



**6 DEGREES
6 DEGRÉS**

Closed Shops: Making Canada's engineering profession more inclusive of international engineers

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Last year, 6 Degrees and the Institute for Canadian Citizenship launched its *Closed Shops* report series, a pillar in our efforts to examine the real and persistent professional barriers that internationally educated professionals face in Canada.

We began with an examination of the legal profession. In that first report, we argued that the Canadian legal profession's so-called entry requirements for foreign-trained lawyers actually functioned as walls—walls that make it extremely difficult for talented people to get in from the outside. We suggested 25 practical recommendations, organized around immigration, licensure, and employment, for how all actors, including regulators, professional associations, and immigration officials, could work to create a more inclusive environment.

In 2018, building on that inaugural report, we are turning our focus onto internationally educated engineers. This new study starts by asserting that internationally educated engineers represent an important economic opportunity for Canada and that it is in our national interest to enable their full participation in our economy and in our society. As the dialogue around diversity evolves, this report stresses that it cannot be meaningful without professional and economic inclusion being measured and recognized.

At no point do we suggest that the engineering profession should relax its high professional requirements. Indeed, all practicing engineers in this country should be held to exacting educational, experiential, and ethical standards, with licensure only granted to those who meet or exceed those standards. Our point is simply that the standards should be equal for all, irrespective of where they were educated.

We look at the licensure and employment processes that internationally educated engineering graduates face—and, for those who are not Canadian citizens, the immigration journey they must also undertake. Our findings reveal a systemic bias, the consequence of a complex and unclear system that varies from one province or territory to another. Many qualified engineers end up falling into the gaps between how these different processes interact. By streamlining the processes and reducing persistent information gaps, we can create a more inclusive economy and society for Canada.

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Each year, Canada's immigration system attracts tens of thousands of highly skilled individuals. Canada takes in one of the highest proportions of highly educated immigrants of any OECD country. And yet, many of these newcomers find that the professional qualifications necessary for getting them into the country are inadequate for landing them jobs in their professions. Consequently, internationally educated individuals face higher unemployment rates and persistent wage gaps compared to those who were educated in Canada.

Building on our 2017 report on lawyers, the 2018 *Closed Shops* report examines the barriers international engineering graduates (IEGs) face in finding employment in the engineering profession in Canada. It finds that, as it is with many other professions, international engineering graduates have a harder time gaining employment than their Canadian-educated counterparts. This is due to various aspects of the immigration process, the engineering licensure process, and the professional employment process.

This report focuses on solutions. It makes recommendations that will improve each step of the process. Importantly, the recommendations this report makes will in no way reduce the high standards of the Canadian engineering profession, or its quality. Rather, they will help remove the inefficient and unnecessary barriers that internationally trained engineers, who meet these standards and quality, face.

These recommendations are directed at a variety of parties, including Engineers Canada, provincial engineering regulators, immigration officials, policy-makers, fairness commissioners, employers, universities, settlement support agencies, and IEGs themselves.

Recommendations

1. IMPROVING THE IMMIGRATION PROCESS

- Allow Engineers Canada to conduct the Educational Credential Assessment that Immigration Canada relies on in its assessment process;
- Create a government job bank that is organized by profession, to more effectively match employers and foreign skilled workers;
- Provide IEGs with thorough information about support services before and after they arrive, along with other materials from Immigration Canada;
- Make the Global Talent Stream permanent and increase the number of skilled immigrants who are admitted under it; and
- Promote alternative career pathways for IEGs by both Immigration Canada and settlement service providers.

2. IMPROVING THE LICENSURE PROCESS

- Harmonize provincial assessment standards by developing a national standard for assessing IEGs' credentials and competence;
- Empower Engineers Canada by provincial engineering regulators, granting it the powers of a national accreditation body;
- Use the Washington Accord and multilateral recognition agreements more effectively by expediting applications from graduates of institutions that have standards already recognized as substantially equivalent to Canada's;
- Provide information sessions from regulatory bodies, and send letters to IEGs to encourage them to apply for licensure;
- Create positions within provincial regulatory bodies that would be specifically dedicated to supporting IEGs;
- Establish fairness commissioners in all provinces and territories;
- Empower fairness commissioners to receive and respond to individual complaints;
- Pass laws requiring regulators to complete components of the licensing process within specified time periods;
- Establish bridging programs in engineering faculties that will facilitate IEGs' entry into the labour market; and
- Enable applicants for licensure to satisfy the Canadian Experience requirement through a competency-based assessment.

3. IMPROVING THE EMPLOYMENT PROCESS

- Create provincial advocacy bodies to complement the regulatory bodies and advocate for IEGs;
- Empower fairness commissioners to respond to employer-driven barriers to entry in the regulated professions;
- Create discipline- or region-specific mentorship programs, run by provincial regulators and employment agencies, to help IEGs navigate the licensure process and form professional networks;
- Create credential databases that employers can use to familiarize themselves with foreign credentials and provide feedback about difficulties evaluating foreign qualifications; and
- Encourage employers to leverage human resources agencies that specialize in recruiting diverse talent and helping them succeed.

1. Introduction

Katrina de Asis is a 32-year-old Filipino woman who immigrated to Canada alone in July 2017. Her resumé is indisputably impressive. She is an electronics engineer who worked for seven years in the Philippines office of a Fortune 500 company, and holds a Master of Business Administration from the University of the Philippines, that country's top-ranked university. De Asis came to Canada because of the opportunities that exist for women here. "This is the only country with a minister for the status of women," she says. "I'm certain there's discrimination against women in all countries, [but at least here you have] a government that's working to recognize women."¹

It is not surprising that de Asis was drawn to a country where she sees gender equality being taken seriously. She hails from a profession characterized by extreme gender imbalance, and a country that remains socially conservative compared to Canada. "Back home, workplaces are more hierarchical, and as a woman, you have to break the ceiling and prove yourself even though you have the knowledge and capability ... I knew in my previous company that that was not going to happen. I knew I wouldn't have any [chance] of becoming a manager, so I left the company. And I knew I needed to leave the country."

Today, de Asis is working as a certified technologist for an electronics manufacturer in Georgetown, Ontario. But she aspires to return to working as a licensed engineer. Yet, more than a year after immigrating, this goal still remains far off. De Asis describes the licensure path for international engineering graduates (IEGs) as "pretty tough," because the process is long and rigidly serial.

In November 2017, de Asis applied to have her academic credentials assessed by Professional Engineers Ontario (PEO), the licensing and regulating body for professional engineering in the province. Then, she waited six months to get an interview with PEO, and another month to get the results from that interview. In the meantime, she was not allowed to register for the technical exams that the PEO required her to write. She will take the first technical exam in December 2018. Depending on how that goes, she may need to write two additional exams, but the earliest she can do so is May 2019. Meanwhile, when she tried to register for the National Professional Practice Exam—an ethics exam all licensed engineers in Canada must write—she was told she could not take it before the technical exams were finished. "I don't understand why," she says. "Ethics is different than technical."

Once she clears all these hurdles, de Asis will still need to demonstrate that she has met the PEO's work experience requirement. "That is one thing I am really scared about," she admits. Her unease is understandable. This requirement is notoriously difficult for many IEGs to meet, because it demands that they find work in their area of specialization, and gain at least one year of Canadian work experience—all in a field where employers tend to prefer domestically trained talent.

"I understand they need to evaluate people," de Asis says, "[but] two years of waiting is too much. I know a lot of people who don't want to pursue this [engineering licence]."

2. Focusing attention on Canada's engineering profession

There is evidently a lot of truth to de Asis' observation. Many—indeed most—international engineering graduates do not obtain an engineering licence when they move to Canada. In 2015, the national engineering association Engineers Canada reported that only 15 percent of immigrant engineers apply for licensure in Canada²—a number well below the roughly 50 percent of Canadian engineering graduates who do.³ Engineers Canada said it was “uncertain” how many of these immigrants were qualified to work as engineers.⁴ But given that IEGs constitute Canada's largest body of skilled immigrants, this number likely reaches into the tens, if not hundreds, of thousands.⁵

The under-licensure and underemployment of qualified engineers is a loss for these individuals, and likely helps to explain the troubling earnings gap that persists between Canadian and internationally educated professionals.⁶ “I know for certain that the salary range is different [for workers who have their engineering licence],” de Asis says. “And it will impact my [chances for] promotion at work.”

The underutilization of foreign engineers also represents a lost opportunity for Canada. As Nusraat Masood, Director of the University of Manitoba's Internationally-Educated Engineers Qualification Program, observes: “There's no use in having hundreds of immigrants who are [highly qualified] if they're not in the workforce. That's not the point of this exercise. The point is not just to recognize their academic accomplishments in a foreign place, but rather to fully leverage their technical ability to help

Canadian society.”⁷

This report focuses attention on some of the key barriers IEGs face in Canada's immigration, licensure, and employment processes, and recommends how they might be addressed. Importantly, this report does not advocate for Canada's stringent engineering standards to be relaxed, but rather identifies barriers that make it unduly difficult for IEGs to achieve licensure or employment relative to their Canadian peers. The recommendations are directed at a variety of stakeholders, including Engineers Canada, provincial engineering regulators, immigration officials, policy-makers, fairness commissioners, employers, universities, settlement support agencies, and IEGs themselves.

This report begins with a discussion of Canada's immigration system and its key features, as well as a look at the data that suggests this system is falling short of its goals. It then reviews the process for becoming a licensed engineer—both as a graduate of an accredited Canadian engineering program and as a graduate of a foreign engineering program—and highlights the ways in which IEGs face unique barriers at the immigration, licensure, and employment stages. Finally, it makes a series of recommendations for change that are informed by interviews with a variety of stakeholders.

² *Monitoring Report on the Educational Credential Assessment Project*, Engineers Canada, 2015, p. 5 (Monitoring Report).

³ *National Membership Report*, Engineers Canada, 2016.

⁴ Monitoring Report, p. 5.

⁵ Between 2004 and 2008, Canada admitted 1.2 million permanent residents. In the same period, Statistics Canada reported that 42 percent of all immigrants had a university degree, that 52 percent of those degrees were in engineering, and that 74 percent of them received those degrees from institutions outside of Canada. This represents 200 000 individuals who were foreign trained in engineering. See Monitoring Report, p. 5–6.

⁶ *Some Assembling Required: STEM Skills and Canada's Economic Productivity*, Council of Canadian Academies, 2015, p. 134 (STEM Report).

⁷ Interview with Nusraat Masood, University of Manitoba IEEQ Program, July 26, 2018 (Masood Interview).

3. Study methods

The findings in this report are based on an extensive literature review, structured interviews with Canadian and internationally educated engineers, and interviews with provincial regulators, Engineers Canada, fairness commissioners, employment agencies, consultants, private companies, bridging program directors, and others. The author interviewed IEGs from a range of countries, academic institutions, and disciplines. The majority of IEGs were recent immigrants, who were in the process of obtaining licensure or looking for employment, or had recently done so. We note, however, that the experiences and concerns voiced by IEGs cannot be taken as representative of the IEG population at large, as various constraints prevented us from using survey methods that would allow for population-wide conclusions to be drawn about IEGs. Rather, we have included their stories to put a human face on some of the challenges IEGs encounter.

4. The challenge

For decades, one of the key objectives of Canada's immigration system has been to attract immigrants who have advanced credentials, skills, and work experience, with the aim of increasing Canada's productivity and raising the standard of living that Canadians enjoy.⁸ To achieve this, Canada has developed an immigration system that strikes a "compromise" between demand and supply-driven immigration, says Thomas Liebig, a senior migration specialist at the Organisation for Economic Co-operation and Development (OECD).⁹

"Most EU countries have completely demand-driven migration, where you need a job offer to come," Liebig explains. "A demand-side approach ensures rapid integration (of skilled immigrants)," because employers are implicitly recognizing their credentials when they offer them jobs. But this approach can be myopic; it may enable employers to satisfy immediate labour shortages but fail to consider a country's longer-term human capital needs.

A supply-side approach, on the other hand, aims to expand the size of a country's labour force and output by admitting large numbers of immigrants. Where this approach fails to pay sufficient heed to local employment conditions, newcomers will often struggle to integrate when they arrive. "The supply-side schemes in Europe have not worked particularly well," Liebig says.

Canada's immigration system falls somewhere in the middle of these two approaches. Today, it takes in one of the highest proportions of highly educated immigrants of all OECD countries (see Figure 1).¹⁰ But it is careful to admit immigrants in numbers and occupations for which there is projected demand, based on the government's forecasts of future labour market conditions.¹¹

Yet, notwithstanding its efforts to get the rights inputs, it is not clear Canada is excelling on outcomes. As many immigrants continue to discover when they arrive, the professional attributes

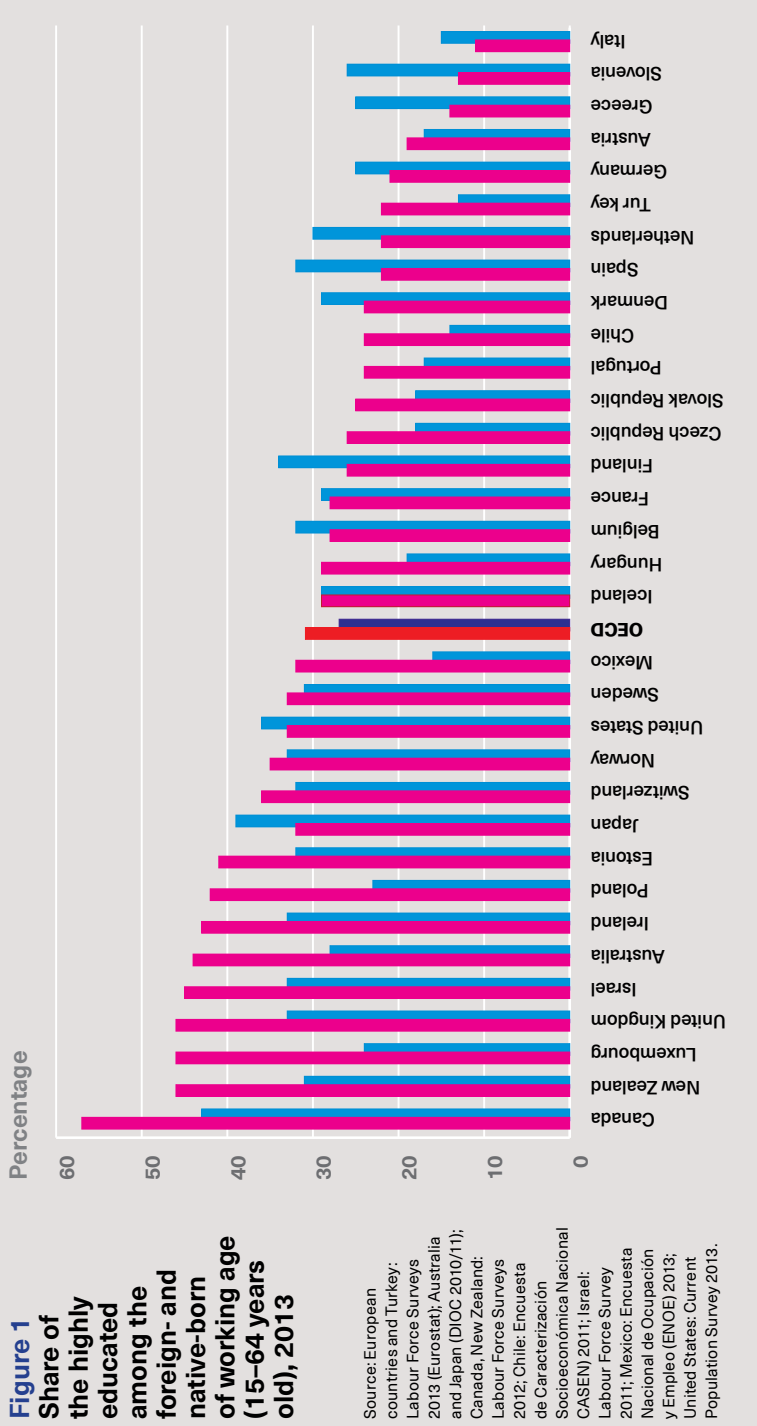
⁸ "An economics perspective on Canadian immigration," Don Drummond and Francis Fong, *Policy Options* (July 2010) (An economics perspective on Canadian immigration).

⁹ Interview with Thomas Liebig, OECD, June 27, 2018.

¹⁰ In 2014, roughly 60 percent of Canadian immigrants were highly educated, versus 40 percent of native-born Canadians. See "Labour Market Integration of Immigrants and their Children," *International Migration Outlook*, 2014, OECD, p. 48, Figure 2.2 (OECD Migration Outlook).

¹¹ See "Canadian Occupational Projections System," Employment and Social Development Canada, visited on Aug. 20, 2018, website: <http://occupations.esdc.gc.ca/sppc-cops/c.4nt.2nt@-eng.jsp?cid=52&lang=en&preview=1>.

Figure 1
Share of the highly educated among the foreign- and native-born of working age (15–64 years old), 2013



necessary for getting them in the door are often insufficient for landing them jobs in their profession. Many educated immigrants struggle to become licensed, or struggle to find employment that adequately values their foreign credentials and experience. For international engineering graduates in particular, these two struggles often go hand in hand.

It is difficult to gauge the full extent of the problem, for reasons that are in part unique to the engineering profession. Unlike in many other professions, individuals who obtain a bachelor's degree in engineering are allowed to perform certain kinds of engineering work without an engineering licence—or what is known as a P.Eng¹²—provided they work under the direct supervision of a licensed engineer.¹³ Thus, a significant—but difficult to track—number of IEGs have likely chosen to not become licensed, but have still found meaningful work that draws on their training. In addition, “engineer” is a broadly used term throughout the world, and may refer to types of workers who would not be regarded as professional engineers in Canada, such as engineering technicians or technologists.¹⁴ Finally, it is appropriate for IEGs to undergo additional training when they emigrate from countries that have lower engineering standards than Canada. Education systems¹⁵ and engineering standards¹⁶ can vary considerably from country to country, so it is to be expected that some IEGs will have to invest time and money to demonstrate their competence or upgrade their skills.

However, even accounting for such factors, there is reason to believe IEGs face a number of hurdles that make it unduly difficult for them to become licensed and employed relative to their Canadian counterparts.¹⁷ A 2014 study¹⁸ that evaluated 2011 National Household Survey data found that Canadian-born and -educated engineers are far more likely to work in their field of training than

¹² Or “Eng./ing.” in Quebec.

¹³ Email from Stephanie Price, Engineers Canada, August 23, 2018 (Price Email).

¹⁴ Email from Enayat Aminzadah, APEGA, August 23, 2018 (Aminzadah Email).

¹⁵ “Making Integration Work: Assessment and Recognition of Foreign Qualifications,” OECD, 2017, p. 6 (Making Integration Work).

¹⁶ “Engineers Geoscientists Manitoba Registration Review Report,” Office of the Manitoba Fairness Commissioner, July 2017, p. 3.

¹⁷ Making Integration Work, *ibid.*, p. 6.

¹⁸ “Employment Match Rates in the Regulated Professions: Trends and Policy Implications,” Office of the Fairness Commissioner of Ontario, Canadian Public Policy, August 2015, S28 (Employment Match Rates).

Figure 2
Employment Match Rates by Immigration Status and Place of Education, Ontario and Rest of Canada, 2011

| Professions | Ontario | | | | Rest of Canada (ROC) | | | | DIFFERENCE ON INDISPARITY = ROC | | | | | | | | | | | |
|---------------------------|----------------------------|-------------|----------|--------------------------|----------------------|----------|-------------------|-------------|---------------------------------|--------------|-------------------|--|--------------|-------------|--|--------------|-------------|--|-----------------|---|
| | CANADIAN BORN AND EDUCATED | MR | SE (+/-) | INT'L EDUCATED IMMIGRANT | MR | SE (+/-) | DISPARITY MEASURE | MR | | SE (+/-) | DISPARITY MEASURE | | | | | | | | | |
| Architects | 44.7% | 0.7% | | 26.4% | 0.6% | | 18.4% | 1.0% | | 65.3% | 0.5% | | 26.0% | 0.7% | | 39.2% | 0.9% | | -20.8%*** | ✓ |
| Accountants | 50.5% | 0.3% | | 26.2% | 0.3% | | 24.3% | 0.4% | | 52.3% | 0.2% | | 23.1% | 0.3% | | 29.2% | 0.4% | | -4.9%*** | ✓ |
| Chiropractors | 79.8% | 0.9% | | 67.6% | 3.4% | | 12.2% | 3.6% | | 81.0% | 0.9% | | 78.0% | 2.9% | | 2.9% | 3.0% | | 9.3%* | ✓ |
| Dentists | 89.5% | 0.5% | | 34.1% | 1.0% | | 55.4% | 1.1% | | 86.5% | 0.4% | | 30.7% | 1.0% | | 55.8% | 1.1% | | -0.4% | ✓ |
| Dietitians | 70.2% | 1.6% | | 26.7% | 2.9% | | 43.6% | 3.3% | | 58.8% | 1.1% | | 10.8% | 1.7% | | 48.0% | 2.0% | | -4.4% | ✓ |
| Engineers | 39.0% | 0.2% | | 20.3% | 0.1% | | 18.7% | 0.2% | | 48.3% | 0.1% | | 22.2% | 0.1% | | 26.1% | 0.2% | | -7.4%*** | ✓ |
| Lawyers | 65.0% | 0.3% | | 14.3% | 0.4% | | 50.7% | 0.5% | | 65.1% | 0.2% | | 13.3% | 0.4% | | 51.8% | 0.4% | | -1.1% | ✓ |
| Occupational therapists | 76.8% | 0.7% | | 69.8% | 2.6% | | 6.9% | 2.7% | | 78.4% | 0.5% | | 64.9% | 2.5% | | 13.5% | 2.5% | | -6.6% | ✓ |
| Optometrists | 93.1% | 0.8% | | 47.3% | 3.0% | | 45.9% | 3.1% | | 92.2% | 0.6% | | 57.4% | 3.2% | | 34.7% | 3.3% | | 11.2%* | ✓ |
| Pharmacists | 80.9% | 0.6% | | 50.7% | 0.7% | | 30.2% | 0.9% | | 85.1% | 0.3% | | 34.4% | 0.8% | | 50.7% | 0.9% | | -20.5%*** | ✓ |
| Physicians | 85.5% | 0.3% | | 36.7% | 0.5% | | 48.7% | 0.6% | | 86.1% | 0.2% | | 54.6% | 0.5% | | 31.5% | 0.5% | | 17.2%*** | ✓ |
| Physiotherapists | 79.8% | 0.6% | | 40.7% | 1.2% | | 39.1% | 1.4% | | 80.1% | 0.4% | | 38.1% | 1.2% | | 42.1% | 1.2% | | -3.0% | ✓ |
| Registered nurses | 71.2% | 0.3% | | 53.6% | 0.5% | | 17.6% | 0.6% | | 75.8% | 0.2% | | 45.3% | 0.4% | | 30.5% | 0.5% | | -12.9%*** | ✓ |
| Teachers | 66.5% | 0.1% | | 25.3% | 0.3% | | 41.2% | 0.3% | | 60.1% | 0.1% | | 17.5% | 0.3% | | 42.6% | 0.3% | | -1.4%*** | ✓ |
| Veterinarians | 82.3% | 0.7% | | 26.0% | 1.4% | | 56.3% | 1.6% | | 80.9% | 0.6% | | 36.8% | 1.4% | | 44.0% | 1.6% | | 12.3%*** | ✓ |
| Engineering technologists | 17.6% | 0.1% | | 11.4% | 0.3% | | 6.2% | 0.3% | | 24.2% | 0.1% | | 11.3% | 0.3% | | 12.9% | 0.3% | | -6.7%*** | ✓ |
| Medical lab technologists | 44.0% | 0.6% | | 16.6% | 0.7% | | 27.4% | 0.9% | | 43.4% | 0.4% | | 14.6% | 0.7% | | 28.8% | 0.8% | | -1.4% | ✓ |
| Aggregate | 51.5% | 0.1% | | 24.1% | 0.1% | | 27.3% | 0.1% | | 54.7% | 0.1% | | 24.7% | 0.1% | | 29.9% | 0.1% | | -2.6%*** | |

Notes:
 MR = Match rate
 ON = Ontario.
 *significant at p<0.05.
 **significant at p<0.01.
 ***significant at p<0.001.
 Source: Statistics Canada (2006, 2011).

IEGs: only 22 percent of IEGs “matched” to engineering jobs, compared to 48 percent of Canadian-born and -educated engineers (see Figure 2).¹⁹ These findings largely replicate the results of a 2010 study, which used 2006 census data to conduct the same assessment.²⁰ A new match rate study is currently being conducted by Ontario’s Office of the Fairness Commissioner;²¹ more current data in this area will be welcome.

In addition to this concerning match rate data, a substantial body of research has shown that immigrants’ education and work experience are significantly discounted by employers,²² which results in immigrants earning less, receiving fewer promotions, and suffering disproportionate rates of unemployment and underemployment relative to the Canadian-born.²³ For instance, a 2015 report on science, technology, engineering, and mathematic (STEM) skills and Canada’s productivity observed “a large disparity between the earnings of immigrants and Canadian-born workers,” and noted that the “earnings gap between immigrants and non-immigrants is even larger for those with a university degree.”²⁴ Most troublingly, this report observed that “previous generations tended to be able to close this gap, but census data dating back to 1975 indicate that the earnings gap has since widened and become more difficult to close.”²⁵

19 These numbers reflect the match rate for Canada, excluding Ontario. In Ontario, 39 percent of Canadian-born and -educated engineers worked as engineers, compared to 20 percent of IEGs. See Employment Match Rates.
 20 The 2010 study arrived at similar findings: then, only 19 per cent of IEGs “matched” to engineering jobs, compared to 42 per cent of Canadian-born and -educated engineers. See “Immigrants Working in Regulated Occupations,” Perspectives on Labour and Income, 11(2): 13–28.
 21 Email from Kim Bergeron, Office of the Fairness Commissioner, July 26, 2018 (Bergeron Email).
 22 “The Fiscal Impact of Immigration in OECD Countries,” *International Migration Outlook*, 2013, OECD, p. 152 (Fiscal Impact of Immigration).
 23 Employment Match Rates, *ibid*.
 24 STEM Report, *ibid*, p. 134.
 25 STEMP Report, *ibid*, p. 134.

5. The case for including international engineering graduates

For a host of economic, political, and ethical reasons, it is extremely important that Canada works to address the underutilization of skilled immigrants, including IEGs.

From an economic perspective, Canada must do so if it is to realize one of the key goals of its immigration policy: maximizing the well-being of Canadians.²⁶ Skilled immigrants can import new ideas and innovations into Canadian companies, which will ultimately raise productivity, wages, and the standard of living.²⁷ And immigrants' connections to their countries of origin can also open up new markets for Canadian products, thereby generating more employment and income for the Canadian population.²⁸

Canada also benefits from boosting the employment outcomes of skilled immigrants since well-employed immigrants contribute more in taxes and draw less on social benefits.²⁹ A 2013 OECD report estimated that "raising immigrants' employment rate to that of the native-born would entail substantial fiscal gains" in the neighbourhood of 0.5 to 1 percent of GDP (see Figure 3).³⁰

Within the engineering profession specifically, IEGs will also be needed to satisfy burgeoning demand in sectors key to the Canadian economy. Engineers Canada's labour market projections to 2025 indicate that thousands of IEGs will need to be admitted each year across disciplines such as electrical, mechanical, civil, computer, geological, industrial, and mining engineering for supply to meet expected demand in the coming decades (see Figure 4).³¹ For example, in the civil engineering field alone, Canada will need to take in more than 800 IEGs annually over the next five years to satisfy demand.³²

The inclusion of newcomers matters politically, as well. As has become increasingly clear with the rise of populist movements fueled by anti-immigrant sentiment, countries that fail to include immigrants

do so at potentially great cost to themselves and future generations. "Making use of educated immigrants' skills fosters social cohesion," says Liebig, and can help to ensure a host country's society accepts further immigration.³³

Finally, it is worth noting that Canada's efforts to include immigrants can have long-lasting implications for these individuals and their families. In interviews with the author, IEGs almost universally cited the chance of a better life for their children as a reason for immigrating to Canada. Unfortunately, though, this dream can be compromised when they fail to be included fully. According to OECD research, the offspring of first-generation skilled immigrants often have relatively lower employment outcomes because of factors such as less contact with employers, limited access to the networks through which job vacancies are filled, and a lack of knowledge about the way the labour market functions.³⁴

²⁶ An economics perspective on Canadian immigration.

²⁷ An economics perspective on Canadian immigration.

²⁸ An economics perspective on Canadian immigration.

²⁹ Fiscal Impact of Immigration, p. 153.

³⁰ Fiscal Impact of Immigration, p. 152.

³¹ "Engineering Labour Market in Canada: Projections to 2025," Engineers Canada, June 2015, p. 8–11 (Labour Market Projections 2025).

³² Labour Market Projections 2025, p. 8.

³³ Liebig Interview. See also, OECD Migration Outlook, *ibid.*, p. 37–38.

³⁴ OECD Migration Report, p. 38.

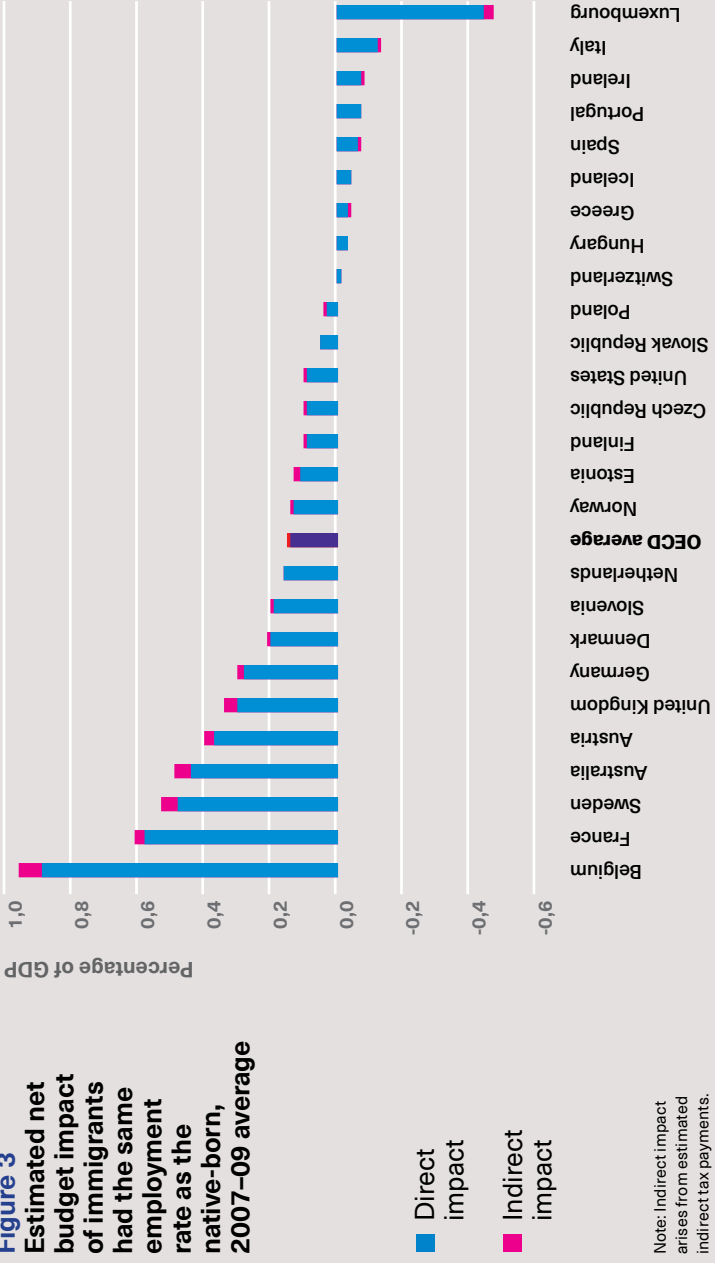
Figure 4
Net
In-Migration

| | Total Net In-Migration | | | | International | | | Interprovincial | | |
|---------------------------|------------------------|---------|---------|---------|---------------|---------|---------|-----------------|---------|--|
| | 2005-14 | 2015-19 | 2020-25 | 2005-14 | 2015-19 | 2020-25 | 2005-14 | 2015-19 | 2020-25 | |
| Canada | 247.6 | 271.6 | 312.3 | 247.2 | 271.3 | 311.9 | | | | |
| Newfoundland and Labrador | -0.3 | -0.8 | 4.6 | 0.8 | 0.9 | 1.1 | -1.0 | -1.8 | 3.5 | |
| PEI | 0.9 | 1.6 | 1.6 | 1.4 | 1.6 | 1.9 | -0.5 | 0.0 | -0.3 | |
| Nova Scotia | 0.3 | 0.6 | 1.5 | 2.4 | 2.3 | 2.7 | -2.1 | -1.7 | -1.2 | |
| New Brunswick | 0.0 | 2.5 | 3.4 | 1.8 | 2.7 | 3.3 | -1.8 | -0.2 | 0.1 | |
| Quebec | 39.2 | 51.7 | 77.9 | 47.7 | 59.8 | 83.6 | -8.5 | -8.0 | -5.7 | |
| Ontario | 91.3 | 99.6 | 104.0 | 103.9 | 113.0 | 123.9 | -12.6 | -13.5 | -19.9 | |
| Manitoba | 7.6 | 13.1 | 9.4 | 12.3 | 17.0 | 17.8 | -4.7 | -3.9 | -8.4 | |
| Saskatchewan | 7.3 | 12.3 | 2.6 | 7.5 | 11.0 | 7.2 | -0.2 | 1.3 | -4.6 | |
| Alberta | 57.4 | 43.9 | 48.0 | 32.1 | 27.9 | 21.9 | 25.3 | 16.0 | 26.1 | |
| British Columbia | 44.0 | 46.9 | 59.4 | 37.4 | 34.9 | 48.7 | 6.6 | 12.1 | 10.7 | |

"Engineering Labour Market in Canada: Projections to 2025." Engineers Canada, June 2015, p. 8-11 (Labour Market Projections 2025).

Figure 4 shows the average annual number of net in-migrants to the provinces for total migrants, international migrants and net interprovincial migrants associated with the population outlook. The number of net international in-migrants rises from an average of about 250 thousand over the past 10 years to over 300 thousand in the long-term.

Figure 3
Estimated net
budget impact
of immigrants
had the same
employment
rate as the
native-born,
2007-09 average



6. The process for graduates of accredited Canadian engineering programs

The process for becoming an engineer in Canada is by no means easy. But it is straightforward. In all of the provinces and territories, applicants must satisfy broadly comparable academic, professional,³⁵ and work experience requirements to become licensed engineers.³⁶

6.1 ACADEMIC

Unlike most professional programs, students can enter Canadian engineering faculties directly after high school (or CEGEP, in Quebec³⁷). Admission standards to accredited undergraduate engineering programs tend to be competitive—often requiring students to have entering averages in the high 80s or low 90s—but students are not required to write standardized entrance exams.

A full-time engineering student typically completes a bachelor's degree in engineering over four years. Early on in the process, students select the engineering discipline in which they wish to specialize—such as civil, mechanical, electrical, or computer engineering—and then spend the majority of their studies concentrating on that discipline.

Many Canadian engineering programs also require their students to obtain a minimum amount of work experience in order to graduate. The majority of Canadian engineering students participate in internship or co-op programs to fulfill this requirement. In its survey of 2500 engineering students who were in their final year of study in 2017, Engineers Canada found that 75 percent had participated in

³⁵ Licensure applicants must pass a National Professional Practice Exam that tests their knowledge of ethics, professional practice, engineering law, and liability. They must additionally be of good character and proficient in an official language (i.e., English or French).

³⁶ "Guideline on admission to the practice of engineering in Canada," Engineers Canada, May 2017, p. 3. (Engineers Canada Guideline).

³⁷ CEGEP is the province's public pre-university and technical college system.

an internship or co-op during their studies.³⁸ Internships and co-op programs help students learn technical and soft skills, and also help them develop the experience and connections they need to obtain entry-level positions after graduating.³⁹ By comparison, IEGs generally do not gain this early access to employers within Canada, since they have completed their engineering degrees before they immigrate.

6.2 LICENSURE

As students in accredited Canadian engineering programs approach graduation, most start to receive information from their provincial engineering regulator about the licensure process and the benefits of applying for it. If these graduates choose to become licensed, their academic knowledge is automatically confirmed by the provincial engineering regulator. (Graduates of non-accredited Canadian engineering programs are treated differently when applying for licensure.⁴⁰)

To become licensed, an engineering graduate must gain at least four years of work experience (or three years in Quebec).⁴¹ Typically, at least one of these years must be spent working in a Canadian environment (the Canadian Environment requirement).⁴² To fulfill this requirement, the licensee must demonstrate qualities such as the ability to communicate engineering information, manage engineering activities, work collaboratively, protect the public interest, and apply the engineering theory learned in the person's area of specialization.⁴³

Unsurprisingly, engineering faculties and professional networks play a key role in helping Canadian engineering graduates line up this Canadian work experience. According to Engineers Canada, the most common resources that graduates used to find engineering work in 2017 were:⁴⁴

³⁸ "Final Year Engineering Students Survey – National Results – 2017," Engineers Canada, 2017, p. 5 (Engineers Canada 2017 Survey).

³⁹ "Co-op participation of college and bachelor's graduates," Statistics Canada, December 2016, p. 1.

⁴⁰ Price Email, *ibid.*

⁴¹ Engineers Canada Guideline, *ibid.*, p. 4. Engineers in training (EIT) normally confirm their experience by submitting documents that verifies they performed work under the supervision of a licensed engineer.

⁴² Engineers Canada Guideline, p. 4.

⁴³ Interview with Chelsea Roberts, P.Eng., August 13, 2018 (Roberts Interview).

⁴⁴ Engineers Canada 2017 Survey, *ibid.*, p. 19–20.

- On-campus resources: 60 percent used these resources, with on-campus student career services most commonly used.
- Mentors: 52 percent relied on mentors, which were most often mentors developed in their co-op or internship.
- Online resources: 35 percent used online resources, with Indeed and LinkedIn being the most commonly mentioned websites.
- Family and friends: 33 percent relied on family or friends, although most predominantly on family.

IEGs, by comparison, typically lack access to the campus career services, professional mentors, and personal networks that are so instrumental to facilitating Canadian graduates' entry into the job market. They can also be penalized by online resources like Indeed or LinkedIn that use automated screening technologies to filter out candidates that do not have experience with niche Canadian programs or systems. These issues will be discussed in further detail below.

7. The process for international engineering graduates

The pathway to professional practice for IEGs is long and frequently opaque. This section provides an overview of the immigration, licensure, and employment processes applicable to IEGs intent on working as engineers in Canada, and highlights many of the key barriers they face along the way.

7.1 IMMIGRATION

7.1a EXPRESS ENTRY

Canada's immigration system is a key juncture in any skilled immigrant's path to professional practice. Currently, the majority of skilled workers come in under the Federal Skilled Worker Program,⁴⁵ which sources applications through the Express Entry pool of candidates.⁴⁶

⁴⁵ Immigrants with skills in managerial, professional, or high-skilled occupations are admitted under this program.

⁴⁶ *2017 Annual Report to Parliament on Immigration*, Immigration, Refugees and Citizenship Canada, <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2017.html> (last accessed on Aug. 14, 2018).

Individuals interested in immigrating to Canada for work must initiate this process by creating an online Express Entry profile. There, they enter information about their educational credentials, skills, work experience, and language abilities, and whether they are sponsored by an employer or province. Applicants who do not have a job offer can create a Job Match account through Job Bank, a government-run database that aims to match job seekers with employers.⁴⁷

Express Entry applicants are then ranked according to a points system, the Comprehensive Ranking System (CRS). CRS favours candidates who have already arranged employment in Canada or who have been sponsored by a province.⁴⁸ Out of 1200 points available under the CRS, 600 points can be gained through an employer or provincial sponsorship.⁴⁹ The applicants with the highest scores are considered to be best positioned for economic success in Canada, and are invited to apply to immigrate to Canada as permanent residents.⁵⁰

To verify their educational credentials in this process, Express Entry applicants must obtain an Educational Credential Assessment (ECA) from a designated third-party organization.⁵¹ This ECA is used to verify that a person's foreign education is "valid and equal to a Canadian one," but—problematically—is generally not used by engineering regulators for the purposes of assessing the immigrant's academic credentials.

"It is important to note that the Express Entry program remains unconnected from licensure and uses an academic assessment that is not transferable to what is required in the licensure process," says Stephanie Price, Executive Vice-President of Regulatory Affairs at Engineers Canada. While the federal government's website warns that this assessment "doesn't guarantee you'll get a job in your field, or at a certain level, or that

you'll get a licence to practice in a regulated profession,"⁵² it is easy to see how immigrants might assume their credentials will be accepted in Canada. As Price notes, this system "creates misunderstanding and frustration for many applicants who do not understand why a provincial/territorial body is assessing their academics for licensure, when a federal government has already assessed their academics for purposes of immigration."⁵³

7.1b GLOBAL TALENT STREAM

In June 2017, Ottawa launched the Global Talent Stream (GTS), a two-year pilot project that is part of the Temporary Foreign Worker Program. The GTS exists to help Canadian firms scale up quickly by accessing skilled foreign talent in a timely fashion. To participate, firms must either be referred to the program by designated government agencies, or need to fill highly skilled positions within the occupations listed on a Global Talent Occupations List. This list names occupations for which there is an undersupply of domestic labour, such as engineering managers, computer engineers, software engineers, information systems analysts, and consultants.⁵⁴

The GTS establishes a two-week standard for processing work permit applications for highly skilled talent. Employers are required to work with Employment and Social Development Canada to develop a Labour Market Benefits Plan that demonstrates a plan for creating future jobs or increasing skills and training for Canadians and permanent residents.⁵⁵ A worker who comes to Canada under the Global Talent Stream is granted a two-year work permit, explains Yousuf Khatib, the co-founder and CEO of Global Skills Hub, a talent recruitment agency.⁵⁶ "Once you're in the country, you would then apply through the Express Entry program," he adds.⁵⁷

47 "Submit an Express Entry profile: What to do while you wait in the pool," Immigration, Refugees and Citizenship Canada, <https://www.canada.ca/en/immigration-refugees-citizenship/services/immigrate-canada/express-entry/submit-profile/waiting-pool.html> (last accessed on Aug. 14, 2018).

48 *The Canadian Expression of Interest System: A Model to Manage Skilled Migration to the European Union?*, Migration Policy Institute Europe, May 2016, p. 11.

49 Ibid, p. 9–11.

50 "Express Entry Canada 2018," CanadaExpressEntry.org, <http://www.canadaexpressentry.org> (last accessed on Aug. 14, 2018).

51 These are World Education Services, the International Credential Assessment Service of Canada, the Comparative Education Service, International Qualifications Assessment Service, and the International Credential Evaluation Service.

52 "Educational credential assessment: What is it," Immigration, Refugees and Citizenship Canada, <https://www.canada.ca/en/immigration-refugees-citizenship/services/immigrate-canada/express-entry/documents/education-assessed.html> (last visited on August 14, 2018).

53 Price Email, *ibid*.

54 "Eligibility for the Global Talent Stream," Employment and Social Development Canada, <https://www.canada.ca/en/employment-social-development/services/foreign-workers/global-talent/requirements.html#gto1> (last visited on August 14, 2018).

55 Ibid.

56 Interview with Yousuf Khatib and Ivana Lochhead, Global Skills Hub, August 1, 2018 (Khatib and Lochhead Interview).

57 Ibid.

7.2 LICENSURE

Canada's constitution grants the provinces responsibility for regulating professions within their jurisdictions. As a result, each province has an independent engineering regulator that is responsible for assessing the skills and credentials of engineering applicants, both domestic and international.⁵⁸ However, unlike graduates of accredited Canadian engineering programs, who undergo a very similar process for becoming licensed in all of the provinces and territories, the process for IEGs varies considerably from one jurisdiction to another.⁵⁹

In general, this process can be very long. As Engineers Canada notes, it can “take up to a year for a provincial/territorial association to assess your qualifications after receiving all of your required documents. In some cases, an association may require you to take further steps such as an examination or obtaining more education. Typically, the rest of the application process can take an additional two to five years.”⁶⁰

7.2a ACADEMIC

Unlike Canadian graduates, who systematically receive information about licensure and the benefits of obtaining it, IEGs may or may not receive information about licensure, and if they do, the process can be difficult to navigate, since the licensure requirements vary by jurisdiction.

The documents that an applicant is required to submit vary by regulator but are generally very time consuming to compile.⁶¹

58 The Yukon, Northwest Territories, and Nunavut each have engineering regulators, but the Association of Professional Engineers and Geoscientists of Alberta processes the licensure applications for the territories.

59 *Quebec Investigative Monitoring Report: Mechanism for the Recognition of Equivalence applied to holders of an Engineering Diploma from outside Canada deemed not to be Equivalent*, Office of the Professions Quebec, 2015, p. 22 (Quebec Investigative Report).

60 “Application Process,” Engineers Canada, website: <https://newcomers.engineerscanada.ca/application-process> (last accessed on Aug. 14, 2018). In some jurisdictions, these timeframes are not typical. In British Columbia, for instance, “in the past 12 months, it took an average of 66 calendar days for an IEG to receive the results of an assessment,” notes Pichler of Engineers and Geoscientists BC.

61 Numerous IEGs interviewed for this report commented on the difficulty and stress of submitting the required documentation. In particular, they noted that it was often difficult to create or obtain detailed course descriptions, because they can no longer remember courses they took years before, and/or because universities are slow or unwilling to provide them.

Damilola Onanuga, a Nigerian who practiced as a mechanical engineer before immigrating to Toronto in March 2018, has yet to submit his application. “The process is what I’m trying to understand,” he says. “I wouldn’t want to submit an application where I get rejected ... You can start the application process before immigrating, but I couldn’t start, because I needed more clarification.”⁶²

A regulator will assess an applicant’s academic credentials in terms of their equivalency to the accredited Canadian engineering standard, which is defined by Engineers Canada. In general terms, a regulator will either confirm that the IEG’s credentials are recognized as substantially equivalent to the Canadian standard, or require that the IEG confirm their competence or upgrade their skills if the credentials are not recognized.

Recognized credentials

The process for recognizing “substantially equivalent”⁶³ degrees has been greatly facilitated by the Washington Accord, a multilateral recognition agreement (MRA) first signed in 1989 by engineering organizations in Canada, the United States, the United Kingdom, Ireland, Australia, and New Zealand.⁶⁴ Today, engineering associations in 20 countries are signatories to the Washington Accord. Many recent signatories—like China, India, and Pakistan—are top source countries of IEGs to Canada,⁶⁵ so their inclusion in the Washington Accord is significant.⁶⁶

The problem is provincial regulators do not all attach the same significance to Washington Accord status. “While Engineers Canada is signatory to MRAs, each provincial/territorial engineering regulator decides whether or not to ratify and use the agreement in their jurisdiction,” says Price of Engineers

62 Interview with Damilola Onanuga, IEG, August 1, 2018.

63 Substantial equivalence “implies reasonable confidence that the graduates possess the academic competencies needed to begin professional practice at the entry level.” See *Accreditation Criteria and Procedures: Canadian Engineering Accreditation Board, Engineers Canada, 2017*, p. 42.

64 *25 Years Washington Accord*, International Engineering Alliance, 2014, p. 10.

65 Email correspondence with Kim Bergeron, Ontario Office of the Fairness Commissioner, July 26, 2018.

66 International Engineering Alliance, website: <http://www.ieagrements.org/accords/washington/signatories/> (last accessed on Aug. 13, 2018). However, new signatories like India and Pakistan are only accredited from the point of admission to the Washington Accord (i.e., only graduates from 2016 and later are covered). Also, only certain programs in China and India are included, says Stephanie Price of Engineers Canada.

Figure 5
Dropout rate of permit applicants having an engineering diploma obtained outside Canada

(diplomas deemed by the Order as being non-equivalent to a Quebec diploma)

Source of data: Ordre des Ingénieurs du Québec (April and August 2015)

| Period | Number of files | Files rejected | Files accepted with conditions | Cause abandoned/closed | | Permits issued | | File still open | Dropout rate |
|---|-----------------|----------------|--------------------------------|------------------------|---------|----------------|------|-----------------|--------------|
| | | | | TIME | 3 FAILS | JUNIOR ENG. | ENG. | | |
| Former policy | | | | | | | | | |
| 2008-2009 | 16 | 3 | 13 | 10 | 0 | 0 | 3 | 0 | 76.9% |
| 2009-2010 | 19 | 5 | 14 | 7 | 0 | 3 | 2 | 2 | 50% |
| 2010-2011 | 30 | 7 | 23 | 12 | 1 | 6 | 4 | 0 | 56.5% |
| 2011-2012 | 18 | 3 | 15 | 9 | 0 | 4 | 0 | 2 | 60% |
| Transition between former and new policies | | | | | | | | | |
| 2012-2013 | 11 | 2 | 9 | 2 | 0 | 3 | 0 | 4 | - |
| New policy | | | | | | | | | |
| 2013-2014 | 22 | 0 | 22 | 1 | 0 | 0 | 0 | 4 | - |
| 2014-2015 | 16 | 0 | 16 | 0 | 0 | 1 | 0 | 15 | - |

Quebec Investigative Monitoring Report: Mechanism for the Recognition of Equivalence applied to holders of an Engineering Diploma from outside Canada deemed not to be Equivalent; Office of the Professions Quebec, 2015, p. 22 (Quebec Investigative Report).

Canada. “Use varies across the country, with some regulators adopting MRAs verbatim, others using them as an input and consideration during the licensure process, and some not using them at all.”⁶⁷

Unrecognized credentials

IEGs who are graduates of a university that is not already recognized under the Washington Accord or other MRA are, in general, assigned an examination program by the provincial regulator (unless a regulator determines an applicant has applied engineering principles at a level that warrants exemption).⁶⁸ The examination program can vary considerably by jurisdiction and applicant: an IEG may be required to provide detailed accounts of their work experience, sit for an interview, participate in a bridging program, take university classes, or write technical exams.⁶⁹ In some jurisdictions, an IEG may be given the option of choosing their preferred examination program.

The written exams that are assigned serve different functions. Confirmatory exams are used to confirm knowledge an applicant is believed to possess due to their academic history, while general exams are assigned when an applicant’s academic record appears to be lacking the study of fundamental engineering principles.⁷⁰

In 2015, Quebec’s Commissioner for Complaints published a report on the province’s examination program for IEGs from institutions with engineering standards not recognized as substantially equivalent to Canada’s. The commissioner found that the dropout rate for IEGs taking these exams was “worrisome, even potentially dramatic” (see Figure 5).⁷¹

The commissioner’s report concludes that “the multiple examinations approach ... appears to seriously affect the feasibility of obtaining recognition of equivalence ... and the permit, particularly because of the considerable effort required, over a long period.”⁷² The commissioner further noted that the

67 Price Email, *ibid.*

68 Email from Gillian Pichler, Engineers and Geoscientists British Columbia, dated August 23, 2018 (Pichler Email).

69 Interview with Moody Farag, Professional Engineers Ontario, August 8, 2018 (Farag Interview).

70 2017 Nova Scotia Commissioner Report, p. 10.

71 Quebec Investigative Report, *ibid.*, p. 15.

72 Quebec Investigative Report, *ibid.*, p. 15.

examination program was potentially resulting in the “systemic exclusion” of these IEGs.⁷³

7.2b PROFESSIONAL

Like Canadian engineering graduates, IEGs must also pass the National Professional Practice Exam, which, in some jurisdictions, can only be written after an IEG has been deemed academically qualified.⁷⁴ Depending on the jurisdiction, IEGs must also be proficient in either English or French.⁷⁵ This proficiency requirement can be a challenge for some IEGs to satisfy.

7.2c WORK EXPERIENCE

If they want to become licensed, IEGs must also demonstrate four years of relevant work experience, at least one of which must be spent working in a Canadian environment.⁷⁶ If an IEG worked abroad before immigrating, provincial regulators will consider whether this experience counts towards satisfying the experience requirement.⁷⁷

IEGs generally do not have access to the same internship or co-op opportunities as Canadian-educated engineers. By extension, they often miss out on opportunities to develop the professional networks or mentorship relationships that Canadian graduates report as being key to finding engineering work.⁷⁸ In addition, employers' unfamiliarity with IEGs' foreign credentials, or their concerns about cultural fit, can make them

reluctant to hire IEGs.⁷⁹ As a result, many IEGs struggle to complete the work experience requirement in general, and the Canadian Environment requirement specifically.

In 2013, the Ontario Human Rights Commission released a policy stating that “a strict requirement for ‘Canadian experience’ is discrimination (on its face) and can only be used in very limited circumstances.”⁸⁰ Ontario's Office of the Fairness Commissioner has also repeatedly expressed concern that this requirement unjustifiably limits access to the profession for IEGs.⁸¹

7.3 EMPLOYMENT

Like Canadian engineering graduates, IEGs can also forgo the licensure process and focus exclusively on finding engineering work. Those that do generally also face barriers to finding employment. And since they are not licensed, they are prohibited from practicing independently or performing various forms of engineering work, which can limit their pay and advancement opportunities. As Chelsea Roberts,⁸² a licensed engineer at energy company Enbridge, notes: “Someone with a P.Eng. commands a higher salary than someone without a P.Eng. It demonstrates that they have experience and are of good character. I think organizations—especially organizations where clients need to receive certified work—have a legitimate business need for someone who has that [licensing] qualification. But if [a company] doesn't have that need, or has enough [licensed engineers], why wouldn't you fill the pipeline with [unlicensed] people that you can keep on at lower cost?”⁸³

73 Ibid.

74 “2017 Registration Review Report: Engineers Geoscientists Manitoba,” Office of the Manitoba Fairness Commissioner, 2017, p. 4. (Manitoba 2017 Report).

75 Engineers Canada Guideline, *ibid.* In Quebec, a candidate must be proficient in French. In New Brunswick, either French or English. In all, others, a candidate must be proficient in English.

76 Engineers Canada Guideline, *ibid.*, p. 4. Pichler Email, *ibid.* In some cases, regulators will accept working abroad for a Canadian firm as sufficient to satisfy this requirement.

77 In some jurisdictions, IEGs who have four years of qualifying experience but who lack the one-year of Canadian work experience will qualify for a Provisional Licence. This licence can help to clarify the IEG's status with prospective employers.

78 Engineers Canada 2017 Survey, *ibid.*, p. 19–20.

79 OSPE Report.

80 Bergeron Email, *ibid.*

81 *Ibid.*

82 By request, this is not her real name.

83 Roberts Interview, *ibid.*

8. Recommendations

In recent decades, governments, provincial engineering regulators, Engineers Canada, and others have spearheaded various initiatives aimed at reducing many of the barriers IEGs face. These efforts include reforming the Express Entry program and introducing the Global Talent Stream, negotiating mutual recognition agreements, investing in comprehensive action plans such as the From Consideration to Integration Initiative, and piloting projects such as competency-based assessments and university bridging programs.

These efforts are laudable, but much work still remains to be done. At the immigration and licensing stages, various reforms could help reduce duplication, increase transparency, and speed up the process for IEGs. At the employment stage, there is an even greater need for creative government and private-sector solutions.

The recommendations in this section are organized around the different stages of immigration, licensure, and employment. Since many of the challenges can be best understood from the vantage point of IEGs and other stakeholders in the system, this section shares some of their perspectives on the process and how it can be improved.

8.1 IMMIGRATION

8.1a

Change who conducts ECAs: Engineers Canada should conduct the Educational Credential Assessment that Immigration Canada uses in its assessment process.

As noted above, Immigration, Refugees and Citizenship Canada (Immigration Canada) requires Express Entry applicants to obtain an Educational Credential Assessment (ECA) from designated third-party organizations to verify that their degree is valid and equivalent to a Canadian degree. Yet, while it relies on these ECAs when allotting points to applicants under the Express Entry system, it does not take account of whether an applicant's educational credentials are likely to be accepted by professional regulators.

Indeed, the ECA actually says very little about an applicant's credentials. As Sherron Hibbitt, Executive Director of the International Credential Assessment Service of Canada, explains, "All we are doing for our [educational credential] assessments is establishing the generally comparable level. For example, we're just establishing that a degree is comparable to a four-year degree in Canada. We're very careful never to say that it's a bachelor's degree in engineering ... we never, ever indicate a specific degree."

It is misleading and inefficient to use an ECA system that primes skilled immigrants to believe they will be able to practice as professionals once they arrive, only to have them undertake a separate credential assessment with regulators. While it is true that the federal government's website and ECA reports are plastered with warnings about the limitations of an ECA, it is easy to see how this process can be misleading or confusing.

Fortunately, there are precedents for a better way. Both the Medical Council of Canada and the Pharmacy Examining Board of Canada have assumed responsibility for conducting the ECAs for internationally educated doctors and pharmacists, respectively. Engineers Canada should do the same for engineers. If it did so, it could use the same database for conducting ECAs as it currently maintains to assist provincial regulators with assessing credentials for the purposes of licensure. This would be far preferable to the current system, where regulators use Engineers Canada's database—the International Institutions and Degrees Database—while third-party organizations use their own internally generated databases for preparing ECAs.⁸⁴

Engineers Canada has previously contemplated assuming responsibility for ECAs, and even mused that it could use the ECA process to help IEGs plan to succeed in Canada. In a 2015 report on its Educational Credential Assessment Project (the ECA Project), Engineers Canada proposed that it could provide each IEG applicant with a report that offered personalized guidance on whether an applicant would be a good candidate for licensure, and what steps to take if an applicant was not.⁸⁵

Troublingly, the ECA project was discontinued following consultation with the provincial engineering regulators, as "not all regulators believed that Engineers Canada would be best positioned to be the single, national educational assessment body for the profession," explains Price of Engineers Canada. "Because regulators evaluate undergraduate education in parallel to postgraduate and work experience, an undergraduate education-only assessment by Engineers Canada would be costly, time-consuming, and confusing to applicants," she says.⁸⁶ We disagree, and would strongly urge Engineers Canada and the provinces and territories to take up the ECA project again. In the absence of unanimous consensus among the provinces and territories, we would urge those that do support this change to move ahead on their own.

⁸⁴ Interview with Sherron Hibbitt, Aug. 8, 2018 (Hibbitt Interview).

⁸⁵ Monitoring Report, *ibid.*

⁸⁶ Email with Stephanie Price, Engineers Canada, dated Aug. 17, 2018.

8.1b

Reform the Job Bank: The federal government should create job banks that are organized by professional ecosystem, to more effectively match employers and foreign skilled workers.

Immigrants who express an interest in moving to Canada under the Express Entry stream can register on Job Bank, a “one-stop job listing website” that is the “largest online listing of bilingual job postings.”⁸⁷ It certainly is large—with more than one million jobs listed on it every year, and thousands posted to it every day.⁸⁸ But this does not mean it is effective.

Vikram Rangnekar, the founder of MOV North, a website he started in 2016 to blog about his experience immigrating to Canada from Silicon Valley, says the companies visiting his site “don’t—and wouldn’t—go to the government’s job bank.” The federal government’s Job Bank is “not focused on tech. It’s a generic job bank,” Rangnekar says. “Everyone is hiring, they want quick searches.”

After his blog went viral, Rangnekar transformed MOV North into a subscription service through which Canadian employers⁸⁹ can now pay for access to his database. His software matches the skill sets these firms are seeking with foreigners who have created profiles on his website. The site is particularly popular with tech companies that are looking to attract skilled workers under the Global Talent Stream.

Rangnekar created his site because nothing like it existed. “There was LinkedIn, but that was kind of generic; it didn’t say anything about whether [a prospective employee] wanted to move internationally.” By comparison, the people who fill out profiles on his site are signalling that they are open to immigrating, and that they are part of the tech ecosystem.

Applicants who are able to line up job offers boost their chances of being invited to immigrate, as well as their odds of succeeding when they arrive. Thus, the more that can be done to promote early-stage employment matching the better.

Employers in other industries would presumably benefit from having access to more focused job-matching sites that are built around targeted professional ecosystems. While the private sector might be best-placed to create solutions that address this need, the federal government could also reform its Job Bank to better serve niche communities of employers and foreign talent.

⁸⁷ “How do I search for jobs,” Department of Employment and Social Development Canada, https://www.jobbank.gc.ca/content_pieces-eng.do?cid=203, (last visited Aug. 14, 2018),

⁸⁸ Ibid.

⁸⁹ Or foreign companies that are setting up offices in Canada.

8.1c

Inform IEGs about support services: Immigration Canada should provide IEGs with thorough information about support services before and after they arrive.

There are a multitude of public, private, and non-profit programs that support newcomers to Canada. The problem is, immigrants are often unaware of them, or only become aware of them after considerable time has passed.

ACCES Employment is a government-funded non-profit that runs five employment agencies across the Greater Toronto Area. Its Engineering Connections program is a five-week program that assists IEGs with securing full-time employment. It trains IEGs on how to write resumés, offers language instruction, and provides an overview of the Canadian engineering sector. It also performs employer outreach to connect employers with IEGs.

ACCES has a high success rate of finding jobs for IEGs. “We are at around 80 percent employed within a year,” says Manjeet Dhiman, SVP of Services and Business Development at ACCES. The vast majority of that number find employment within their professional field, while roughly 5 percent are employed in related fields like sales of engineering-related equipment or teaching. “That success rate does not include survival jobs,” she adds.

IEGs need to be made aware of programs like ACCES, says Jayden Lopez,⁹⁰ a civil engineer from Honduras. “I was admitted as a Federal Skilled Worker, but no one told me what to do or where to find help. No one directed me to ACCES ... I found it on the Internet.”

Other IEGs also described stumbling upon ACCES through an online search or after hearing about it from a friend. “That’s an ongoing feedback we get,” acknowledges Dhiman. “Sometimes it’s taken them months or a year before they realize there is a public, free-to-them service to help them with their employment and settlement.”

When asked whether Immigration Canada notifies newcomers of ACCES’ services, Dhiman explains that, in addition to their own outreach, “there is a package that immigrants get at the airport. It’s very light: leaflets. People, especially at that moment, they might just kind of haze past it, until they start to realize it’s not as easy as they might have thought. That’s always a challenge newcomers face. Their expectations as they arrive is that it will be easy because they’ve been selected because of their skills. But then they realize it’s a struggle to find employers [who are interested in them]. That’s usually when they realize that they need support.”

⁹⁰ By request, this is not the person’s real name.

Immigration Canada should take a much more systematic approach to informing immigrants about the support services available to them, and it should ensure that they receive this information both shortly before they immigrate, and again within a few months of their arrival. It would also be beneficial to distribute this information by email, as well as through leaflets.

8.1d

Expand the Global Talent Stream: Ottawa should make GTS permanent and increase the number of skilled immigrants who are admitted under it.

The Global Talent Stream (GTS) pilot project will end in July 2019 unless Ottawa extends it. Rangnekar of MOV North is emphatic that the program “should be permanent.” Canada needs to “double down and send more signals out to the most competent in the world,” he says. “I know a lot of companies are using it, and want to use it.”

The program not only benefits Canadian employers that are looking to grow, but is also good for Canadians⁹¹ and skilled immigrants. In particular, it increases skilled immigrants' chances of integrating successfully into the Canadian labour market because it allows them to immediately start working when they arrive in Canada and to later apply for Express Entry.

Khatib, of Global Skills Hub, echoes a similar sentiment as Rangnekar. “Up until now, the immigration program in Canada has been a mess,” he says. “You have the Express Entry program for getting permanent residency in Canada. You go in and apply and are given points surrounding your education, age, etc., and as you have higher points you get accepted. The challenge is, you have all these highly qualified people who came to Canada and qualified under the Express Entry program but weren't able to get a job once they got here.” The Global Talent Stream eliminates this problem, since it brings workers in under a two-year work permit, and enables them to apply through the Express Entry program once they are well-established in Canada.⁹²

Currently, the types of occupations listed on the GTS' Global Talent Occupations List are largely limited to STEM jobs. In addition to making GTS permanent, Ottawa should consider expanding the list of eligible occupations. In particular, it should work with professional regulators and economists to leverage their labour market

⁹¹ On account of the Labour Market Benefits Plan that employers are required to develop and implement.

⁹² Khatib and Lochhead Interview, *ibid.*

projections about the industries that will depend on an influx of skilled foreign labour in the years to come.⁹³

8.1e

Promote alternative career pathways: Immigration Canada should work with settlement service providers to ensure that IEGs are aware of career opportunities in related fields.

Katrina de Asis had the foresight to realize it would take time to obtain her P.Eng. “I knew I wouldn't be licensed immediately,” she says. “I could not wait two years to become a P.Eng., so I got the technologist certificate.” De Asis is referring to the engineering technologist certificate,⁹⁴ which is one of two non-regulated engineering designations engineers can readily qualify for—the other being the engineering technician qualification.⁹⁵ De Asis obtained her technologist certificate three months after arriving in Canada, which enabled her to start working at Communications & Power Industries.

These alternative career pathways can be useful for IEGs like de Asis, who want to work as engineers but recognize that it will take time to get there. It can also provide meaningful alternative opportunities for IEGs who choose to not work as engineers, or who are unable to find engineering employment in their field.

Immigration Canada should work with settlement service providers to ensure skilled immigrants are aware of the alternative career options open to them.⁹⁶ Currently, it is not clear that this information is systematically made available to IEGs. And it would be particularly beneficial if IEGs were made aware of these opportunities before they arrived, so they could hit the ground running.

8.2 LICENSURE

8.2a

Harmonize provincial assessment standards: Engineering regulators should develop a national standard for assessing IEGs' credentials and competence.

As discussed above, each province and territory currently has its own process for assessing IEGs' credentials and work experience,

⁹³ See Labour Market Projections 2025, *ibid.*

⁹⁴ Aminzadah Email, *ibid.* Broadly, technologists perform design functions by using established procedures and programmed software.

⁹⁵ *Ibid.*

⁹⁶ Making Integration Work, *ibid.*, p. 53.

and these processes vary considerably. This variability can create barriers to licensure for IEGs. IEGs interviewed for this report frequently commented on the lack of clarity regarding the process for establishing competence, which prompted a number of them to defer initiating the licensure process.

The variability between jurisdictions can also result in IEGs arbitrarily facing more stringent requirements depending on the province or territory in which they choose to settle. This is not merely unfair, but also unnecessary. Under the Canadian Free Trade Agreement,⁹⁷ an engineer licensed in one province or territory has a right to practice in any other jurisdiction without having to go through a lengthy licensure process.⁹⁸ Since the end result is the same—an IEG licensed in one jurisdiction is entitled to practice in any other—it makes no sense to impose different processes on IEGs for getting there.

Finally, it bears noting that the current fragmented system is likely inefficient. It results in untold government resources being poured into developing and administering 13 different assessment processes when a single, harmonized one would do.

There is an obvious solution to these problems: the provinces and territories should develop a single standard for how IEGs are assessed and expected to demonstrate competence anywhere in Canada. Importantly, the provinces would still retain constitutional responsibility for the regulation of engineers within their jurisdictions. But they would all agree to apply a common standard. Engineers Canada could play a critical coordinating role in this harmonization process.

8.2b

Empower Engineers Canada: Provincial and territorial engineering regulators should grant Engineers Canada the powers of a national accreditation body.

In addition to harmonizing their assessment standards, the provinces and territories should make Engineers Canada solely responsible for assessing IEGs' credentials and experience, and for assigning examination programs. This system could be funded by the provincial and territorial regulators, which would likely save costs by eliminating their independent assessment functions.

⁹⁷ The Canadian Free Trade Agreement replaced the Canada Agreement on Internal Trade (AIT) on July 1, 2017. The AIT is in the process of being phased out.

⁹⁸ Price Email, *ibid.* Most regulators will require the licensee to submit their resumé and references, and the regulator will contact the regulatory body where the engineer is currently licensed to verify good standing.

The provincial and territorial regulators could continue to play an important role in local initiatives, such as publishing local labour market reports, funding IEG-dedicated managers, and creating university bridging programs.

The legal community's National Committee on Accreditation

While it is true that professional regulation is a matter of provincial jurisdiction, this fact should not prevent the provinces from transferring some of their responsibilities to a national engineering association. Indeed, one need look no further than the legal community's National Committee on Accreditation (NCA) for a valid model of how this might work. The NCA is mandated by the Federation of Law Societies of Canada to assess the legal education and professional experience of internationally educated lawyers. After conducting its assessments, the NCA advises applicants on what exams and courses they must complete. Once applicants complete these requirements, they receive a Certificate of Qualification from the NCA, which then enables them to apply to a provincial or territorial law society for licensure.

8.2c

Use the Washington Accord and MRAs more effectively: Engineering regulators should consistently expedite applications from graduates of institutions that have standards already recognized as substantially equivalent to Canada's.

Engineering is one of the professions that has best embraced international efforts to harmonize professional standards and facilitate international mobility. The Washington Accord and Canada's mutual recognition agreements with Australia, Ireland, Hong Kong, France, and the U.S. state of Texas⁹⁹ are testaments to this fact, as these MRAs exist to expedite the recognition of engineering credentials obtained in jurisdictions that have substantially equivalent engineering standards.

The problem is, MRAs are negotiated by Engineers Canada, but not used consistently by the provincial regulators. British Columbia,

⁹⁹ "Mutual Recognition Agreements," Engineers Canada, website: <https://engineerscanada.ca/become-an-engineer/international-mobility-of-engineers/mutual-recognition-agreements> (last visited on Aug. 23, 2018).

for example, only conducts a “very cursory review of someone’s transcript” if they’re the graduate of a Washington Accord signatory, explains Gillian Pichler, Director of Registration at Engineers and Geoscientists British Columbia. “It saves us a lot of time and it saves a lot of time for the applicant.” Some other provinces, by comparison, conduct line-by-line evaluations. “Applicants whose engineering degree is issued from an institution of the Washington Accord may also be exempt from writing technical exams, but this is not an automatic exemption,” explains Moody Farag, Acting Deputy Registrar of Licensing and Registration at Professional Engineers Ontario.¹⁰⁰

This fragmented approach is problematic, as it again results in IEGs arbitrarily facing higher barriers to licensure depending on the province or territory in which they locate. And it also falls short of the requirements of the Washington Accord, which states that “when a registering body is separate from the signatory, the signatory must make every effort to ensure that the registering body recognizes signatories’ programs.”¹⁰¹

Another issue is that some of the countries with the world’s best engineering programs do not have engineering accrediting bodies, and as a result, are not signatories to the Washington Accord or MRAs. Select programs in Denmark, Sweden, Germany, Israel, and the Netherlands fall into this category. British Columbia is simply prepared to recognize degrees from those institutions as being as good as Canada’s, she notes, since these are world-class programs. “We met with a bit of political flak on that, but at the end of the day, we have thousands of applicants,” says Pichler, implying that Engineers and Geoscientists British Columbia needs to be efficient with how it uses its resources.

It would be welcome if the other provinces took this kind of common-sense approach to credential assessments, particularly when they are dealing with application backlogs, as some regulators have admitted they experience.¹⁰²

8.2d

Encourage IEGs to become licensed: Engineering regulators should offer information sessions and send letters to IEGs to encourage them to apply for licensure.

¹⁰⁰ Farag Interview, *ibid.*

¹⁰¹ NCDEAS White Paper, *ibid.*, p. 4.

¹⁰² Interview with Enayat Aminzadah and Amit Banerjee, Association of Professional Engineers and Geoscientists of Alberta, Aug. 9, 2018 (Aminzadah and Banerjee Interview).

Roughly half of all Canadian-educated engineers become licensed, compared to somewhere between 15 and 25 percent of IEGs.¹⁰³ Unlicensed engineers almost certainly earn and advance less over their careers than licensed engineers, particularly if they spend their careers in the engineering field.¹⁰⁴ As a 2017 OECD report notes, “data from selected European OECD countries suggest that immigrants who obtained formal recognition (of their credentials) are more often employed and work in better jobs. ... Employers may face higher levels of uncertainty when assessing the value of qualifications from (lower-income) countries, making an official recognition particularly informative of the real value.”¹⁰⁵

It is clear that IEGs stand to benefit from having their engineering credentials formally recognized by Canadian regulators. It is thus important that IEGs be made aware of the benefits of licensure and encouraged to apply for it.

Currently, most provincial regulators meet with Canadian engineering students shortly before they graduate to provide information on the licensing process, but they do not necessarily do so with IEGs. “With Canadian graduates ... [we] will reach out to them through annual events right before they graduate, and during that session they are encouraged to start an application,” says Enayat Aminzadah, International Qualification Services Manager at the Association of Professional Engineers and Geoscientists of Alberta (APEGA). “Of course, [for IEGs] it’s a different situation,” he adds. “It’s a little more sporadic.”¹⁰⁶

PEO takes a similar approach. “We have a student program, and a PEO staff from this program visits engineering programs at universities to provide information about PEO and licensure, as well as to encourage students to apply upon graduation,” explains PEO’s Farag. “Engineering graduates also receive a letter from the registrar upon graduation inviting them to apply and to inform them of PEO’s Financial Credit Program (FCP), by which new graduates may have the P.Eng. fees, as well as the fees for the

¹⁰³ This range is an estimate, based on the 15 percent reported by Engineers Canada in 2015, and the 22 percent reported in the Ontario Fairness Commissioner’s 2014 match rate study. See Monitoring Report and Employment Match Rates.

¹⁰⁴ There is a dearth of data on how licensure affects pay outcomes and promotion opportunities, but Ontario, Alberta, and B.C. engineering regulators each confirmed that it seemed likely that unlicensed engineers would earn and advance less in their careers than licensed engineers.

¹⁰⁵ Making Integration Work, *ibid.*, p. 9.

¹⁰⁶ Aminzadah and Banerjee Interview, *ibid.*

first-year enrollment in the Engineering Intern Program waived, if they apply within six months of graduation.” IEGs may receive this information if they attend information sessions offered by newcomers’ settlement agencies or job fairs, and they may qualify for the FCP if they apply for their licence within six months of their landing date, Farag says.

Provincial regulators that do not currently do so should develop systematic methods for disseminating information about licensure and its benefits to IEGs. These efforts might include hosting in-person and online information sessions at venues such as settlement agencies, job fairs, bridging programs, and employer events, and should have Immigration Canada provide letters of the kind Farag mentions to all newly admitted IEGs. In addition, regulators may want to grant IEGs a longer grace period in which to apply without paying fees, since IEGs often face many more pressing challenges in their first six months of living in a new country.

8.2e

Employ IEG-dedicated managers: Provincial regulators should create positions dedicated to supporting IEGs.

It is clear from conversations with IEGs that many find the licensure process intimidating and unclear. They would benefit from being able to connect with managers like APEGA’s Aminzadah, who says Alberta “is very unique” in dedicating a staff member to this role. “There are a lot of folks in other provincial associations where they might do some of the work, but I am focused full-time on it.”

Aminzadah assists IEGs by holding seminars, taking appointments over the phone and email, working closely with agencies across Alberta, and providing guidance to applicants on whether their qualifications may or may not meet Alberta’s requirements. The other provincial regulators should create similar positions in their jurisdictions.

8.2f

Establish fairness commissioners: The provinces and territories that do not have fairness commissioners should pass fair-access legislation and establish fairness commissioners.

Currently, Manitoba, Ontario, Quebec, and Nova Scotia all have fair-access laws and fairness commissioners. These commissioners are statutorily mandated to review the relevance and necessity of the registration practices of all professional regulators in the province, including the timeliness of their decision-making, the reasonableness of their fees, and the registration rates of

internationally educated individuals.¹⁰⁷

Fairness commissioners can also require professional regulators to address exclusionary practices. “If recommendations are made [to a regulator], the Office of the Fairness Commissioner [OFC] requires that the regulator come up with an action plan to meet the standards. It then works with PEO to satisfy the recommendation[s] made. The OFC then monitors the progress made by the regulators and publishes its finding,” explains Kim Bergeron, Stakeholder Engagement and Communications Advisor at the Ontario Office of the Fairness Commissioner.

It is evident from the fairness commissioners’ reports that these bodies play a critical role in helping to level the playing field for Canadian and internationally educated professionals. In addition, their work can help introduce general efficiencies into regulators’ processes, as their recommendations can lead regulators to revisit the need for certain requirements or how they are administered.

Ontario pioneered the fairness commissioner model, not just in Canada, but around the world. Now, it is liaising with Denmark, Australia, and New York State to help them establish similar offices.¹⁰⁸ We can take pride in the fact that other countries are emulating our best practices. But we also need to take a look at our own backyard: today, British Columbia, Alberta, Saskatchewan, New Brunswick, Newfoundland and Labrador, Prince Edward Island, Yukon, Northwest Territories, and Nunavut are still without commissioners. They should create them. For jurisdictions with smaller populations, such as the Atlantic provinces and the three territories, it might be beneficial to establish regional fairness commissioners.

8.2g

Empower fairness commissioners to receive complaints: Fairness commissioners should be statutorily authorized to receive and respond to individual complaints.

Fairness commissioners should be empowered to receive, respond to, and track individual complaints. “There is no mandate right now for receiving complaints,” says the Ontario OFC’s Bergeron. “We receive [complaints] on some occasions, but we redirect them to an appeals body; we’re not mandated to act on specific complaints.” Fairness commissioners could better serve internationally educated professionals if they had a mandate to receive and respond to their complaints.

¹⁰⁷ See, for example, Manitoba 2017 Report, *ibid*, p. 2.

¹⁰⁸ Making Integration Work, *ibid*, p. 57.

8.2h**Speed up processing times: Pass laws that require regulators to complete components of the licensing process within specified time periods.**

Many of the IEGs interviewed for this report commented on the length of time it took to complete the licensure process. Ahsan Ahmed is a mechanical engineer from Pakistan, who now teaches as an assistant professor at the University of Ottawa. When asked how the licensure process could be improved, he notes: “The course accreditation takes a lot of time; writing course descriptions takes a lot of time ... If you don’t have Canadian experience, it takes a lot of time ... We were told most of the evaluators are volunteers, so they take their time.”

While no one part of the licensure process may take that long, the whole process can be extremely time consuming when taken together. Positively, engineering regulators have committed to meeting the pan-Canadian framework requirement for assessment of qualifications within one year of receipt of all documents and fees.¹⁰⁹ Provincial and territorial governments should help to further move things along by introducing legislation that requires regulators to achieve both the assessment and licensing processes within specified time periods. Notably, this approach would follow best practices elsewhere. “The vast majority of OECD countries have fixed the maximum admissible processing time for recognition of foreign qualifications in legislation,” a 2017 OECD report notes.¹¹⁰

Statutory maximums would benefit IEGs and could help ensure regulators allocate their resources efficiently. For example, regulators might reconsider whether it is necessary to conduct line-by-line evaluations of graduates coming from institutions recognized under the Washington Accord or other MRAs. Or provinces that have not already introduced flexible timelines for writing the National Professional Practice Exam might choose to do so, to enable applicants to complete this exam in the same time period as they are undertaking their technical exams.

¹⁰⁹ Price Email, *ibid*. In most cases, these assessments, as well as the communication of assessment decisions, are generally carried out within 120 calendar days.

¹¹⁰ Making Integration Work, *ibid*, p. 19. In the European OECD countries, such legislation typically derives from the Directive 2013/55/EU on the Recognition of Professional Qualifications and the Lisbon Recognition Convention.

8.2i**Establish bridging programs: Engineering faculties should establish bridging programs that facilitate IEGs’ entry into the labour market.**

In Manitoba and Ontario,¹¹¹ engineering regulators give IEGs from unrecognized programs the option of verifying their professional competence by participating in university bridging programs. For instance, the University of Manitoba’s Faculty of Engineering runs an Internationally-Educated Engineers Qualifications (IEEQ) Program, to which IEGs who have been assigned exams by Manitoba’s Association of Professional Engineers and Geoscientists are eligible to apply.¹¹²

The IEEQ program is innovative in offering technical courses and instruction on cultural orientation, English, and networking. If an IEG is having issues, “it’s almost never due to technical deficiencies,” says Marcia Friesen, the program’s former director. Rather, the issues have to do with culture and language. “IEGs are worried about not having food in the fridge, or they’re dealing with a partner who hates it in Canada, or [they’re struggling with the realization that Canada] is not the promised land they’d thought, or they’re receiving pressure from back home to return. All these pressures make it difficult for them to study. We try to address all those concerns through the program,” she says.

Crucially, the one- to two-year program also includes a co-op term, which current program director Nusraat Masood describes as a “game-changer.”¹¹³ The program helps IEGs develop employability skills, and provides employers with a low-risk way of bringing IEGs on for four months of paid work experience.¹¹⁴ “After the co-op term, [IEGs] get a local reference,” notes Masood, “and I think that’s the biggest difference between graduates of the IEEQ program and immigrants who take other pathways [to licensure]. Hopefully you will get a [Canadian] reference that [prospective] employers will contact. Most employers are not willing to call [references who are] overseas.” In addition to having very high completion rates, these bridging programs can also benefit provinces that struggle to retain talented immigrants, since the program helps IEGs get local job placements.

The University of Manitoba and Toronto’s Ryerson University are currently the only engineering faculties in Canada that offer these

¹¹¹ Farag Interview, *ibid*.

¹¹² Manitoba 2017 Report, *ibid*, p. 7.

¹¹³ Masgood Interview, *ibid*.

¹¹⁴ Interview with Marcia Friesen, University of Manitoba IEEQ Program, July 24, 2018 (Friesen Interview).

innovative programs. Governments and universities should work together to establish similar bridging programs in other provinces.

8.2j

Adopt a competency-based alternative to the Canadian Experience requirement: Regulators should enable applicants to satisfy the Canadian Experience requirement through a competency-based assessment.

Katrina de Asis is concerned about whether she will satisfy the PEO's work experience requirement in her current role at Communications & Power Industries. "I've read through the guidelines, and it's difficult to prove that you are applying the theory of quality assurance [QA]. I'm certain design engineering PEO would accept. But QA [is difficult]. I have to match my work] experience to what is required."

IEGs commonly struggle to satisfy the work experience requirement, because they must not merely find employers willing to hire them—which can itself be a huge challenge—but must additionally find employment within their engineering discipline.¹¹⁵

In response to pressure from the Ontario Human Rights Commission and provincial fairness commissioners, B.C.'s engineering regulator has led a national Canadian Environment Experience Requirement Project aimed at articulating the competencies covered by the current one-year requirement and identifying alternative ways for applicants to meet them. After extensive consultation, Engineers and Geoscientists BC and its provincial counterparts developed four main competencies that "all have to be achieved in a Canadian environment." Importantly, though, an applicant can fulfill the competencies through a combination of work and online seminars, Pichler explains.

"We've created a drill-down questionnaire for competencies," she says. "An applicant will be asked if they have experience applying Canadian codes and standards, for example. If the answer is no, they're then asked, 'Have you applied ones that are similar to those in Canada?' And so we can examine whether someone has achieved this competency even if they've never [worked in Canada]."

The provinces should implement competency-based alternatives to the one-year Canadian Environment requirement. Currently, many of the provinces are committed to or considering implementing some form of competency-based assessment process for

this requirement.¹¹⁶ Ideally, the provinces and territories would all adopt the same system under the auspices of Engineers Canada, but barring that, all provinces and territories should act to implement their own.

8.3 EMPLOYMENT

8.3a

Expand regulators' mandate: The provinces and territories should create advocacy bodies to complement the regulatory bodies' regulatory functions.

When asked whether PEO does enough to assist applicants with finding employment, Farag notes: "PEO has a very specific mandate in the act. The act doesn't really even allow PEO to explore those areas at all. We're just a regulatory body that issues licences."

Similarly, APEGA's Aminzadah notes, "We're very much focused on the regulatory side of things ... Of course, the demand is for much more. Of course, because our mandate is to serve the members, occasionally we do coordinate events where IEGs could come and network with professionals. APEGA is doing as much as it can, but of course a lot of the resources are towards members."

Or this, from Pichler at Engineers and Geoscientists British Columbia: "We do not advocate. Our legislation says our primary mandate is to protect the public interest. Subject to that primary mandate, we can support our members and licensees ... We are a whole lot more regulatory than we are advocacy."

IEGs (and Canadian-educated engineers) would benefit from having agencies that exist to advocate for their interests. PEO realized that there was a need for such an entity in the late 1990s, and ultimately helped to establish a new advocacy organization, the Ontario Society of Professional Engineers (OSPE). OSPE exists to "advance the professional and economic interests of all engineers province-wide," and has in recent years published a number of reports that focus attention on the barriers that IEGs face in the province.¹¹⁷

Importantly, OSPE interviewed both employers and IEGs for their reports. "The purpose of interviewing employers was to understand from their perspective what the perceived barriers were. We were trying to identify the gap on both sides," says Aarthi Vig, an external

¹¹⁶ Aminzadah and Banerjee Interview, *ibid.* Pichler Interview, *ibid.* Pichler Email, *ibid.*

¹¹⁷ Ontario Society of Professional Engineers, <https://www.ospe.on.ca>, (last visited on Aug. 14, 2018).

consultant for OSPE.¹¹⁸ In Vig's view, it is very important that IEGs are informed about "what the perceived barriers are [from employers' perspectives]." For example, OSPE repeatedly heard from employers that they were concerned about "fit." "Armed with information about the perceptions they are up against, IEGs may have a better chance of overcoming them," says Vig.

The other provinces and territories should create advocacy arms within their provincial regulators, or establish standalone organizations like OSPE. These organizations could help draw attention to issues affecting engineers at the local level, and could work with employers and IEGs to address key employment barriers.

8.3b

Empower fairness commissioners to address employment barriers: Provinces and territories should empower fairness commissioners to respond to employer-driven barriers to entry in the regulated professions.

Shyam Seshadri currently works part-time as a cashier and beverage-maker at a Tim Hortons restaurant in Scarborough, Ontario. He's a chemical engineer by training, having completed his bachelor's in engineering at India's University of Calicut in 2005. Prior to moving to Canada in March 2018, Seshadri worked for four years as a project lead at Honeywell, a U.S. multinational, and for eight years as an engineer.

Seshadri is not focused on obtaining his P.Eng. at this stage. His first priority is to find engineering work. But so far, it has been difficult, because employers keep asking for Canadian work experience. "It's a vicious cycle," he says. They won't give me a job until I have the Canadian experience. And I won't get the Canadian experience until I have a job."

In most cases, employers are not explicit about demanding Canadian work experience. But some of their hiring practices discriminate against IEGs in their effect. Some job postings that Seshadri has seen, for example, cite requirements for local experience or graduation from a Canadian institution, even though these may not be necessary job requirements. In another case, Seshadri was told by a firm's human resources officer that he "didn't get the job because he didn't have the Canadian experience."

Canada's fairness commissioners are agencies created by provincial legislation: they can only exercise the powers granted to them by law. Currently, those laws do not authorize them to look at employer practices that unfairly deny internationally educated

professionals jobs on account of their immigration status. This limitation is understandable: private-sector employers are not subject to many of the obligations and responsibilities that are imposed on public- or quasi-public institutions such as professional regulators.

However, private-sector employers are subject to provincial human rights legislation, which prohibits discrimination on the basis of personal characteristics such as place of origin, colour, ethnic origin, and citizenship.¹¹⁹ It would be beneficial if fairness commissioners had a statutory mandate to collect data on employer trends in the regulated professions, to report potentially discriminatory employment practices to the relevant human rights bodies, and to make systemic recommendations directed at employers and employer organizations, such as local chambers of commerce.

8.3c

Create discipline- or region-specific mentorship programs: Provincial and territorial regulators and employment agencies should create mentorship programs that help IEGs navigate the licensure process and form professional networks.

Greeshma Gopinath holds bachelor's and master's degrees in mechanical engineering from India and the U.S, respectively, and has experience working for heavy machinery companies like Caterpillar and John Deere. She has been living in Toronto with her husband since September 2017, and has yet to find employment in her field. Gopinath has approached a couple of agencies about being paired with mentor who has a P.Eng. but has not been assigned one.

"Getting a mentor with a P.Eng. in my stream could have helped me," Gopinath says. "A lot of times people are scared to submit the [licensure] application ... It would be helpful to have a mentor who can help you understand what is required."

In addition to discipline-specific mentorship, IEGs could benefit from mentorship programs that help them form professional networks. Provincial regulators could lead the way in this area. Engineers Geoscientists Manitoba, for example, has created ethnic-specific chapters across the province dedicated to supporting newcomers from particular regions of the globe. It now has standalone chapters for Filipino, Chinese, Indian, and Arab members. Similarly, Engineers Nova Scotia¹²⁰ and Engineers and Geoscientists

¹¹⁹ See, for instance, the *Ontario Human Rights Code*, R.S.O. 1990, c. H.19, s. 3.

¹²⁰ <https://engineersnovascotia.ca/mentor-program/>

BC¹²¹ have created their own mentorship programs. These organizations help connect IEGs who are already well-established in their careers with new IEGs from their countries of origin.¹²²

8.3d

Create credential databases for employers: Regulators should engage with employers to ensure they can familiarize themselves with foreign credentials and provide feedback about difficulties evaluating foreign qualifications.

What makes employment barriers so challenging is that “you cannot force [employers] to accept that [someone’s credentials] are equivalent,” Liebig of the OECD notes. And the reality is that foreign credentials often do not send the same positive signals as domestic qualifications, since employers are not familiar with the education and training systems from which they were obtained.¹²³

It can help if employers are brought on board for the recognition and assessment process, Liebig says. One way to do this would be to equip employers with information about foreign credentials. In Germany, for instance, employers have access to an online portal that provides “detailed and authoritative information” regarding the vocational training systems in 76 countries.¹²⁴ Another option would be for regulators to work with local chambers of commerce or other industry associations to get feedback from employers about the difficulties they experience evaluating equivalency, so that regulators could work to address any information gaps.

8.3e

Enable IEGs to succeed: Employers looking to diversify their workforces should leverage human resources agencies that specialize in recruiting diverse talent and helping them succeed.

Atif Khan is an aerospace engineer who graduated from Queen Mary University of London in 2009. He arrived in Canada around the same time as Shyam Seshadri, and like Seshadri, he is about to start his own “survival job”—in his case at Amazon, where he will be doing manual warehouse labour. “Money runs out quickly,” he says, “so you have to do something about it.”

¹²¹ <https://www.egbc.ca/Member-Programs/Mentoring-Program>

¹²² Manitoba 2017 Report, *ibid*, p. 3.

¹²³ Making Integration Work, p. 7.

¹²⁴ Making Integration Work, *ibid*, p. 66.

For Khan, the employer screening practice that has been working against him is ATS—or Applicant Tracking Software—a system used by many employers and sites like Indeed to do a first cull of job applicants. “The tracking software is meant to weed out applicants who don’t have the necessary experience,” Khan explains. “Even if you have 80 or 85 percent of the requirements [an employer is] looking for, you’re eliminated. Humans aren’t doing the initial screening; they’ve been removed.”

Khan finds it difficult to meet the experience requirements that appear in job postings because they are too niche—they require knowledge of very specific kinds of software programs, for example. ATS is set up so that if your resumé doesn’t include the right words, Khan says, your resumé will be passed over. “Back home, it was more open. Humans processed your application. ... This kind of acknowledgement is not there in the Canadian labour market; that people can learn things quickly. I don’t like this robotic system.”

OSPE’s 2015 report on IEGs substantiates Khan’s observations. The report’s “core finding” was that employers’ recruitment processes may be misaligned with IEGs’ job search practices. IEGs are being “inadvertently screened out during the recruitment process [for] failing to present their experience in ways that appear relevant to the needs of Canadian employers. ... [And because] some Canadian employers may be relying on screening and interview methods that are preventing them from properly considering professional experience,” the report states.¹²⁵

While it would be difficult, and likely undesirable, to reverse the technological trends behind ATS, employers should be concerned if their screening practices are causing them to overlook foreign-trained candidates. After all, workplace diversity is increasingly recognized to provide companies with a competitive edge, and can also be beneficial, or even necessary, from a public relations perspective.

Fortunately for employers, an increasing array of private organizations¹²⁶ have emerged in recent years to assist companies in becoming more diverse. Khatib’s company, Global Skills Hub (GSH), is one such example. GSH is hired by Canadian companies to conduct worldwide talent scans, handle the recruitment process, and help employees adapt to their new workplace.¹²⁷

¹²⁵ *From the World to the Workforce: Hiring and Recruitment Perceptions of Employers and Internationally Trained Engineers*, OSPE, 2015, p. 2 (OSPE 2015 Report).

¹²⁶ Femininity, Diversio, and Global Skills Hub are a few examples.

¹²⁷ Khatib and Lochhead Interview, *ibid*. Today, GSH sources skilled workers from North and South America, South Asia, Eastern Europe, and Africa.

Ivana Lochhead, Vice-President of Global Growth at GSH, acknowledges that some employers—particularly smaller ones—are not always sensitive to cultural differences, and notes that GSH works “to coach them along the way.” GSH also works with foreign-educated employees to help them succeed in their new workplaces, using external coaches to develop one- to three-month programs to help employees adapt to their Canadian context.

9. Conclusion

When Katrina de Asis came to Canada, she received the disconcerting “advice” from two college advisors that she would never find engineering work.

“Twice I have been told I will never find a job. Twice. I was skeptical, though. I didn’t lose hope. But somehow it made me anxious.” As de Asis recognizes, it is easy for skilled immigrants in similar situations to get caught in a downward spiral. “In Canada, it’s very busy,” she says. “Even in the survival jobs, you don’t have time to look for another job, because you just need to pay your bills ... The immigration program—inviting people to come here is very good. But when you get here, somehow it just destroys your morale.”

It is not surprising that some IEGs become demoralized when trying to become practicing engineers in Canada: many struggle to find well-paying work within their field of training—despite immigration officials having determined they are attractive applicants, and there is labour market demand for their skills.

As this report has highlighted, many of the barriers that IEGs face are systemic ones. Depending on an IEG’s profile, any number of stakeholders may have a hand in shaping the IEG’s intake experience and outcomes, including immigration agents, engineering regulators, settlement support agencies, employers, universities, and others. The barriers that IEGs experience are often the result of gaps between how these immigration, licensure and employment processes interact, rather than problems endemic to any one system.

Fortunately, there are many ways for these barriers to be addressed. Federal and provincial officials could harmonize their educational assessment processes, engineering associations could standardize their IEG examination programs, and regulatory agencies could target employment barriers—to name but a few of the recommendations explored in this report. Admittedly, these are big ideas, but that seems called for when dealing with a big challenge.

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About the Author

Lauren Heuser is the author of *Closed Shops: Opening Canada's Legal Profession to Foreign-educated Lawyers*, co-published in 2017 by the Institute for Canadian Citizenship (ICC) and the Centre for International Governance Innovation (CIGI).

Heuser is currently completing her Master in Business Administration at INSEAD in France. She was formerly a deputy editor and columnist for the *National Post*, and has written for *The Walrus*, *The Globe and Mail*, *The Boston Globe*, and the *Ottawa Citizen*. Prior to entering journalism, Heuser practised as a business law associate in the Toronto office of an international law firm. She holds a Doctor of Jurisprudence degree from the University of Toronto, and a Bachelor of Arts (Honours) degree in literature and political science from the University of Manitoba.

Organizations interviewed for this report

ACCES Employment; Association of Professional Engineers and Geoscientists of Alberta; Engineers Canada; Engineers and Geoscientists British Columbia; Global Skills Hub; International Credential Assessment Service of Canada; Migration Advisory Committee Secretariat (United Kingdom); MOV North; Organisation for Economic Co-operation and Development; Office of the Fairness Commissioner (Ontario); Ontario Society of Professional Engineers; Professional Engineers Ontario; University of Manitoba Faculty of Engineering, Internationally-Educated Engineers Qualifications Program

Individuals interviewed for this report

| | |
|---------------------|----------------------|
| Aarthi Vig | Katrina de Asis |
| Ahsan Ahmed | Kim Bergeron |
| Amit Banerjee | Lawrence Anoliefo |
| Andy Wang | Manjeet Dhiman |
| Anshu Nicodemus | Marcia Friesen |
| Atif Khan | Maria Margarita Meza |
| Azhar Hussein | Moody Farag |
| Chelsea Roberts | Nidhi Joshi |
| (not her real name) | Nusraat Masood |
| Damilola Onanuga | Sherron Hibbitt |
| Deborah Wolfe | Shyam Seshadri |
| Enayat Aminzadah | Stephanie Price |
| Gillian Pichler | Stephen Earl |
| Greeshma Gopinath | Thomas Liebig |
| Ivana Lochhead | Vikram Rangnekar |
| Jayden Lopez | Willem van der Molen |
| (not his real name) | Yousuf Khati |

6 Degrees Reports

New Canadian Entrepreneurs: An Underappreciated Contribution to Canadian Prosperity? Bessma Momani. 6 Degrees-CIGI, 2016.

Open for Business: Immigrant/New Canadian Entrepreneurs in Canada. Ricardo Meilman Lomaz Cohn and Eric Adebayo. 6 Degrees-Vancity, 2016.

All of us: What we mean when we talk about inclusion. Sarmishta Subramanian. 6 Degrees-RBC, 2017.

Closed Shops: Opening Canada's Legal Profession to Foreign-Educated Lawyers. Lauren Heuser. 6 Degrees-CIGI, 2017.

Innovation and Entrepreneurship: Power by New Canadians, Fuelled by Youth. Jean-Paul Boudreau and Monica Jako. 6 Degrees-Ryerson-SSHRC, 2017.

Reconciliation beyond the Box: The UN Declaration and Plurinational Federalism in Canada. Sarah Morales and Joshua Nichols. 6 Degrees-CIGI, 2018.

Closed Shops: Making Canada's engineering profession more inclusive of international engineers. Lauren Heuser. 6 Degrees, 2018.

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Institut pour la citoyenneté canadienne

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www.icc-icc.ca

Ideas & Insights at the ICC

Ideas & Insights is the thought leadership program of the Institute for Canadian Citizenship. Working with partners and program participants around the world, it develops cutting edge insights on inclusion and citizenship in the 21st century, all built on careful, original research. It is under the leadership of Scott Young (syoung@icc-icc.ca).

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6 Degrees drives a global conversation on citizenship and inclusion. The Canadian initiative includes an immersive annual three-day event in Toronto, as well as a series of one-day pop-ups across Canada and around the world. 6 Degrees is about connection, conversation, artistic representation, and the power that comes from bringing people together. It is about what we can do to counter rising nativism and exclusion, and how we can go about doing it. It is also about language: how better language can make for better thinking; how we can reframe issues to open hearts and change minds.

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“Inviting people to come here is very good. But when you get here, somehow it just destroys your morale.”

