

The engineering workforce

The Ordre des ingénieurs du Québec publishes a study that anticipates needs by 2030 and proposes actions to mitigate scarcities

Montreal, April 26, 2021 – Quebec’s economy will need over 50,000 new engineering professionals by 2030, according to an extensive study published today by the Ordre des ingénieurs du Québec (OIQ) and conducted in collaboration with Aviseo Consulting. The study specifically shows that some fields of practice and certain regions of Quebec will need to attract more professionals to meet the anticipated demand.

“This study gives us the tools we need to anticipate job market needs and suggest potential actions to ensure that engineers keep meeting society’s expectations and contribute to Quebec’s prosperity in the years to come,” commented OIQ President Kathy Baig, Eng., MBA, ASC, DHC, when unveiling the study at an event of the Fédération des chambres de commerce du Québec (FCCQ).

Regions and fields to watch

The balance between supply and demand for engineering professionals will vary greatly by region and field of practice.

The study identifies the major trends that will impact the profession. In general, workforce needs should increase particularly in the fields of computer and software engineering, electrical and electronics engineering, and chemical engineering. The strong demand in these fields of practice can be explained by trends such as the energy transition and transportation electrification, computer security or the digital transition, which is gaining ground in all economic sectors.

For example, Greater Montreal will see increasingly high demand in many fields of engineering. Cybersecurity expertise will also be in high demand in Outaouais. The Saguenay–Lac-St-Jean and Abitibi-Témiscamingue regions will experience growing demand in industrial engineering, whereas Gaspésie will be searching for talent in mechanical engineering.

Potential actions

Based on Aviseo Consulting’s findings, the OIQ proposed potential actions to mitigate the effects of workforce scarcities, such as increasing funding for schools and faculties of engineering to increase their training capacity.

The OIQ also suggests setting up agile consulting mechanisms between businesses and universities so that training programs keep in step with job market needs in terms of the expertise required and developments within the profession.

As the first major socio-economic study in the OIQ’s recent history, the document entitled *Profil de l’ingénieur d’aujourd’hui et de demain* is [available for free on the OIQ’s website](#).

POTENTIAL ACTIONS PROPOSED BY THE OIQ

Action 1: Mitigate the effects of workforce scarcities

- 1.1. Increase funding to universities to boost their training capacity. Grant additional funding to programs that target minority client groups.
- 1.2. Continue all actors' efforts to increase the number of women in the profession.
- 1.3. Encourage more initiatives that promote hiring candidates from minority groups and share best practices. Grant enough resources to carry out these projects.

Action 2: Adapt research and university training to job market needs

- 2.1. Continuously adapt university curricula and continuing education programs based on realities in the profession and job market needs. For example:
 - Sustainable development and climate change adaptation;
 - Social acceptability of engineering projects;
 - New technologies, including artificial intelligence and cybersecurity;
 - Change management.
- 2.2. Set up agile consulting mechanisms between businesses and universities to stay informed of job market needs and developments within the profession.
- 2.3. Continue to focus on multidisciplinary and collaborative work in university programs, especially with projects between faculties and universities.

About the Ordre des ingénieurs du Québec

The Ordre des ingénieurs du Québec turned 100 years old in 2020. It has a membership of some 65,000 engineering professionals in all fields, except forest engineering. Its mission is to regulate the practice of engineers and support the development of the profession in the interest of protecting the public. For more information, go to oiq.qc.ca.

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