industry, ranging from the abilities and knowledge and type of work, to the way engineers think, and the philosophy and general attitude of engineering. I feel comfortable identifying with the engineering profession and feel that being an engineer is a part of my core identity.

### *Engineering is a partial identity for me (9 responses):*

I identify as someone who is inherently interested in technology and enjoys solving problems and figuring out how things work, so it suits my personality; however, engineering is a profession just like any other. The profession is a means to an end for career development and potentially other careers. If I wasn't doing it, I could easily be replaced with another person readily enough.

### *No, engineering is not a part of my core identity (7 responses)*

This profession is what I do, not what I am. My priorities are the relationships in my life. The profession does not define me. I define myself by values like integrity, fairness, and hard work.

## Do you identify engineering work, the engineering profession, and/or the engineering community of practice as part of your core identity?

### **Responses from Women** (reported by overall theme in order of frequency & representative comments)

#### ***Yes, engineering is inextricable from my core identity (8 responses):***

I do identify with engineering as a part of my identity. It is a major part of who I am. It influences how I think about things and how I approach situations and issues. I'm proud to be an engineer.

#### ***Engineering is a partial identity for me (5 responses):***

I identify with the *traits* common to engineers, such as being logical, rational, and organized. Identifying as an engineering professional is a part of my identity, but not at the core of it. I have so many other interests and priorities in my life, and my career is only one aspect of this. I prefer to find my core identity outside of engineering and career.

#### ***No, engineering is not a part of my core identity (3 responses)***

I do not identify myself as an engineering professional as part of my core identity. It is supplementary. Engineering is a job. I work for an engineering company. Being female in a male dominated profession has resulted in a lot of discrimination throughout my career. Although I'm proud to have achieved an engineering degree, it's not part of my core identity. If I had to choose again, I would not choose engineering even though I've been very successful in my career.

## Do you (or to what extent do you) experience that the engineering community identifies and embraces *you* as a member of the profession?

**Responses from Men (reported by overall theme in order of frequency, and representative comments)**

### ***Yes (24 responses)***

I am recognized in the industry within my circle of expertise. I feel welcome when I walk into a room to discuss or express my views. I feel respected by my fellowmen [sic]. By identifying with common traits, stereotypes, and generalization associated with engineers, I feel counted and that I belong in the engineering community. There are lots of opportunities to become part of the industry. I feel accepted at my workplace and my current position. I feel fully embraced. I feel right at home in the engineering community. Volunteer and PD opportunities allowed me to interact with people at all levels within the profession. I have been honored with considerable recognition and many awards.

### ***No (12 responses)***

I am only seen as a provider of annual dues. We are slaves to employers who treat us poorly. There is a low level of unease and mistrust between fellow engineers when we work for competing firms or have a client business relationship among ourselves. I'm young, and the culture is "I've been here longer and am smarter than you"; in a profession where we are told that we must innovate and create, the opposite is very much the norm in industry. I have to fit the mould of who was there before me. There is no sense of community of engineers in the truest sense of the word. It feels like it's everyone for themselves. Even the name change from *Consulting Engineers of Manitoba* to *Association of Consulting Engineering Companies* shifts the emphasis from the engineers to the firms.



## Do you (or to what extent do you) experience that the engineering community identifies and embraces *you* as a member of the profession?

**Responses from Women (reported by overall theme in order of frequency, and representative comments)**

### ***Yes (9 responses) and Yes, But... (2 responses)***

For the most part, I feel that the engineering community accepts me as a member. I feel a part of the engineering community by my involvement with ACEC and another engineering organization. I felt very welcomed into the company and department. Winnipeg is a small engineering community, and I always find people I went to school with or work with when I attend professional events. I feel embraced by the community, but often feel left out by my male colleagues at social gatherings, either because I don't get invited or because I do get invited but then get treated differently as a female.

### ***No (2 responses)***

As a science professional but not an engineer, I don't feel that I am provided with the same professional respect as engineers and geoscientists are given. I don't get as much recognition as even an EIT would.

## Which aspects of engineering identity are most appealing, comfortable or accessible to you? Which aspects do you align with?

**Responses from Men (reported by overall theme in order of frequency, and representative comments)**

“The role that engineers serve in the community, as society’s solution-providers: unique skills and experience that are used largely to improve people’s lives and the human condition; Technology, design, improving and controlling the physical environment. I love the concept of engineering: to take scientific principles and apply them to physical, functional, and useful systems.”

“I like that we are a widely recognized profession looked upon by the general public in a mostly favourable light and are respected by those around us. I am proud to have people know that I am an engineer.”

Problem-solver ♦ Challenging ♦ A strong, defined ethical responsibility ♦ Interesting ♦ Well-educated & possess specialized knowledge ♦ Creative ♦ Designers ♦ Guarding public interest and safety ♦ Efficient



## Which aspects of engineering identity are most appealing, comfortable or accessible to you? Which aspects do you align with?

Responses from Women (reported by overall theme in order of frequency, and representative comments)

“We are the people that make the designs into reality”

“The role engineers play in society: we literally have designed the world we live in”

Rational ♦ Logical ♦ Organized ♦ Detail oriented ♦ Methodical ♦ Respected ♦ Professionalism  
♦ Creativity ♦ Logical ♦ Problem solving ♦ Hard-working ♦ Ethical ♦ Intelligent ♦ Problem  
solver ♦ Take on challenges ♦ Technical nature ♦ Organization ♦ Intelligent ♦ Gifted in math  
and science

## Which aspects of engineering identity are most uncomfortable, far-removed, inaccessible, or distasteful to you?

**Responses from Men** (reported by overall theme in order of frequency & representative comments)

### *The stereotypes of engineers are those of...*

Tradespeople (e.g. electricians, mechanics), misogynists, arrogant, socially awkward, abrasive, impractical.

Note: some of these male respondents indicated that they resented the stereotype of engineers as misogynists and arrogant, but yet acknowledged it to be true in their experience.

### *That engineers are...*

Undercompensated by employers. Under-recognized by society. Hold life-long responsibility for their work. Do not receive tangible value for APEGM dues.

### *That engineering is/has...*

Devalued by clients and society. Treated as a commodity. Taxing workplace realities including poor treatment by clients, the legal and business side of engineering, tight delivery schedules and preoccupation with efficiency in time budgets. Ownership by profit-driven engineering corporations unable to invest in people, resources, and new ideas for long term benefits for society.

## Which aspects of engineering identity are most uncomfortable, far-removed, inaccessible, or distasteful to you?

**Responses from Women** (reported by overall theme in order of frequency & representative comments)

### *The stereotypes of engineers are those of...*

Male, socially awkward, loners, unemotional, arrogant, big egos, socially inept, nerds, drink to excess, can't communicate.

### *That in engineering....*

Most firms are highly concerned about profitability. Excessive work hours and the expectation of 24/7 availability. Dealing with contractors. Engineering as a commodity rather than a profession.

The ACEC-Manitoba TWICE Committee thanks

- the respondents of the survey
- the ACEC-MB Board in its support for the initiative
- ACEC-MB principal firm contacts for assistance in distributing the survey



**TWICE: Technical Women in Consulting Engineering**