2015 Final Year Engineering Student Survey – Atlantic* Report

Conducted by Ipsos Reid on behalf of Engineers Canada

August 2015

*Newfoundland and Labrador, Prince Edward Island, Nova Scotia, and New Brunswick

Table of Contents

Research Objectives

- The primary objective of this research is to understand the reasons why graduates of CEAB accredited engineering programs at Atlantic Canadian higher education institutions do or do not intend to apply for their license. For the purposes of this report, Atlantic Canada includes Newfoundland and Labrador, Prince Edward Island, Nova Scotia, and New Brunswick.
- In order to achieve this objective, the research seeks to understand the following:
  - The future career and/or education plans of final year engineering students;
  - Motivations for pursing their undergraduate degree in engineering;
  - The percentage of final year engineering students who intend to pursue a career in Engineering and the percentage who intend to apply for their P.Eng. licence.

Methodology

- The online survey was conducted between February 24 to April 3, 2015 with final year undergraduate engineering students.
- All higher education institutions' Faculties of Engineering with CEAB accredited programs were invited to participate in the study and were asked to send the online survey to all final year engineering students registered in their engineering program.
- The link to the online survey was sent to the higher education institutions and each school was requested to send the survey link to all qualified students.
- The survey was offered in both English and French.
- Nationally, total of 35 higher education institutions participated in the research and 2,010 students completed the survey. Within Atlantic provinces specifically, 3 schools participated and a total of n=113 students completed the survey.
- The margin of error for Atlantic Canadian participants (n=113) is ± 3.7%, 19 times out of 20.
- Statistically significant differences year or year are identified with arrows ▲▼, while statistically significant differences between subgroups are identified with letters (the letter(s) identify the subgroup the % is different from)

Methodology (cont'd)

- For certain questions, the base size was too low to include in reporting. These include: Q16, Q17 (only n=6 responded to these questions) and Q36b (only n=3)

Please note: base sizes under n=30 are considered very small and should be interpreted with caution

Key Highlights

While over nine in ten students intend on pursuing a career in engineering (92%) we observe a decline compared to previous years (98% in 2014, 98% in 2013). The proportion of students who intend to apply for licensure (72%) remains strong and consistent with 2014 (66%).

- As noted, the vast majority of students continue to report they are likely (definitely/ probably) to pursue a career in engineering (92% vs. 98% in 2014, 98% in 2013) however this figure is lower than in previous years.
- Seven in ten of all students indicate they are likely (definitely/ probably) to apply for licensure (72% vs. 66% in 2014, 68% in 2013), consistent with last year, of which four in ten definitely will pursue their P.Eng. licence (43%) and three in ten probably will (28%). Two in ten (21%) do not intend on applying for their P.Eng. while fewer than one in ten don't know (7%).
- Consistent with 2014, the vast majority (83%) of final year engineering students intend to go into the workforce after graduating with their bachelor's degree in Engineering, while one in ten (12%) intend to pursue more education after their undergraduate degree is complete.
- Overall, three in ten students have already been offered a job in the engineering field (29%).

Key Highlights (cont'd)

There have also been some notable shifts in students' knowledge about certain aspects of the engineering profession compared to last year:

- Students are more likely to think that a license is not required to use the title 'Engineer' than last year (32% vs. 21% in 2014, 19% in 2013).
- In terms of organizational responsibility, students are more likely to know that their respective provincial engineering association licenses professional engineers (95% vs. 84% in 2014) and regulates the practice of engineering (80% vs. 69%). They are also more likely to believe that the organization licenses companies offering engineering services (63% vs. 48%) and promotes the interests of professional engineers (78% vs. 64%). In each case, they are less likely to feel Engineers Canada fulfills those functions.

Executive Summary

Undergraduate Program Motivations and Experience

- The most common reasons students provided for choosing to study engineering are that it was related to their interests (62%) or because of the application of science and math (61%). Other common mentions include the practical, applied nature of the discipline (55%), financial security (47%), job security (44%) and the challenge (44%).
- Seven in ten students (68%) indicate having decided to study engineering while in high school, while one in ten did so during first year (11%) or while they were working (11%) and slightly fewer when they were a small child (7%). Very few did so during second year (2%).
- Students' feel that by far the most important support for students during their engineering studies were family and friends (87%), followed by around half who mentioned faculty (47%) and four in ten who said individuals from a co-op/internship (41%). Around one in ten mention off campus work (15%) or engineer societies/clubs (13%).
- In terms of extracurricular participation, just over half of students (55%) indicate having participated in off campus work during their degree program, followed by four in ten who worked on campus (38%). Closer to two in ten participated in an off campus organization (22%), discipline specific engineering organizations (20%), another engineering society (18%).
- Students are most likely to feel that the single greatest barrier to completing their engineering degree is the workload of courses (32%), followed closely by school life balance (29%). Closer to one in ten mention paying tuition (12%), while fewer indicate working and attending school simultaneously (6%) or completing first year (5%).

Executive Summary (continued)

Future Intentions: Continuing Education Versus Entering Workforce

- More than eight in ten (83%) final year engineering students say they intend to go into the workforce after graduating with their bachelor's degree in Engineering, while one in ten (12%) intend to pursue more education.
- Of those who plan to pursue more education, nearly two thirds (62%) intend to pursue their master's degree in Engineering, while fewer than one in ten plan to pursue another professional degree (15%) or a master's degree in another area of study (8%).
- Among those students who intend to pursue a career in engineering, one third of students intend on working in the province they are attending school (34%) or elsewhere in Canada (34%). Fewer than one in ten plan to work in the US (4%) or elsewhere in the world (4%). One quarter (25%) don't know where they will work.
- Three in ten students have already been offered a job in the engineering field (29%), of which two thirds have been offered one job (67%), while around one quarter have been offered two jobs (27%).

Future Intentions: Engineering Career

- Over nine in ten (92%) students say they are likely to pursue a career in engineering, statistically lower than in 2014 (98%), of which seven in ten definitely will (71%), while two in ten probably will (21%). Only 5% of students probably will not pursue a career in engineering while 3% don't know.

Executive Summary (continued)

Future Intentions: Pursue Licensure

- More than four in ten of all students (43%) indicate that they definitely intend to apply for licensure, while nearly three in ten (28%) probably will. Two in ten probably/ definitely won't apply (21%) while fewer than one in ten don't know (7%). There have been no statistically significant shifts in intentions versus 2014.
- Among those who do not intend to pursue licensure, the most cited reason is because they plan to move to another province, followed by that it is not necessary for their career plans or that they will be working outside of Canada.
- Once told that a licence is required to legally refer to yourself as an engineer and practice as an engineer, two thirds of students (67%) who originally did not plan or were unsure of their intentions now indicate they are definitely (38%) or probably likely (29%) to apply for licensure. One third (33%) however still indicate that they probably (25%) or definitely (8%) do not intend to apply.
- Of those who intend to pursue their licence, eight in ten plan to do so within one year (78%), of which six in ten will do so within six months (61%), the remaining two in ten plan to apply within a year of graduating (17%). Only 6% plan to apply more than a year after graduating, lower than in 2014 (15%), while just under two in ten don't know (16%).
- Once told that the fee for the first year of the Engineering-in-Training [EIT] program can be waived if they apply within six months of graduation, nine in ten (90%) students who originally intended on waiting more than six months to apply are very (56%) or somewhat likely (34%) to do so within that timeframe.

Executive Summary (continued)

Knowledge of Engineering Profession

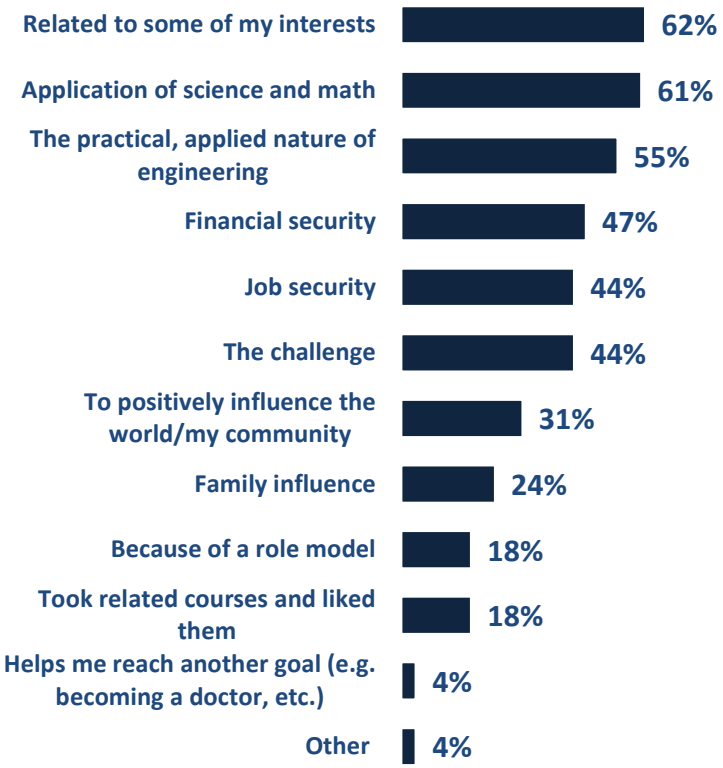
- At nearly nine in ten, the vast majority of students know that a license is required to perform engineering work independently (89%) or that a license is not required to practice engineering work under the supervision of a P.Eng. (86%). Two thirds know that it is required to use the title 'Engineer' (66%). Compared to 2014, students are more likely to think that a license is not required to use the title 'Engineer' (32% vs. 21% in 2014).
- Over nine in ten students are able to correctly identify that the respective provincial engineering association is the organization responsible for licensing engineers (95%) followed by nine in ten students who know that Engineers Canada is the organization that accredits higher education institutions' engineering programs (89%). Eight in ten know that their respective provincial engineering association regulates the practice of professional engineers (80%).
- Students are less certain about which organization licenses companies offering engineering services, six in ten think it is their respective provincial engineering association (63%), while one third believe it is Engineers Canada (33%).
- Compared to 2014, students are more likely to know that their respective provincial engineering association licenses professional engineers (95% vs. 84% in 2014) and regulates the practice of engineering (80% vs. 69%). They are also more likely to believe that the organization licenses companies offering engineering services (63% vs. 48%) and promotes the interests of professional engineers (78% vs. 64%). In each case they are less likely to feel Engineers Canada fulfills those functions.

Undergraduate Motivations and Experience

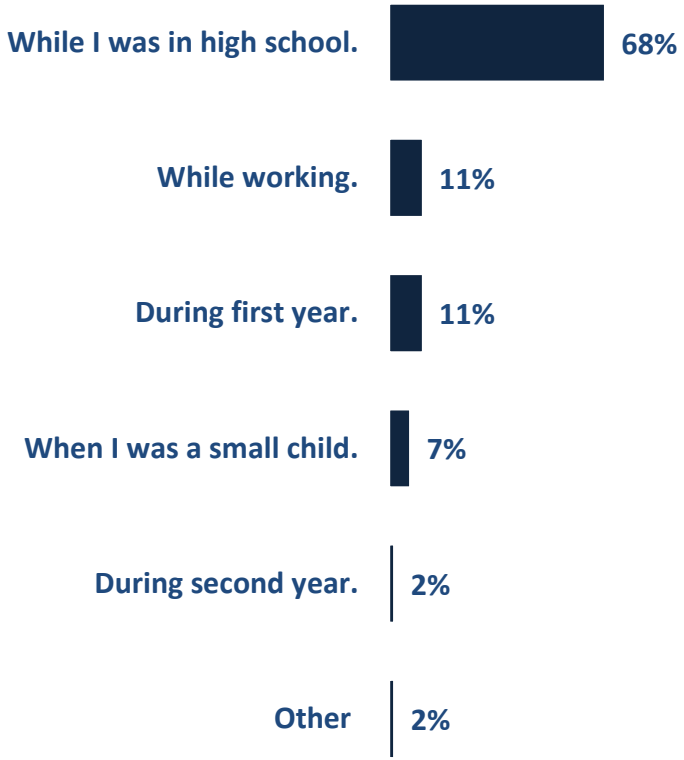
Main Reason(s) and Timing of Decision to Study Engineering

- At six in ten, the most common reasons students offered for choosing to study engineering are that it was related to their interests or because of the application of science and math. Other common mentions include the practical, applied nature of the discipline, financial security, job security and the challenge.
- Seven in ten students decided to study engineering while in high school, while one in ten did so during first year or while they were working and slightly fewer when they were a small child. Very few did so during second year.

Main Reason(s) for studying engineering



When did you make your decision?



Q4a. Thinking back to when you decided to pursue engineering, what was the main reason you choose to study this discipline? Please select all that apply
Q4b. When did you make your decision to pursue the discipline of engineering? Please select the one option which applies most to your situation.
Base: All respondents, 2015 (n=113)

Main Reason(s) and Timing of Decision to Study Engineering - Continued

- There are no statistically significant differences by age or gender

		Age			Gender	
	Total	Under 23	24-26	27+	Male	Female
		G	H	I	J	K
Base: All respondents	(n=113)	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)
Job security	44%	46%	42%	41%	44%	46%
Application of science and math	61%	67%	52%	53%	60%	64%
Because of a role model	18%	19%	13%	24%	15%	25%
The practical, applied nature of engineering	55%	54%	55%	53%	55%	54%
Family influence	24%	27%	26%	12%	20%	36%
To positively influence the world/my community	31%	29%	29%	41%	29%	36%
Financial security	47%	49%	52%	35%	48%	43%
Took related courses and liked them	18%	21%	16%	59%	17%	21%
The challenge	44%	44%	32%	59%	38%	64%
Related to some of my interests	62%	65%	61%	47%	67%	46%
Helps me reach another goal (e.g. becoming a doctor, etc.)	4%	5%	3%	-	5%	-
Other	4%	3%	3%	12%	5%	4%

*small base size **very small base size.

Q4a. Thinking back to when you decided to pursue engineering, what was the main reason you choose to study this discipline? Please select all that apply
Q4b. When did you make your decision to pursue the discipline of engineering? Please select the one option which applies most to your situation.
Base: All respondents, 2015 (n=113)

Main Reason(s) and Timing of Decision to Study Engineering - Continued

- Students under 23 are more likely to have decided to study engineering while in high school, while those 24 or older are more likely to do have do while working.

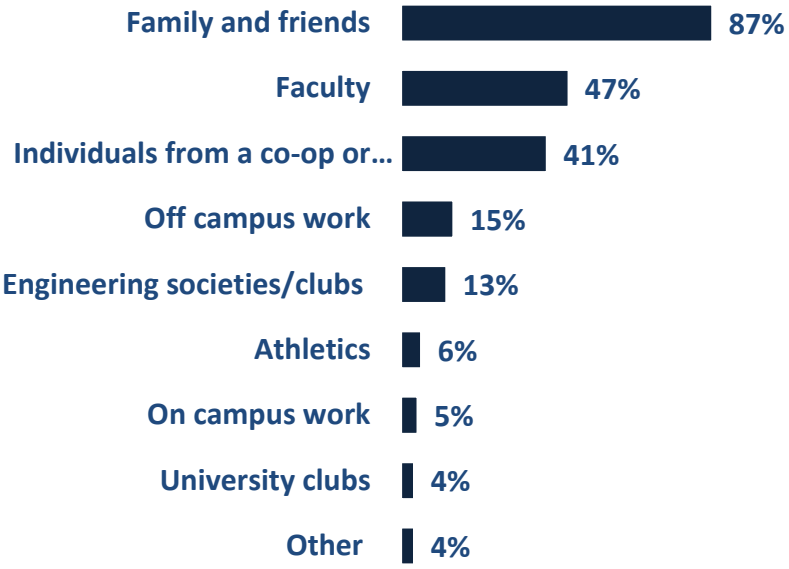
		Age			Gender	
	Total	Under 23	24-26	27+	Male	Female
		G	H	I	J	K
Base: All respondents	(n=113)	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)
While I was in high school.	68%	83% H	61%	29%	73%	54%
While working.	11%	-	7% G	59% G	11%	11%
During first year.	11%	13%	10%	-	6%	25%
When I was a small child.	7%	3%	13%	12%	7%	7%
During second year.	2%	-	7%	-	2%	-
Other	2%	2%	3%	-	1%	4%

*small base size **very small base size.

Q4a. Thinking back to when you decided to pursue engineering, what was the main reason you choose to study this discipline? Please select all that apply
Q4b. When did you make your decision to pursue the discipline of engineering? Please select the one option which applies most to your situation.
Base: All respondents, 2015 (n=113)

Most Important Support During Engineering Studies

- At nearly nine in ten, by far the most important support for students during their engineering studies were family and friends, followed by around half who mentioned faculty and four in ten who said individuals from a co-op/ internship. Around one in ten mention off campus work or engineer societies/ clubs.
- There are no statistically significant differences by age or gender.



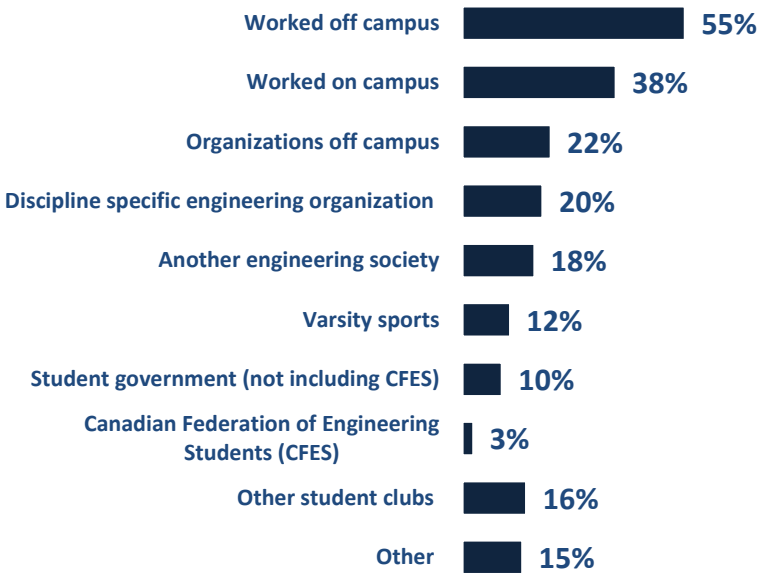
	Age			Gender	
	Under 23	24-26	27+	Male	Female
	G	H	I	J	K
	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)
Family and friends	86%	90%	82%	84%	96%
Faculty	52%	36%	41%	45%	54%
Individuals from a co-op or...	40%	36%	53%	40%	43%
Off campus work	13%	19%	18%	14%	18%
Engineering societies/clubs	13%	16%	12%	15%	7%
Athletics	6%	7%	6%	7%	4%
On campus work	6%	7%	-	6%	4%
University clubs	6%	3%	-	5%	4%
Other	2%	10%	-	4%	4%

*small base size **very small base size.

Q4c. Thinking of all those who have helped support you during your engineering studies, who has been the most important to you? Please select up to 3 options
Q4d. Did you participate in any of the following extracurricular activities during your degree program? Please select all that apply
Base: All respondents, 2015 (n=113)

Extracurricular Participation During Degree Program

- Just over half of students indicate having participated in off campus work during their degree program, followed by four in ten who worked on campus. Closer to two in ten participated in an off campus organization, discipline specific engineering organizations, another engineering society.
- There are no statistically significant differences by age or gender.



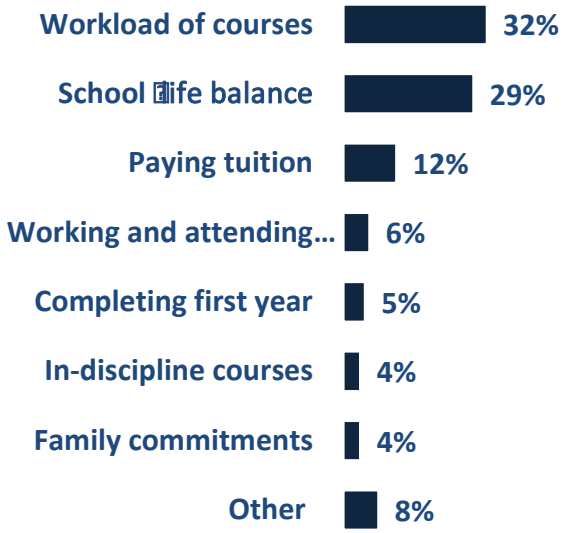
Age			Gender	
Under 23	24-26	27+	Male	Female
G	H	I	J	K
(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)
54%	39%	82%	55%	54%
37%	39%	41%	37%	43%
19%	36%	12%	24%	18%
22%	16%	24%	21%	18%
16%	19%	18%	20%	11%
10%	19%	6%	15%	-
13%	7%	-	11%	7%
3%	3%	-	2%	4%
22%	13%	-	18%	11%
16%	16%	12%	17%	11%

*small base size **very small base size.

Q4c. Thinking of all those who have helped support you during your engineering studies, who has been the most important to you? Please select up to 3 options
Q4d. Did you participate in any of the following extracurricular activities during your degree program? Please select all that apply
Base: All respondents, 2015 (n=113)

Single Greatest Barrier to Completing Engineering Degree

- At one third, students are most likely to feel that the workload of courses is the single greatest barrier to completing their engineering degree, followed closely by the work life balance. Closer to one in ten say paying tuition, while fewer indicate working and attending school simultaneously or completing first year.
- Older students are more likely to indicate family commitments.



	Age			Gender	
	Under 23	24-26	27+	Male	Female
	G	H	I	J	K
	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)
Workload of courses	33%	26%	35%	34%	25%
School life balance	33%	26%	18%	29%	29%
Paying tuition	13%	10%	18%	9%	21%
Working and attending...	5%	7%	12%	8%	-
Completing first year	5%	10%	-	4%	11%
In-discipline courses	3%	7%	-	5%	-
Family commitments	-	10% G	6%	4%	4%
Other	8%	7%	12%	7%	11%

*small base size **very small base size.

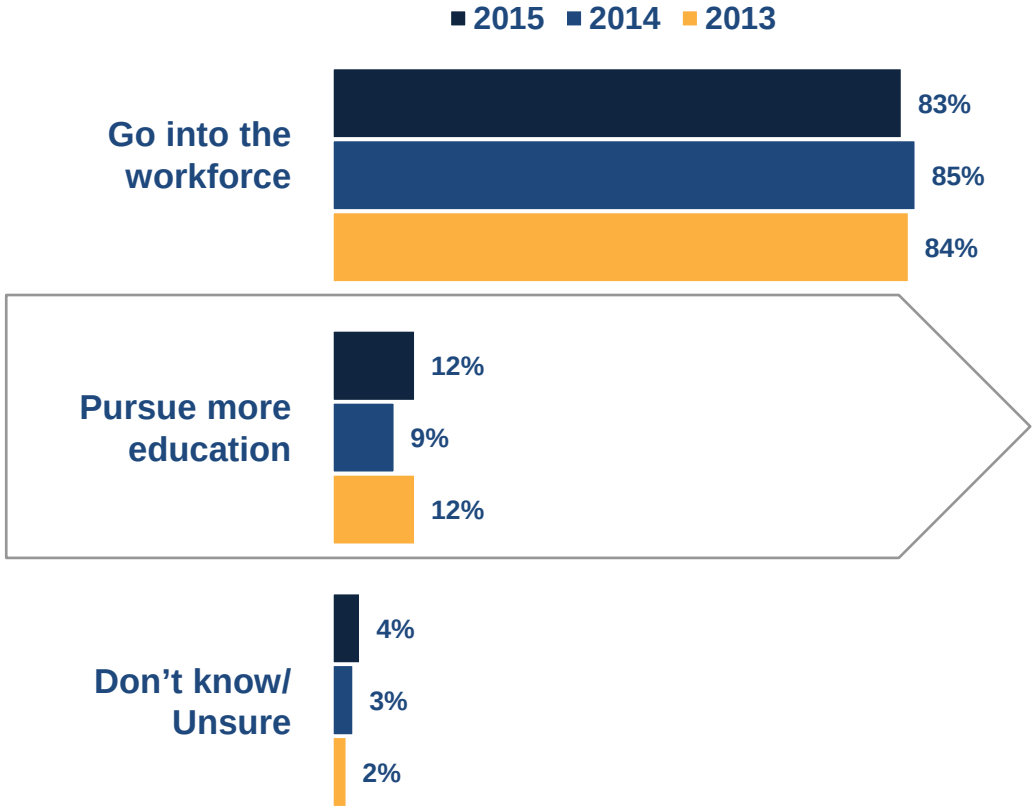
Q4e. Considering all of your experiences in studying for your engineering disciple, what has been the single greatest barrier to completing your degree?
Base: All respondents, 2015 (n=113)

Future Plans

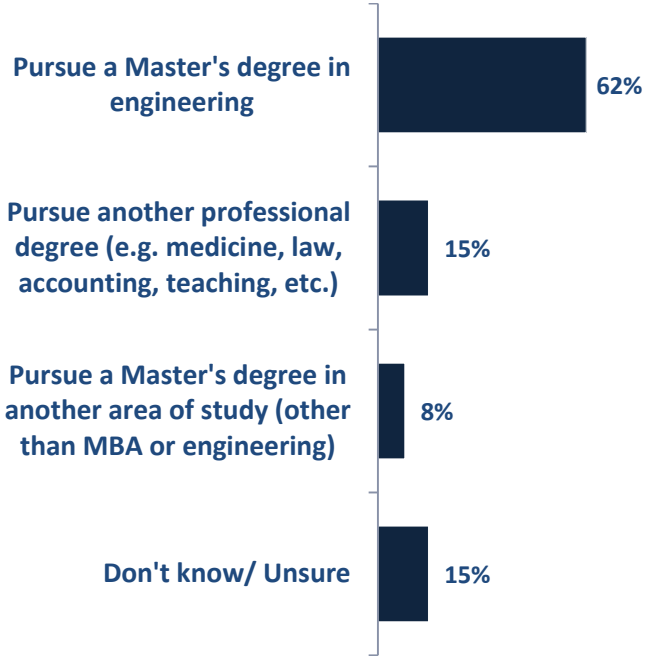
Plans After Graduation

- Over eight in ten students intend on going into the workforce after graduation, while one in ten plan to pursue more education, consistent with 2014.
- Among those who plan to further their education, the majority plan to pursue a master's degree in engineering. *Due to very small base sizes, results should be interpreted with caution.*

Current Plans After Graduation



Educational Intentions (**very small base size)



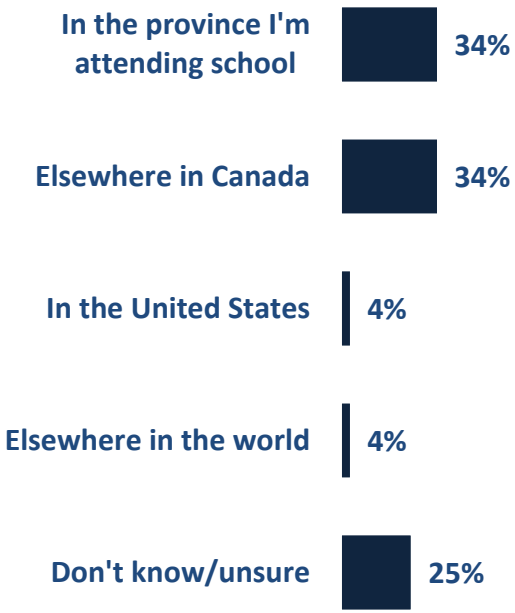
*small base size **very small base size.

Q12. Which of the following best describes your current plans after you graduate? Base: All respondents 2013 (n=106); 2014 (n=154); 2015 (n=113)
Q13. Which of the following best describes the education you plan to pursue? Base: Respondents who said "more education" in Q12, 2015 (n=13**)

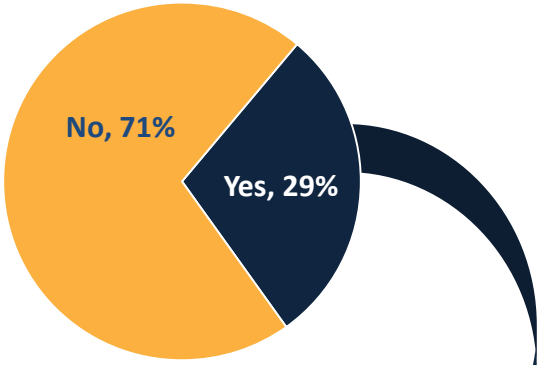
Plans for Work After Graduation

- One third of students intend on working in the province they are attending school or elsewhere in Canada. Fewer than one in ten plan to work in the US (4%) or elsewhere in the world (4%). One quarter don't know where they will work.
- Three in ten students have already been offered a job in the engineering field, of which two thirds have been offered one job, while around one quarter have been offered two jobs.

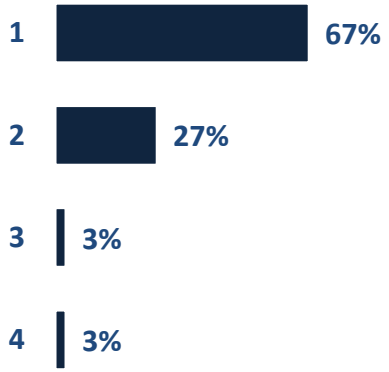
Where do you plan to work?



Have you already been offered a job(s) in the engineering?



How many jobs?

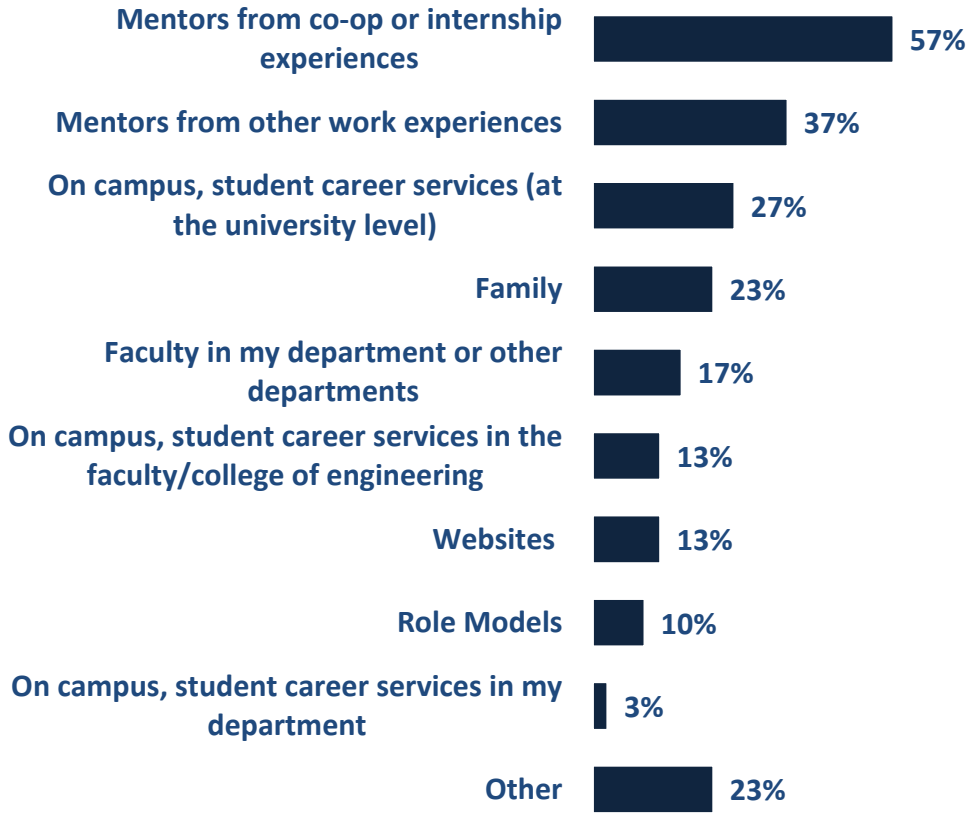


*small base size **very small base size.

Q17d. Where do you plan to work? Base: Plan to pursue a career in the engineering field 2015 (n=104)
Q17e. Have you already been offered a job(s) in the field of engineering? Base: Plan to pursue a career in the engineering field 2015 (n=104)
Q17f. How many jobs have you been offered in the field of engineering?
Base: Have been offered a job in the field of engineering 2015 (n=30*)

Useful Resources in Finding Engineering Work

- Those who have been offered a job in the engineering field are by far most likely to feel that mentors from co-op/ internship experiences were most useful to finding work. Other common mentions include mentors from other work experiences, on campus student career services (at the university level) and family.



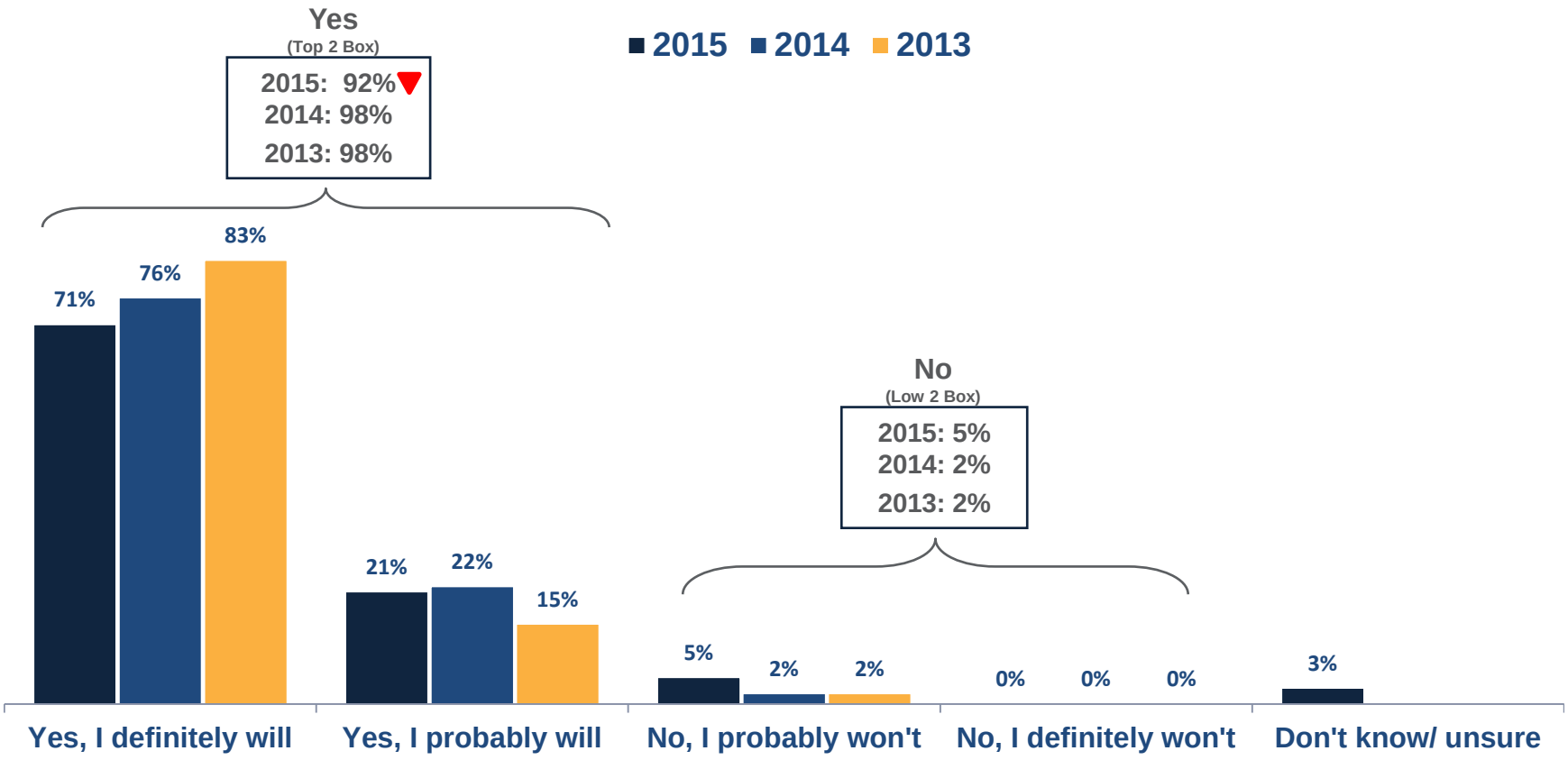
*small base size **very small base size.

Q17g. What resources have been useful in finding engineering work?
Base: Have been offered a job in the field of engineering 2015 (n=30*)

Intention to Pursue Engineering Career

- Nine in ten students intend (definitely/ probably) on pursuing a career in the engineering field after completing their education, statistically lower than last year. Only 5% probably or definitely won't while 3% don't know.

Do You Plan to Pursue a Career in the Engineering Field?



Q14. When you complete your education, do you plan to pursue a career in the engineering field? Base: All respondents 2013 (n=106); 2014 (n=154); 2015 (n=113)

Intention to Pursue Engineering Career

- There are no statistically significant differences by age, gender or resident status.

		Age			Gender		Resident Status		
	Total	Under 23	24-26	27+	Male	Female	Permanent resident	Permanent resident of another province	International student
		G	H	I	J	K	N	O	P
Base: All respondents	(n=113)	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)	(n=69*)	(n=24**)	(n=20**)
Yes, I definitely will	71%	71%	71%	71%	69%	75%	70%	71%	75%
Yes, I probably will	21%	21%	23%	18%	21%	21%	22%	25%	15%
No, I probably won't	5%	3%	7%	12%	7%	-	4%	4%	10%
No, I definitely won't	-	-	-	-	-	-	-	-	-
Don't know/ Unsure	3%	5%	-	-	2%	4%	4%	-	-

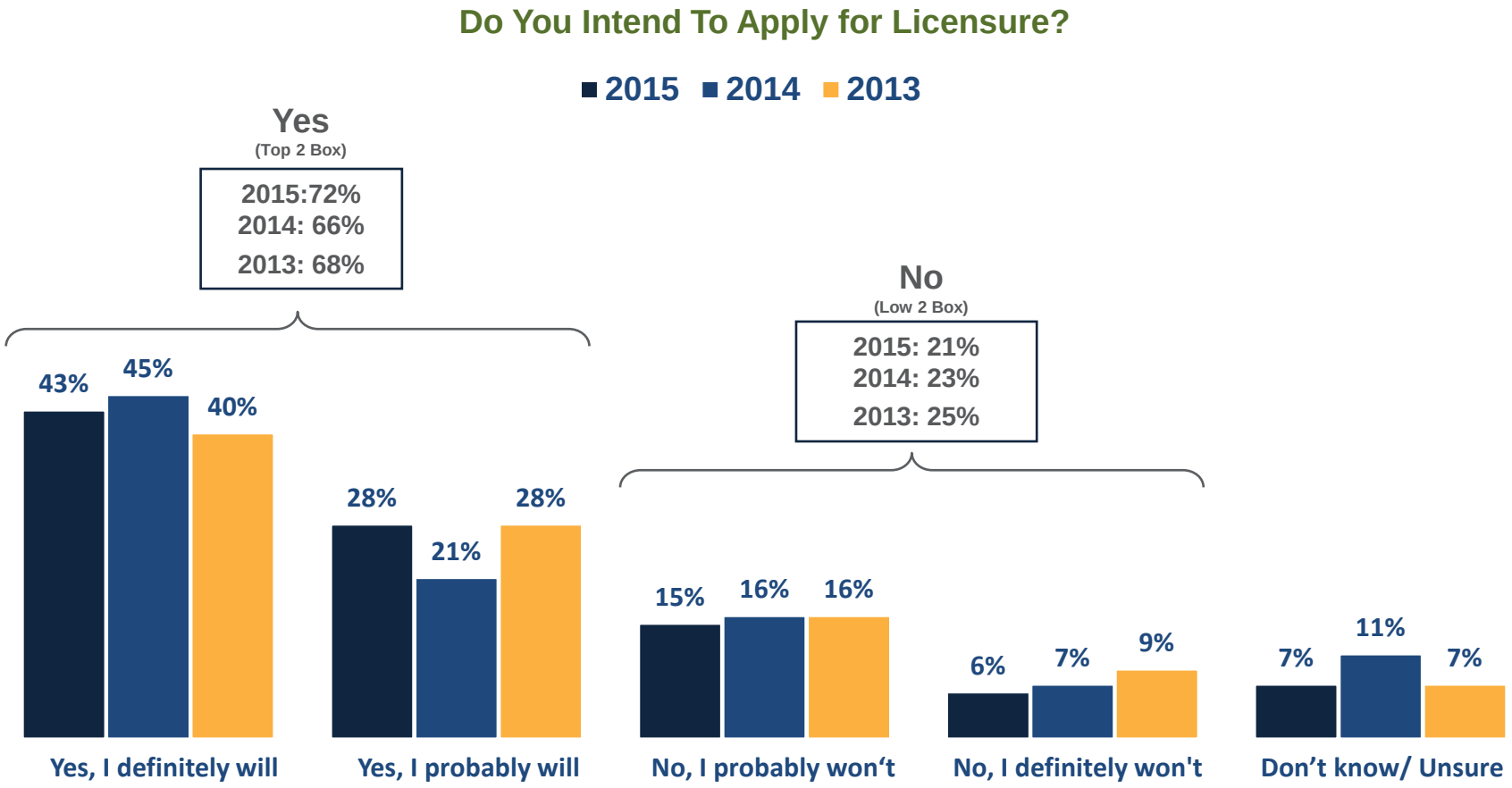
*small base size **very small base size.

Q14. When you complete your education, do you plan to pursue a career in the engineering field? Base: All respondents 2013 (n=106); 2014 (n=154); 2015 (n=113)

Application Intentions for Professional Engineering Licensure

Intention to Apply for Licensure

- At more than seven in ten, the vast majority of students intend on applying for licensure, consistent with 2014. More than four in ten students (43%) definitely intend to apply for licensure, while three in ten (28%) probably will. Two in ten students are unlikely to apply (21%) while around one in ten (7%) don't know.



Q21. Do you intend to apply for licensure as a Professional Engineer (P.Eng.)?
Base: All respondents 2013 (n=106); 2014 (n=154);2015 (n=113)

Intention to Apply for Licensure

- There are no statistically significant differences by age, gender or resident status.

		Age			Gender		Resident Status		
	Total	Under 23	24-26	27+	Male	Female	Permanent resident	Permanent resident of another province	International student
		G	H	I	J	K	N	O	P
Base: All respondents	(n=113)	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)	(n=69*)	(n=24**)	(n=20**)
Yes, I definitely will	43%	33%	48%	77%	41%	50%	49%	17%	55%
Yes, I probably will	28%	35%	19%	12%	31%	21%	29%	38%	15%
No, I probably won't	15%	18%	13%	12%	14%	18%	15%	13%	20%
No, I definitely won't	6%	8%	7%	-	7%	4%	3%	17%	5%
Don't know/ Unsure	7%	6%	13%	-	7%	7%	4%	17%	5%

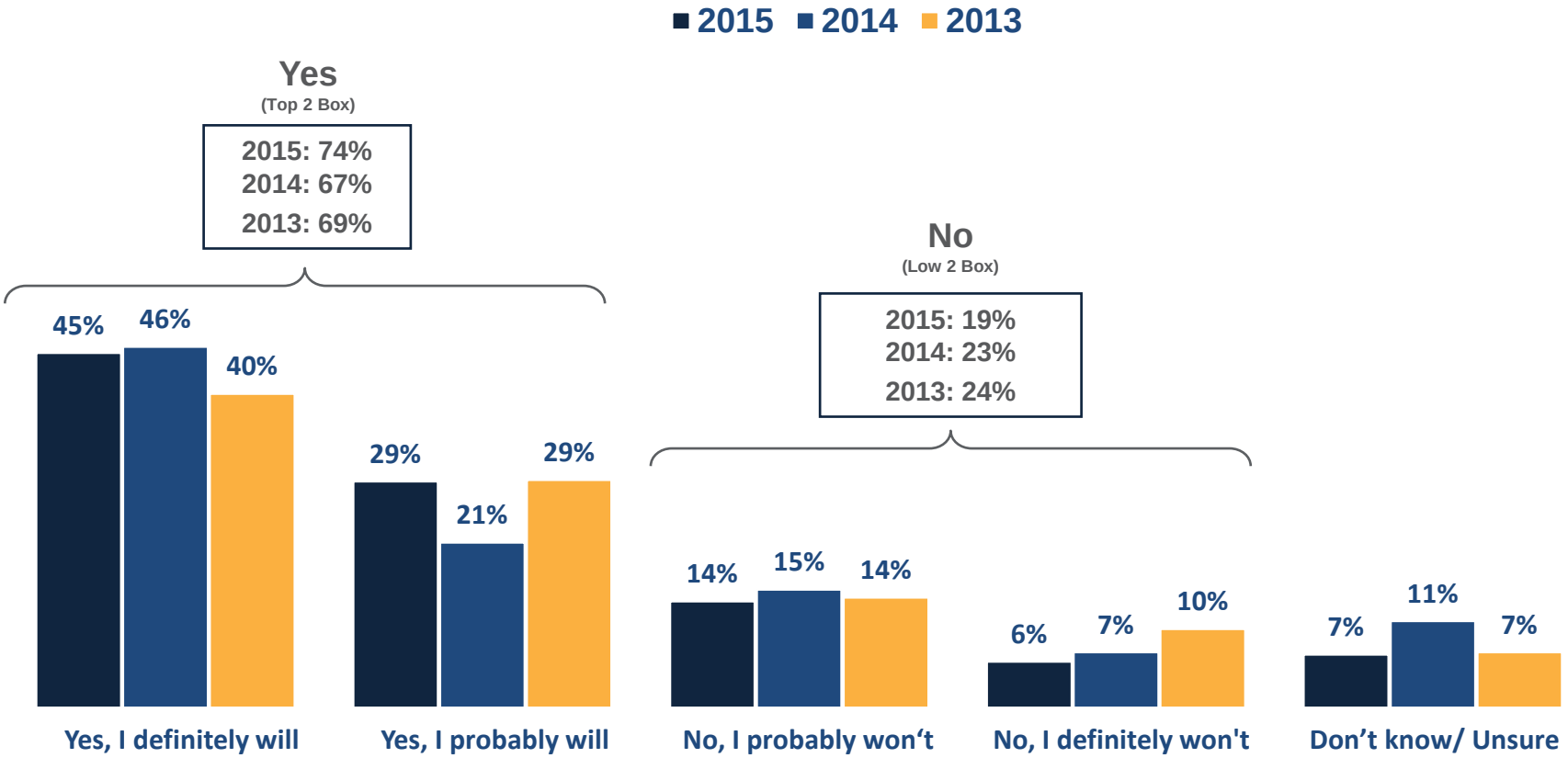
*small base size **very small base size.

Q21. Do you intend to apply for licensure as a Professional Engineer (P.Eng.)?
Base: All respondents 2013 (n=106); 2014 (n=154);2015 (n=113)

Intention to Apply for Licensure- Pursuing Engineering Career

- Among those students who intend to pursue a career in engineering, close to half (45%) indicate that they definitely intend to apply for licensure, while a further three in ten (29%) say they probably will. Two in ten students are unlikely to apply for licensure (19%) while fewer than one in ten (7%) don't know.

Do You Intend To Apply for Licensure?

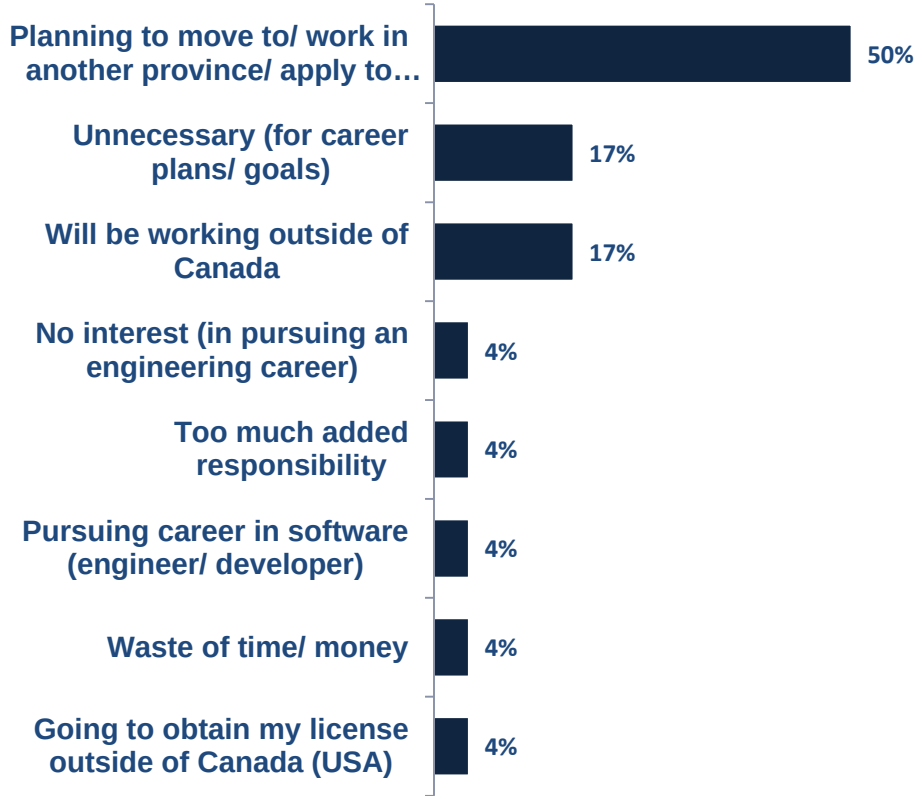


Q21x. Do you intend to apply for licensure as a Professional Engineer (P.Eng.)?
Base: Respondents who intend to pursue a career in the engineering field 2013 (n=104); 2014 (n=151); 2015 (n=104)

Reasons for Not Applying for Licensure

- Among those who do not intend to pursue licensure, the most cited reason is because they plan to move to another province, followed by that it is not necessary for their career plans or that they will be working outside of Canada.

Why do you not intend to pursue the P.Eng. Licence? (very small base size)**

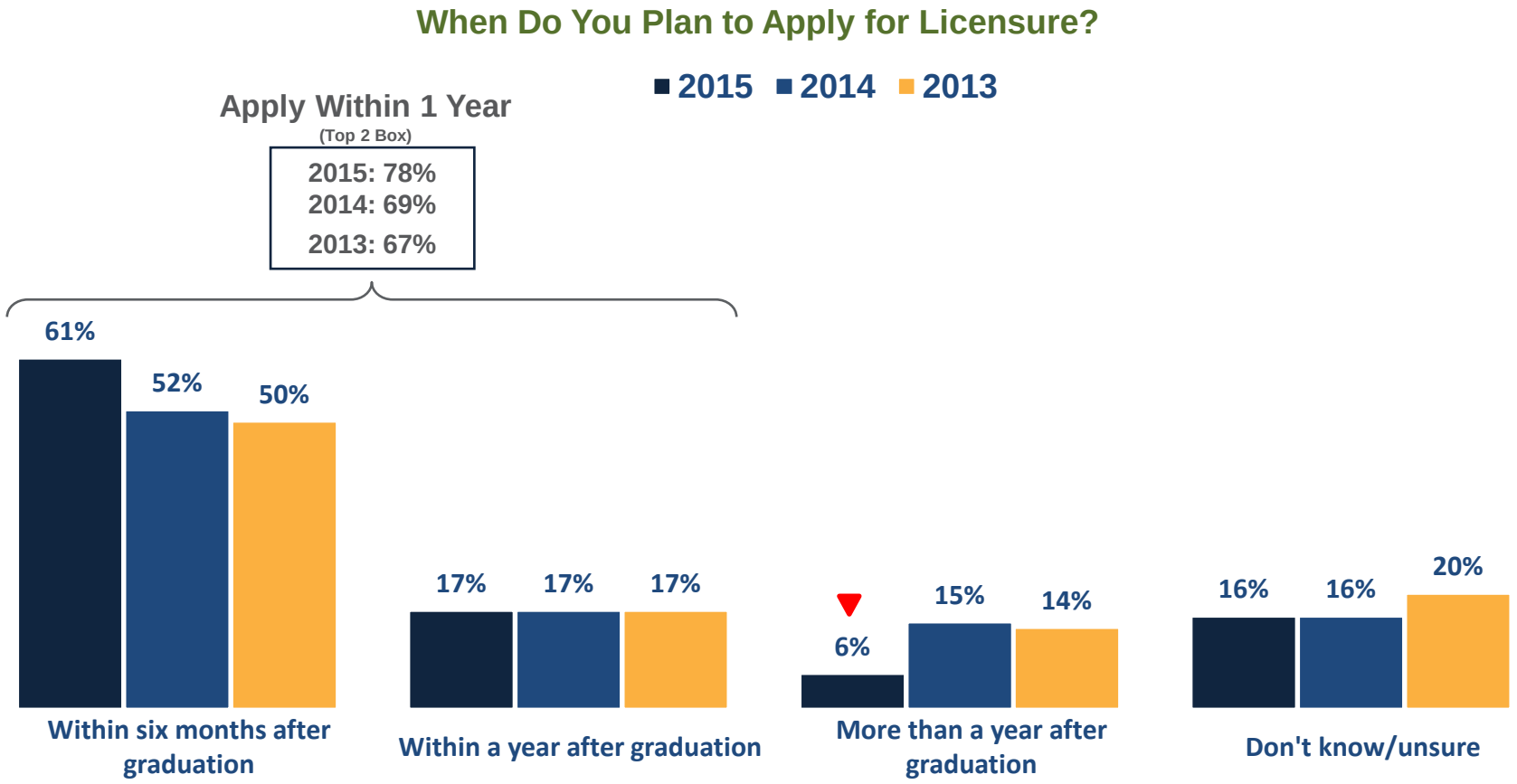


*small base size **very small base size.

Q23. Why do you not intend to apply for licensure as a Professional Engineer (P.Eng.)?
Base: Respondents who do not intend to apply for licensure, 2015 (n=24**)

Application Timeframe

- Eight in ten students who intend to apply for licensure plan to do so within one year (78%), of which six in ten think they will apply within six months of graduation (61%) while around two in ten plan to apply within a year of graduating (17%). Only 6% intend on applying more than a year after graduating, lower than in 2014, while around two in ten are unsure.



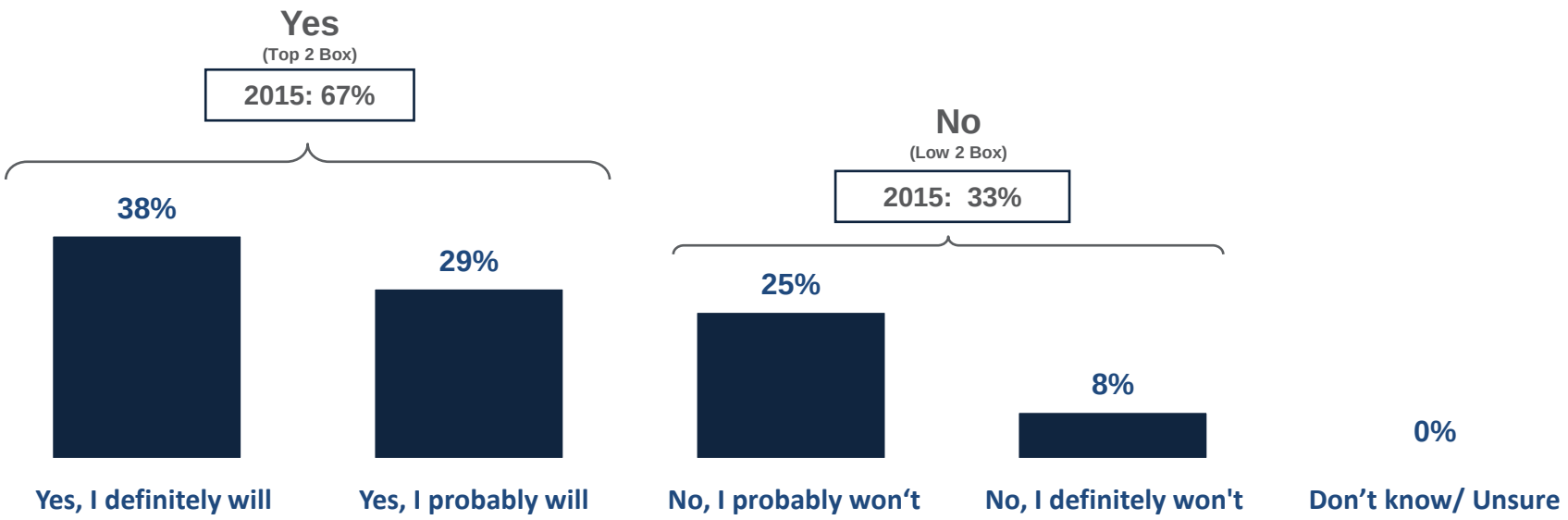
Q27. Do you intend to apply for licensure...?
Base: Respondents who plan to apply for licensure, 2013 (n=102); 2014 (n=147); 2015 (n=105)

Interest Once Told P.Eng. Licence is Required to Practice

- Once told that a licence is required to legally refer to yourself as an engineer and practice as an engineer, two-thirds of those who originally did not plan or were unsure of their intentions now indicate they are definitely or probably likely to apply for licensure. *Due to very small base sizes, results should be interpreted with caution.*

Given that a Licence is Required to Practice Engineering, Do You Intend to Apply?

(very small base size)**



*small base size **very small base size.

Q24. Since a license is required to legally refer to yourself as an engineer, or to practice as an engineer, do you plan to apply for your P.Eng. licence?
Base: Respondents who do not intend to apply for licensure or are not sure, 2015 (n=24**)

Application Timeframe

- There are no statistically significant differences by age, gender or resident status.

		Age			Gender		Resident Status		
	Total	21-23	24-26	27+	Male	Female	Permanent resident	Permanent resident of another province/territory	International student
		G	H	I	J	K	N	O	P
Base: All respondents	(n=105)	(n=60*)	(n=29**)	(n=16**)	(n=78*)	(n=27**)	(n=64*)	(n=24**)	(n=17**)
Within six months after graduation	61%	57%	45%	100%	64%	52%	56%	75%	59%
Within a year after graduation	17%	19%	24%	-	15%	22%	19%	4%	29%
More than a year after graduation	6%	7%	7%	-	6%	4%	5%	13%	-
Don't know/unsure	16%	17%	24%	-	14%	22%	20%	8%	12%

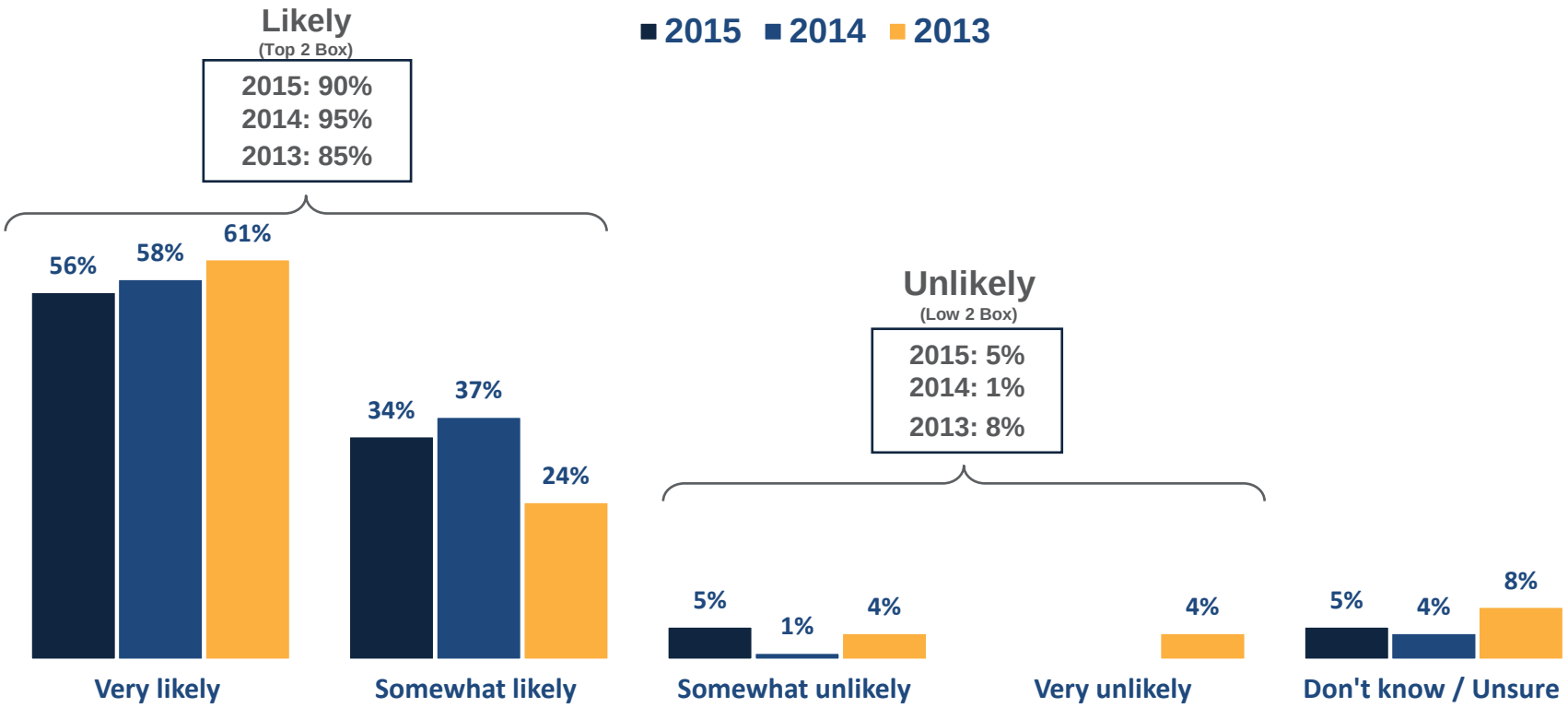
*small base size **very small base size.

Q27. Do you intend to apply for licensure...?
Base: Respondents who plan to apply for licensure, 2013 (n=102); 2014 (n=147); 2015 (n=105)

Impact of Waiving EIT Fees on Likelihood to Apply within Six Months

- Upon learning that they could be eligible to have their first year EIT fees waived, more than half of students (56%) who originally intended on waiting more than six months after graduation to apply say that they are very likely to do so within that timeframe. One third (34%) are somewhat likely to apply within six months, while only 5% are unlikely to apply in that timeframe or don't know.

Would you Apply Within 6 Month if Eligible to Have 1st Year EIT Fees Waived? (*small base size)

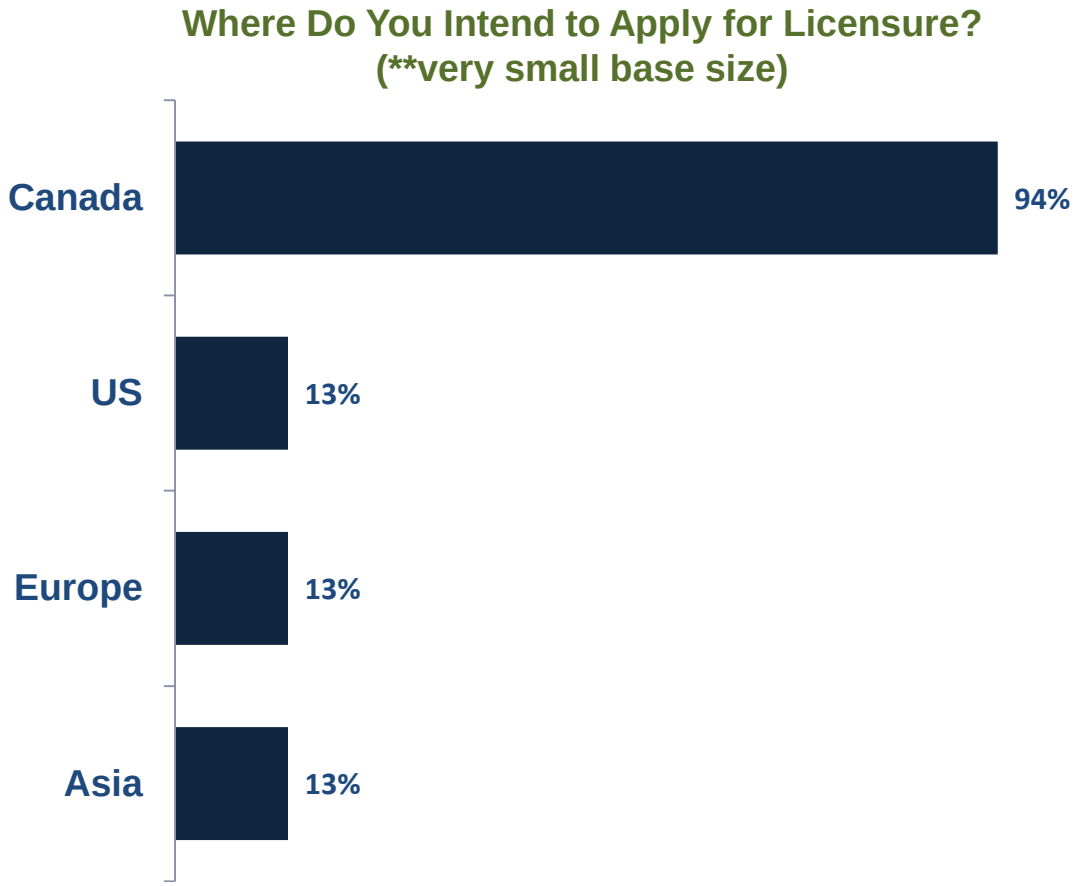


*small base size **very small base size.

Q29. If you knew that by applying for licensure in Ontario within 6 months of graduation you could be eligible to have the application and first year EIT program fees waived, how likely would you be to apply for licensure within that time frame? Base: Respondents who do not know or intend to apply for licensure >6mths after graduation, 2013 (n=51*); 2014 (n=71*); 2015 (n=41*)

Intended Country of Application

- Among those students who intend on applying for licensure after being told it is required to practice, virtually all intend on doing so in Canada.



*small base size **very small base size.

Mentions may add to more than 100% as respondents were able to select more than one response

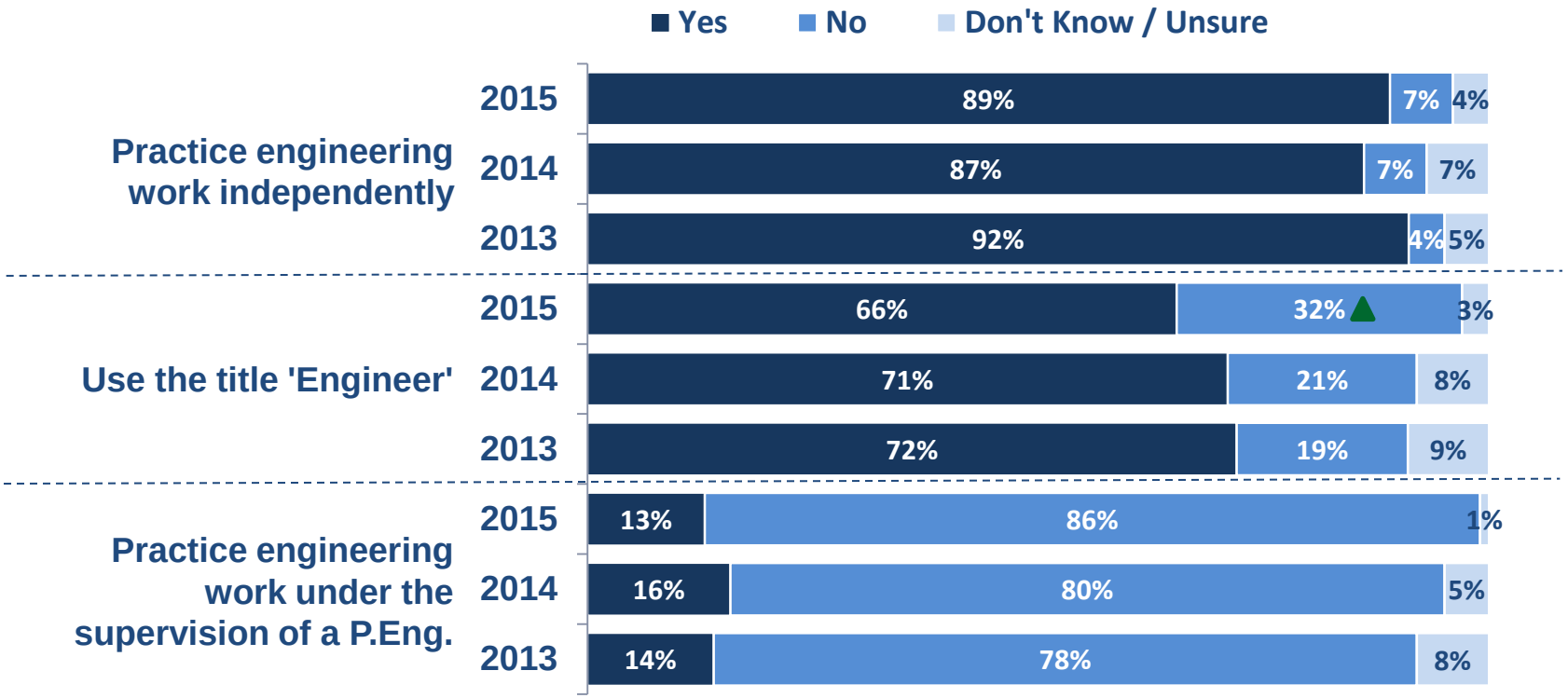
Q25. Where do you intend to apply for licensure?
Base: Respondents plan to apply for your P.Eng. licence, 2015 (n=16**)

Licensing Knowledge

Licensing for Roles within Engineering

- Nine in ten students know that a licence is required to perform engineering work independently (89%) while slightly fewer know that a licence is not required to practice engineering work under the supervision of a P.Eng. (86%). Two thirds know it is needed to use the title 'Engineer' (66%).
- Compared to 2014, students are more likely to think that a license is not required to use the title 'Engineer'.

Is a Licence Required Before Being Able to Do the Following?

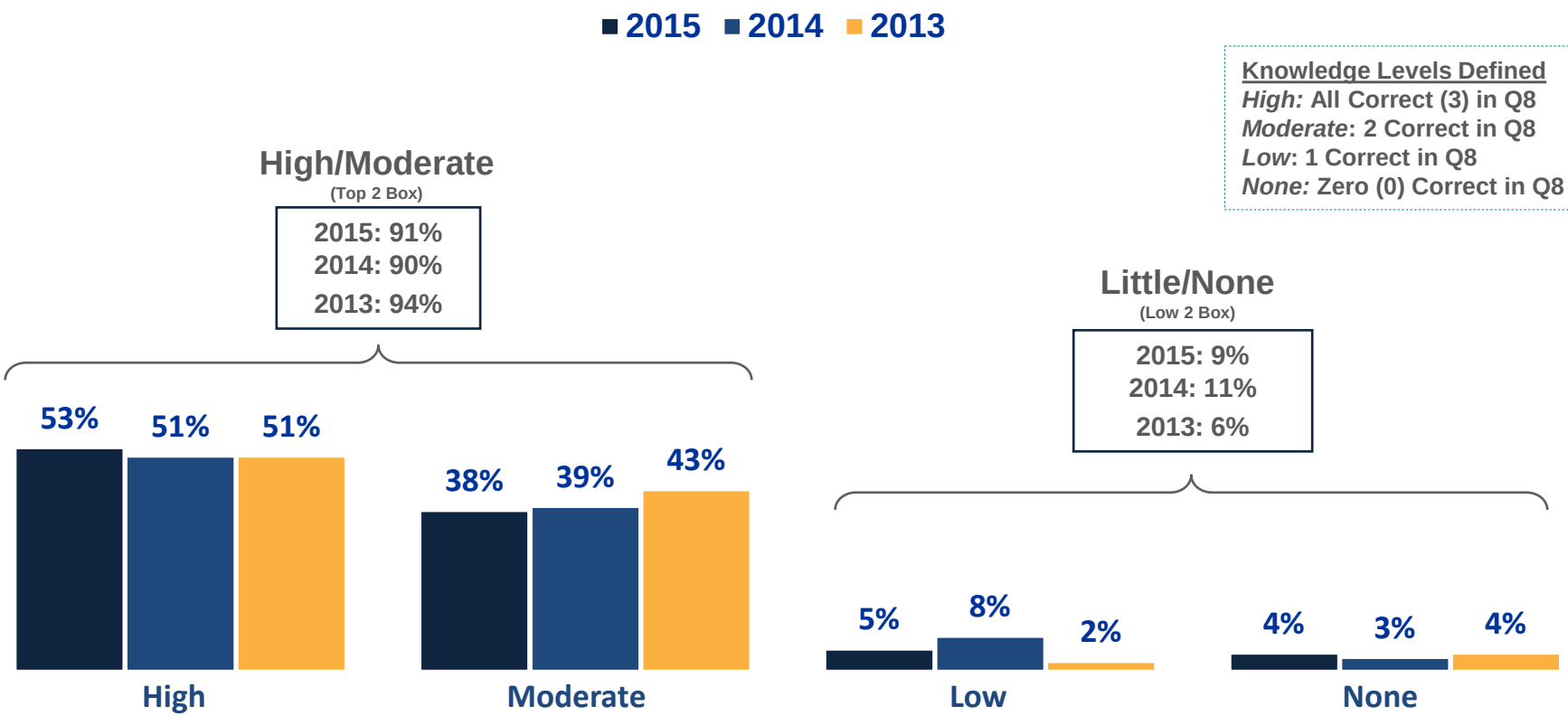


Q8. As far as you know, is a licence required before being able to do the following in ... Base: All respondents 2013 (n=106); 2014 (n=154); 2015 (n=113)

Knowledge of Licensing and Roles

- Nine in ten students have at least a moderate (38%) or high (53%) level of knowledge of when a licence is required to legally perform actions/ duties within the engineering profession. One in ten have either little (5%) or no knowledge (4%) on the subject.

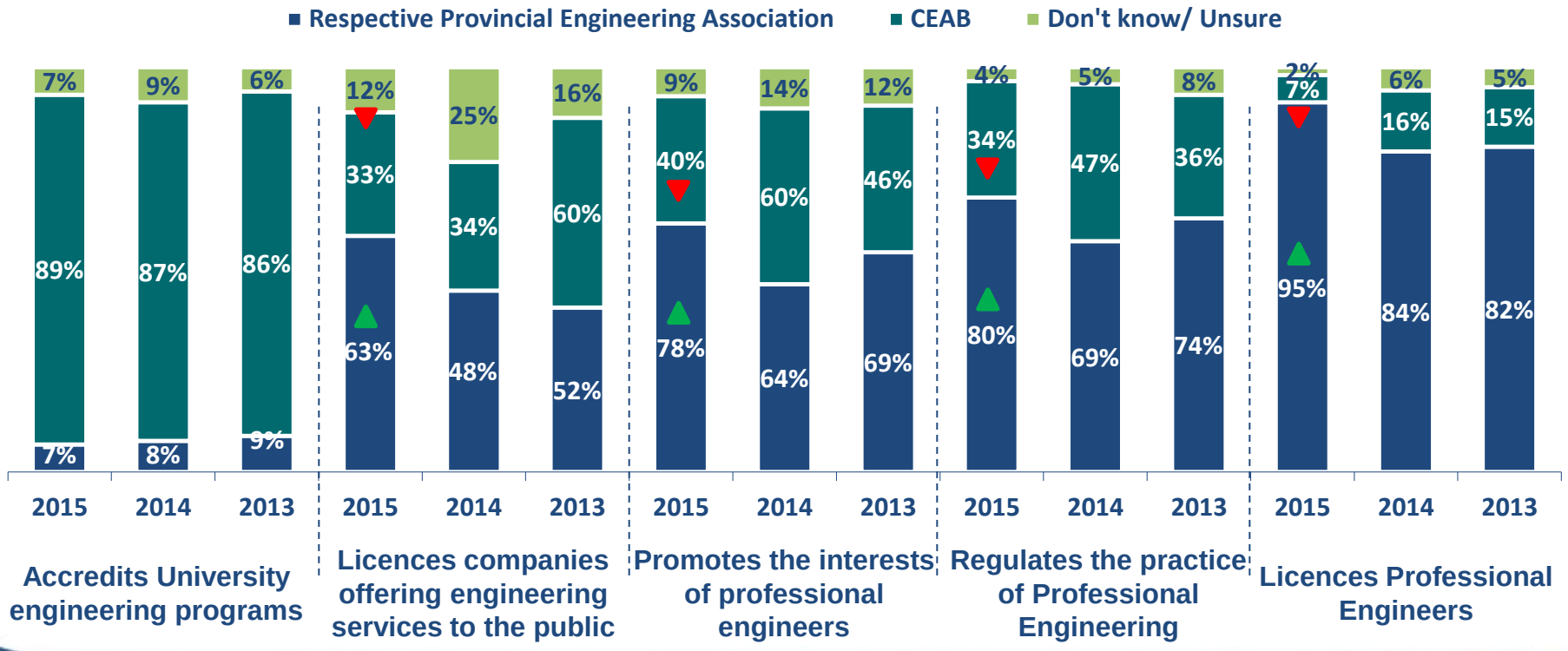
Knowledge Level of Engineering Practices Requiring a Licence



Organizational Responsibilities – 2013, 2014, & 2015

- Over nine in ten know that their respective provincial engineering association is the organization responsible for licensing engineers (95%) followed by nine in ten students who know that Engineers Canada is the organization that accredits University engineering programs (89%). Eight in ten know that their respective provincial engineering association regulates the practice of professional engineers (80%) while students are less certain about which organization licences companies offering engineering services, six in ten think it is their respective provincial engineering association (63%), while one third believe it is Engineers Canada (33%).
- Compared to 2014, students are more likely to know that their respective provincial engineering association licences professional engineers and regulates the practice of engineering. They are also more likely to believe that the organization licences companies offering engineering services and promotes the interests of professional engineers. In each case they are less likely to feel Engineers Canada fulfills those functions.

Which Organization is Responsible for Each of the Follow Activities?

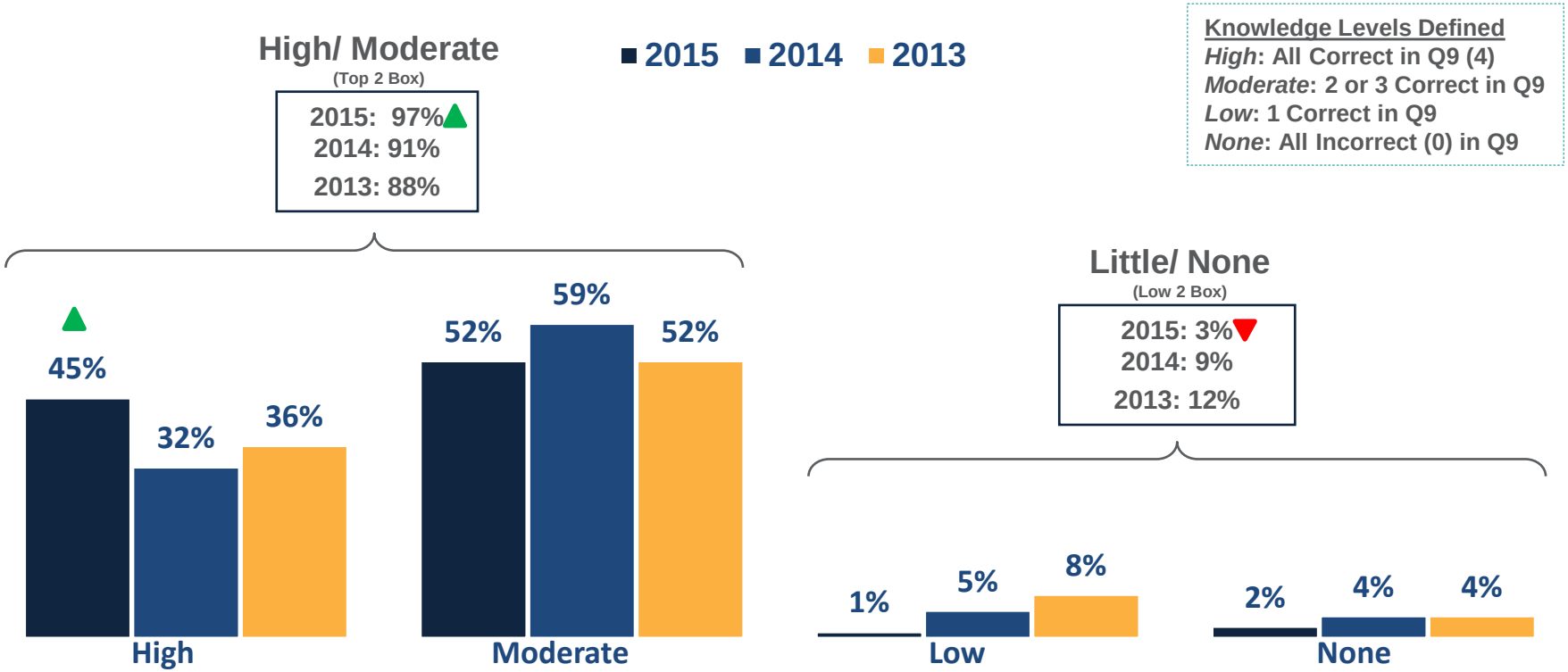


Q9. Please indicate the organization responsible for each of the activities/ procedures listed below.
Base: All respondents 2013 (n=106); 2014 (n=154); 2015 (n=113)

Knowledge of Organizational Responsibility

- Virtually all students have either a high (45%) or moderate (52%) level of knowledge concerning organizational responsibilities of activities/ procedures relating to the engineering profession. Only 3% have either a low level (1%) or no knowledge (2%) on the subject.
- Compared to 2014, students are more likely to have a high level of knowledge and provide correct responses on all four measures.

Knowledge Level of Organizational Responsibility within the Engineering Profession



Q9. Please indicate the organization responsible for each of the activities/ procedures listed below.
Base: All respondents 2013 (n=106); 2014 (n=154); 2015 (n=113)

Impact of Knowledge of Licensing and Roles

Knowledge of Licensing and Roles & Intention to Pursue Engineering Career

- Knowledge in terms of roles and licensing requirements does not influence intent to pursue a career in the engineering field.

Knowledge Levels Defined
High: **All Correct (3) in Q8**
Moderate**: 2 Correct in Q8**
Low**: 1 Correct in Q8**
None: **Zero (0) Correct in Q8**

	HIGH KNOWLEDGE			MODERATE KNOWLEDGE			LOW KNOWLEDGE			NO KNOWLEDGE		
	A			B			C			D		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
	n=54*	n=78*	n=60*	n=46*	n=60*	n=43*	n=2**	n=12**	n=6**	n=4**	n=4**	n=4**
Yes, Definitely	**89%**	**74%**	**75%**	**76%**	**77%**	**72%**	**50%**	**83%**	**50%**	**100%**	**75%**	**25%**
	48	58	45	35	46	31	1	10	3	4	3	1
Yes, Probably	**11%**	**23%**	**17%**	**20%**	**22%**	**21%**	**50%**	**17%**	**33%**	**-**	**25%**	**75%**
	6	18	10	9	13	9	1	2	2	0	1	3
No, Probably	**-**	**3%**	**5%**	**4%**	**2%**	**5%**	**-**	**-**	**17%**	**-**	**-**	**-**
	0	2	3	2	1	2	0	0	1	0	0	0
No, Definitely	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	0	0	0	0	0	0	0	0	0	0	0	0
Top 2 Box Yes	**100%**	**97%**	**92%**	**96%**	**98%**	**93%**	**100%**	**100%**	**83%**	**100%**	**100%**	**100%**
	54	76	55	44	59	40	2	12	5	4	4	4
Low 2 Box No	**-**	**3%**	**5%**	**4%**	**2%**	**5%**	**-**	**-**	**17%**	**-**	**-**	**-**
	0	2	3	2	1	2	0	0	1	0	0	0

*small base size**very small base size. Interpret with caution.

Intentions to Pursue Career within the Engineering Field

Knowledge of Licensing and Roles & Intention to Apply for Licensure

- Knowledge in terms of roles and licensing requirements does not influence intent to pursue a P.Eng. licence.

Knowledge Levels Defined
High: **All Correct (3) in Q8**
Moderate**: 2 Correct in Q8**
Low**: 1 Correct in Q8**
None: **Zero (0) Correct in Q8**

	HIGH KNOWLEDGE			MODERATE KNOWLEDGE			LOW KNOWLEDGE			NO KNOWLEDGE		
	A			B			C			D		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
	n=54*	n=78*	n=60*	n=46*	n=60*	n=43*	n=2**	n=12**	n=6**	n=4**	n=4**	n=4**
Yes, Definitely	**44%**	**44%**	**47%**	**35%**	**45%**	**40%**	**-**	**50%**	**50%**	**50%**	**50%**	**25%**
	24	34	28	16	27	17	0	6	3	2	2	1
Yes, Probably	**28%**	**21%**	**28%**	**28%**	**23%**	**28%**	**-**	**25%**	**17%**	**50%**	**-**	**50%**
	15	16	17	13	14	12	0	3	1	2	0	2
No, Probably	**15%**	**20%**	**15%**	**17%**	**15%**	**16%**	**50%**	**-**	**17%**	**-**	**-**	**-**
	8	15	9	8	9	7	1	0	1	0	0	0
No, Definitely	**7%**	**6%**	**3%**	**11%**	**7%**	**12%**	**50%**	**17%**	**-**	**-**	**-**	**-**
	4	5	2	5	4	5	1	2	0	0	0	0
Top 2 Box Yes	**72%**	**64%**	**75%**	**63%**	**68%**	**67%**	**-**	**75%**	**67%**	**100%**	**50%**	**75%**
	39	50	45	29	41	29	0	9	4	4	2	3
Low 2 Box No	**22%**	**26%**	**18%**	**28%**	**22%**	**28%**	**100%**	**17%**	**17%**	**-**	**-**	**-**
	12	20	11	13	13	12	2	2	1	0	0	0

*small base size**very small base size. Interpret with caution.

Intention to Apply for the Professional Engineers Licensure

Impact of Knowledge of Organizational Responsibility

Knowledge of Organizational Responsibility & Intention to Pursue Engineering Career

- Knowledge of organizational responsibility has no statistically significant impact on intention to pursue an engineering career.

Knowledge Levels Defined
***High*: All Correct in Q9 (4)**
***Moderate*: 2 or 3 Correct in Q9**
***Low*: 1 Correct in Q9**
***None*: All Incorrect (0) in Q9**

	HIGH KNOWLEDGE			MODERATE KNOWLEDGE			LOW KNOWLEDGE			NO KNOWLEDGE		
	A			B			C			D		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
	n=38*	n=49*	n=51*	n=55*	n=91*	n=59*	n=9**	n=8**	n=1**	n=4**	n=6**	n=2**
Yes, Definitely	**87%**	**80%**	**69%**	**84%**	**75%**	**75%**	**67%**	**75%**	**100%**	**75%**	**67%**	-
	33	39	35	46	68	44	6	6	1	3	4	0
Yes, Probably	**13%**	**20%**	**22%**	**13%**	**22%**	**20%**	**33%**	**25%**	-	**25%**	**33%**	**50%**
	5	10	11	7	20	12	3	2	0	1	2	1
No, Probably	-	-	**6%**	**4%**	**3%**	**3%**	-	-	-	-	-	**50%**
	0	0	3	2	3	2	0	0	0	0	0	1
No, Definitely	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	0	0	0	0	0	0	0	0	0	0
Top 2 Box Yes	**100%**	**100%**	**90%**	**96%**	**97%**	**95%**	**100%**	**100%**	**100%**	**100%**	**100%**	**50%**
	38	49	46	53	88	56	9	8	1	4	6	1
Low 2 Box No	-	-	**6%**	**4%**	**3%**	**3%**	-	-	-	-	-	**50%**
	0	0	3	2	3	2	0	0	0	0	0	1

Intentions to Pursue Career within the Engineering Field *small base size **very small base size. Interpret with caution.

Knowledge of Organizational Responsibility & Intention to Apply for Licensure

- Students with a high level of knowledge of organizational responsibility are more likely to be definitely likely to apply for licensure.

Knowledge Levels Defined
***High*: All Correct in Q9 (4)**
***Moderate*: 2 or 3 Correct in Q9**
***Low*: 1 Correct in Q9**
***None*: All Incorrect (0) in Q9**

	HIGH KNOWLEDGE			MODERATE KNOWLEDGE			LOW KNOWLEDGE			NO KNOWLEDGE		
	A			B			C			D		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
	n=38	n=49	n=51	n=55	n=91	n=59	n=9**	n=8**	n=1**	n=4**	n=6**	n=2**
Yes, Definitely	**45%**	**47%**	**53% B**	**40%**	**47%**	**34%**	**22%**	**13%**	**-**	**25%**	**33%**	**100%**
	17	23	27	22	43	20	2	1	0	1	2	2
Yes, Probably	**32%**	**25%**	**22%**	**22%**	**19%**	**36%**	**44%**	**38%**	**-**	**50%**	**17%**	**-**
	12	12	11	12	17	21	4	3	0	2	1	0
No, Probably	**8%**	**12%**	**8%**	**24%**	**19%**	**20%**	**11%**	**-**	**100%**	**-**	**17%**	**-**
	3	65	4	13	17	12	1	0	1	0	1	0
No, Definitely	**8%**	**10%**	**8%**	**9%**	**4%**	**5%**	**11%**	**25%**	**-**	**25%**	**-**	**-**
	3	5	4	5	4	3	1	2	0	1	0	0
Top 2 Box Yes	**76%**	**71%**	**75%**	**62%**	**66%**	**70%**	**67%**	**50%**	**-**	**75%**	**50%**	**100%**
	29	35	38	34	60	41	6	4	0	3	3	2
Low 2 Box No	**16%**	**22%**	**16%**	**33%**	**23%**	**25%**	**22%**	**25%**	**100%**	**25%**	**17%**	**-**
	6	11	8	18	21	15	2	2	1	1	1	0

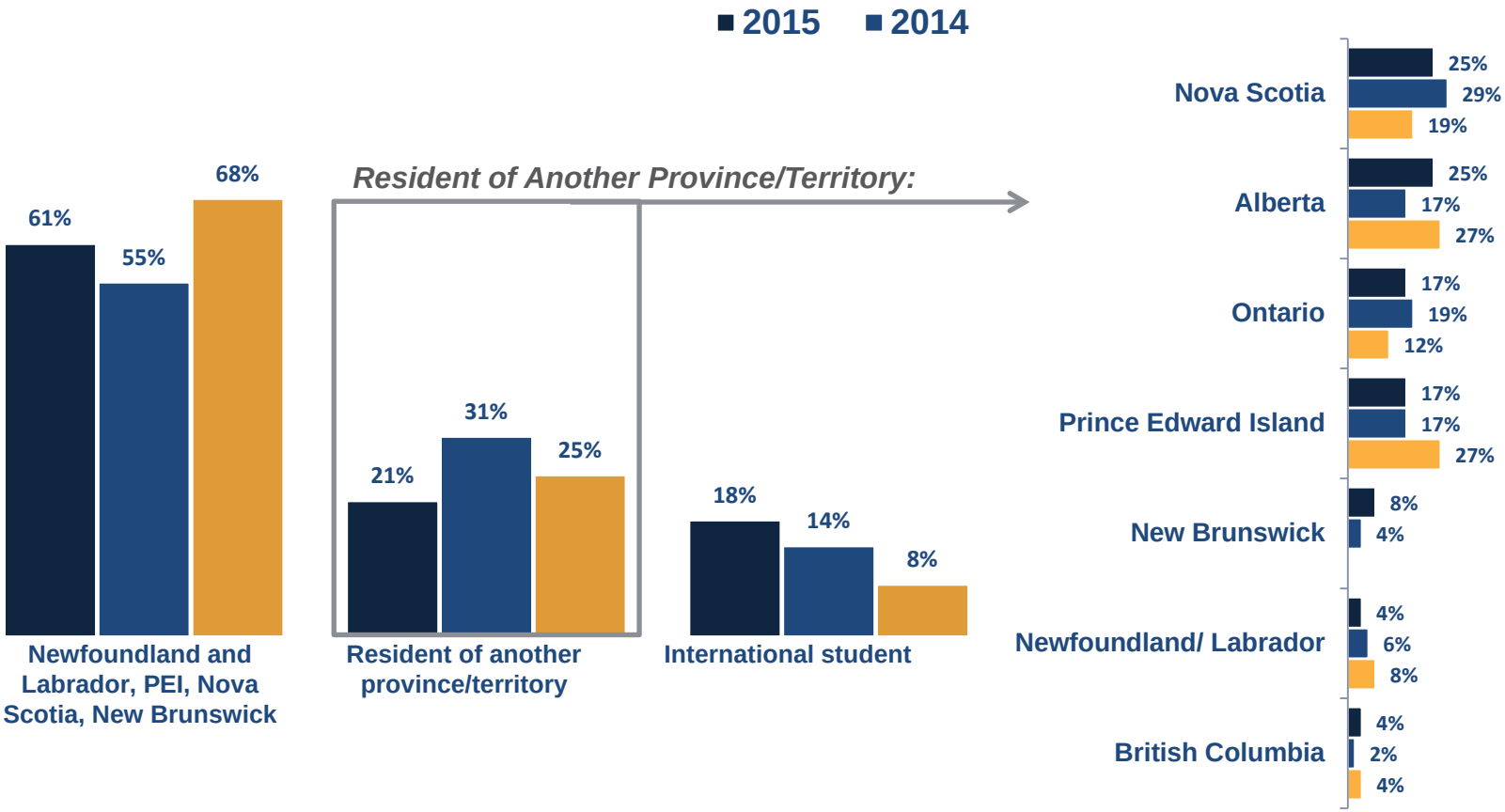
Intention to Apply for the Professional Engineers Licensure

**very small base size. Interpret with caution.

Demographics

Permanent Residency

- Six in ten final year engineering students are permanent residents of the province they are attending school in (61%), while two in ten are a resident of another province/ territory or an international student.
- Of those who are a permanent resident of another province, the most common provide of residence is Nova Scotia and Alberta, followed by Ontario and PEI.

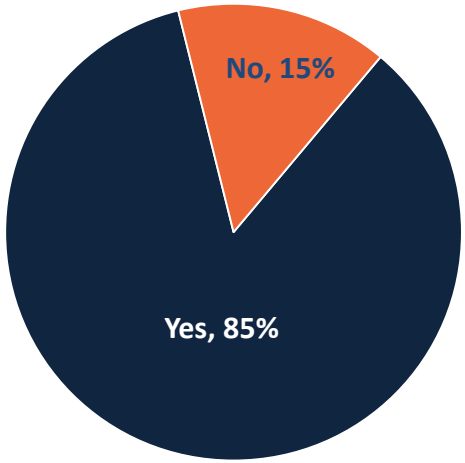


*small base size **very small base size.

Q34. For statistical purposes, we would like to know the location of your permanent residence. Please select the statement that most appropriately describes your current residency status: ? Base: All respondents, 2013 n=106, 2014 n=154; 2015 (n=113) Q35. You indicated that you are attending university in [Newfoundland and Labrador/PEI/Nova Scotia/New Brunswick] but are a permanent resident of another province/territory. Please select the province or territory in which you are a permanent resident. Base: Respondents who are not permanent residents of [Newfoundland and Labrador/PEI/Nova Scotia/New Brunswick], 2013 (n=26**), 2014(n=48*); 2015 (n=24**)

International Students' Plans After Graduation

- More than eight in ten international studies plan on staying in Canada after graduation, while around one in ten do not plan on staying.

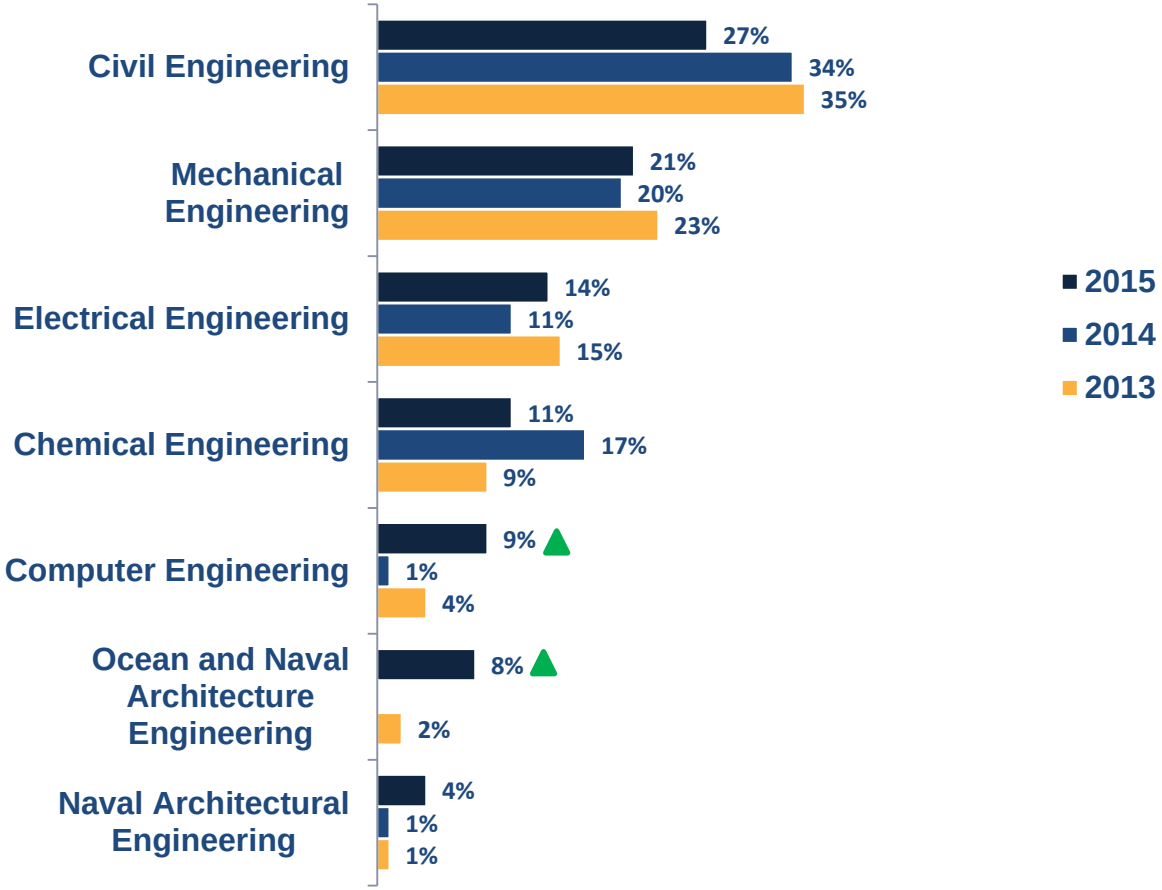


*small base size **very small base size.

Q36a. Do you plan on staying in Canada after your bachelor's degree is complete? Base: International students 2015 (n=20**)
Q36b. Why do you not intend on staying in Canada? *Cannot be shown, only n=3** respondents*
Base: International students who don't intend on staying in Canada 2015 (n=3**)

Engineering Disciplines

- The most popular engineering disciplines continue to be civil engineering, followed by mechanical engineering, electrical engineering and chemical engineering.
- Compared to 2014, students are more likely to mention computer engineering or ocean and naval architecture engineering.



Mentions <3% (in 2013) are not shown

Q3/Q3B. Please indicate the engineering discipline in which you are currently studying by selecting one of the following options.
Base: All respondents, 2013 (n=106); 2014 (n=154); 2015 (n=113)

Engineering Disciplines

- Students under 23 are more likely to study computer engineering than those 24-26 years old.

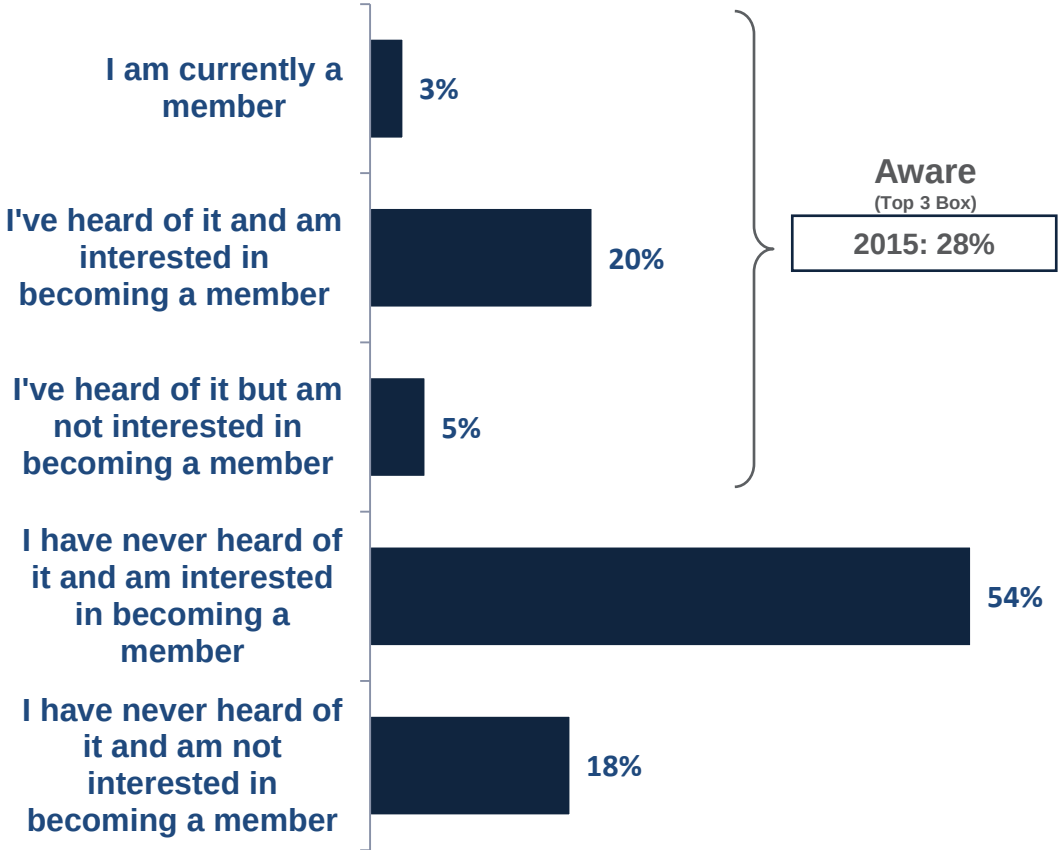
		Age			Gender		Resident Status		
	Total	Under 23	24-26	27+	Male	Female	Permanent resident	Permanent resident of another province	International student
		G	H	I	J	K	N	O	P
Base: All respondents	(n=113)	(n=65*)	(n=31*)	(n=17**)	(n=85)	(n=28*)	(n=69*)	(n=24**)	(n=20**)
Civil Engineering	27%	25%	29%	29%	26%	29%	26%	21%	35%
Mechanical Engineering	21%	16%	29%	24%	25%	11%	25%	17%	15%
Electrical Engineering	14%	14%	13%	18%	15%	11%	10%	13%	30%
Chemical Engineering	11%	11%	7%	12%	9%	14%	6%	17%	20%
Computer Engineering	9%	13% H	-	12%	9%	7%	12%	8%	-
Ocean and Naval Architecture Engineering	8%	10%	10%	-	7%	11%	12%	4%	-
Naval Architecture Engineering	4%	5%	3%	-	4%	4%	3%	8%	-

*small base size **very small base size.

Q3/Q3B. Please indicate the engineering discipline in which you are currently studying by selecting one of the following options.
Base: All respondents, 2015 (n=113)

Association with SMP

- Three in ten students (28%) are aware of a Student Membership Program (SMP) offered by their respective provincial engineering association. Of which, 3% are current members, two in ten have heard of it and are interested in becoming a member (20%) and 5% have heard of the program but are not interested in membership. More than half of students have never heard of it but are interested in becoming a member, while less than two in ten have never heard of it but are not interested.



Q32. Which of the following best describes your association with the [PEGNL/Engineers PEI/Engineers NS/APEGNB/]'s Student Membership Program (SMP)?
Base: All respondents 2015 (n=113)

Demographics- Gender, Age, Ethnicity

Gender	
Male	75%
Female	25%

Ethnicity	
British	57%
Western European	20%
African or African American	9%
East Asian	8%
Southeast Asian	4%
Aboriginal/First Nations/Métis	4%
South Asian	2%
Central/South American	2%
West Asian or Middle Eastern	1%
Southern or Eastern European	1%
Caribbean	1%
Other	6%
Prefer not to say	4%

Age	
18-20	2%
21-23	58%
24-26	27%
27+	15%

Ipsos Reid Public Affairs
300 -160 Bloor Street East
Toronto, Ontario, Canada M4W 1B9

Sandra Guiry, Vice President
Phone: 416-324-2018
Email: Sandra.Guiry@ipsos.com

Michael Howell, Associate Vice President
Phone: 416-572-4407
Email: Michael.Howell@ipsos.com

Engineers Canada
1100 – 180 Elgin St.
Ottawa, Ontario, Canada K2P 2K3

Phone: 613-232-2474
Email: Research@EngineersCanada.ca

July 2015