MEMBER SUBMISSION AT PEO AGM

2026 Annual General Meeting

PEO 2026 AGM
Member Submission #2

1. Title of Submission

Making Digital Engineering Licensure a Priority

2. Issue, Problem, Risk or Gap

Ontario lacks a sufficient number of licensed professional engineers in software, computer, cybersecurity, digital communications, and digital systems engineering. The 2020 Emerging Disciplines Task Force reported that the licensure uptake rate for software engineering is close to zero per cent, and at the 2023 AGM, President Fraser confirmed that 92 per cent of PEO applicants are confined to just eight traditional disciplines. Digital engineering work in Ontario is therefore performed almost entirely by unlicensed and unregulated practitioners.

This gap is growing more consequential as governments and industry invest heavily in digital infrastructure. The federal government has committed $925.6 million for sovereign AI compute infrastructure and established the Ministry of Artificial Intelligence and Digital Innovation. Critical infrastructure cybersecurity legislation is advancing through Bill C-8. Major private sector investments are building digital infrastructure across the country. Building this infrastructure safely and competitively requires licensed digital engineers who are professionally accountable for their work.

Canadian universities have offered CEAB-accredited software engineering programs for decades, and PEO has long recognized software engineering as a licensable discipline. The near-absence of licensure in a well-established discipline is a regulatory gap that has widened over time. PEO's own 2026–2030 Strategic Plan acknowledges this changing landscape — its environmental scan identifies AI, digital transformation, talent shortages, and emerging tech demand as factors impacting its regulatory environment — yet PEO does not separately track or report on licensure in digital disciplines, and no mechanism exists to grow digital engineering licensure.

3. Requested Action

We are asking Council to make the licensure of digital engineers a strategic priority and to undertake the following actions, by whatever mechanism Council determines is appropriate:

a) Establish baseline metrics on the current number of licensed engineers practising in each digital engineering discipline in Ontario, including trends over time;
b) Identify structural barriers to licensure in digital engineering disciplines, including the availability of licensed practitioners to supervise engineering experience and the alignment of academic programs with licensing requirements;
c) Assess the implications of federal AI, cybersecurity, and digital infrastructure initiatives for the demand for licensed digital engineers in Ontario;
d) Engage engineers with domain expertise in digital engineering disciplines, along with industry and academic stakeholders, in developing findings and recommendations;
e) Report findings and recommendations to Council within twelve months, with an interim progress report at six months; and
f) Make the results available to licence holders and the public.

The practice domains covered would include software engineering, computer engineering, cybersecurity engineering, digital communications engineering (networks, protocols, and data infrastructure), digital systems engineering (integration and architecture of software-intensive systems), and other adjacent disciplines involving the design, development, integration, or governance of digital technologies and infrastructure.

These actions are consistent with Strategic Priority 1 of PEO's 2026–2030 Strategic Plan (Effective and Relevant Regulation), which calls for the regulatory system to be "proactive, adaptable to new technologies and risks and grounded in evidence." They would provide the evidence base Council needs to make informed decisions about digital engineering licensure as part of its comprehensive review of the Professional Engineers Act and its regulations.

4. Supporting Research

Federal Budget 2025: $925.6 million over five years for sovereign AI compute infrastructure; national call for data centre proposals exceeding 100 MW.

Ministry of AI and Digital Innovation: National consultation sprint (October 2025) with over 11,000 respondents; key themes included sovereign AI infrastructure, cybersecurity frameworks, and workforce capacity.

Bill C-8: Would establish federal cybersecurity requirements for critical infrastructure operators. Predecessor bill (C-26) completed third reading; expected to pass in current form.

PEO Emerging Disciplines Task Force (2020): Software engineering licensure uptake close to zero per cent; only 40 per cent of all engineering graduates in Ontario seek PEO licensure.

PEO AGM 2023: 92 per cent of applicants confined to eight traditional disciplines, with only 8 per cent across 22 other recognized disciplines

PEO 2026–2030 Strategic Plan: Environmental scan (p. 8) identifies AI, digital transformation, talent shortages, and emerging tech demand as regulatory factors. Computer engineering is a top-10 discipline; software, cybersecurity, digital communications, and digital systems engineering are not separately tracked.

5. Public Interest Considerations

Digital systems increasingly affect the safety, security, and welfare of Ontarians — from critical infrastructure and healthcare to financial platforms and AI-driven decision-making. When the individuals designing, building, and deploying these systems are not licensed, the public protection framework under the Professional Engineers Act does not reach the digital systems on which the public depends.

In traditional engineering domains, building codes, safety standards, and product regulation provide additional layers of public protection. No comparable regulatory framework exists for digital technologies, including AI. In the absence of such regulation, the professional engineer's duty to protect the public interest carries even greater weight — and licensed digital engineers are needed to fulfil it.

6. Legal Considerations

No changes to the Professional Engineers Act, Regulation 941, or By-law No. 1 are required. PEO already has the statutory authority to license engineers in digital disciplines. This submission asks Council to prioritize the exercise of that authority and to determine the most appropriate mechanism for acting on it.

7. Timing and Urgency

Federal AI compute funding is being allocated in 2025–26, data centre projects are expected to come online in late 2026, and a renewed national AI strategy is expected this year. PEO has just adopted its 2026–2030 Strategic Plan, which includes a comprehensive review of the Professional Engineers Act. This is the right moment to

ensure that digital engineering licensure is part of that review. Without baseline data, the Act review cannot adequately address the fastest-growing areas of engineering practice.

8. Other Information

This submission follows a proven approach. PEO's 30 by 30 initiative successfully used measurement and goal-setting to address gender gaps in licensure. This submission applies the same model to a discipline-based gap: measure the current state, identify barriers, and recommend actions.

This submission is focused on digital engineering disciplines and does not address other emerging or advanced fields. It is supported by Engineers for the Profession (E4P), a volunteer advocacy organization whose members include former PEO presidents, councillors, and practising engineers.

9. Attachments

None.

Member #1: Raimund Laqua, P.Eng. (PEO #25625500)
Chair, AI/Digital Engineering Committee, Engineers for the Profession (E4P)

Ray Laqua

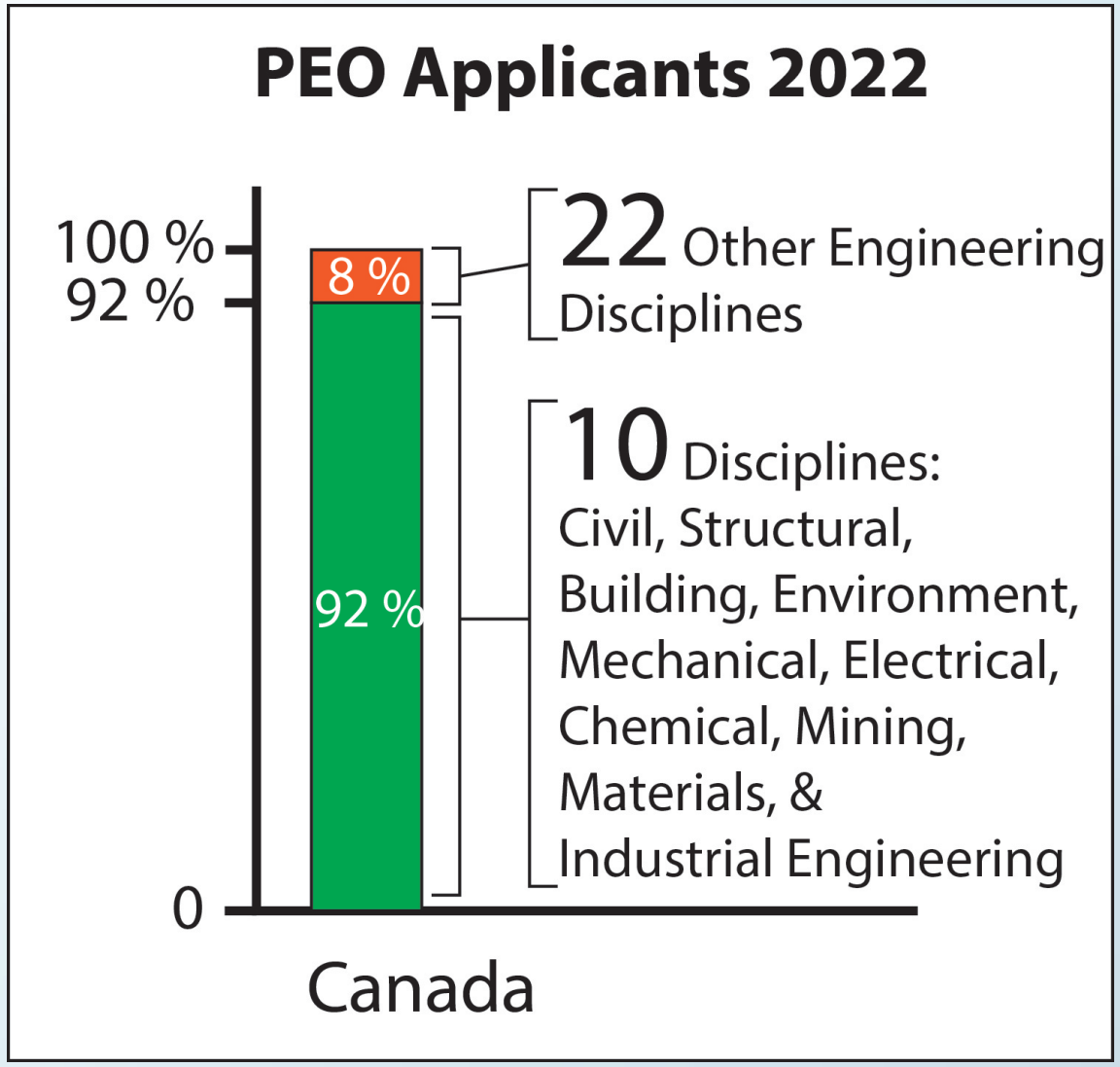
Date: April 10, 2026

Member #2: Royden Fraser, P.Eng. (PEO# 90286626)

Royden Fraser

Date: April 10, 2026

Professional Engineers
Ontario



Traditional Disciplines:

Civil Mechanical

Electrical Chemical Mining

In Canada Today (70+):

Aeronautical
Aerospace
Architectural
Conservation and Sustainability
Automotive
Bioengineering
Biological
Biomedical
Biomedical and Electrical
Biomedical and Mechanical
Biomedical Mechanical
Bioresource
Biosystems
Building
Building Systems
Chemical
Chemical and Bioengineering
Chemical and Biological
Chemical and Biomedical
Civil
Civil and Biomedical
Communications
Computer
Computer Systems
Mathematics and Engineering
Electrical and Biomedical
Electronic Systems
Energy
Electrical
Engineering Physics
Engineering Science
Engineering Physics and Biomedical
Engineering Chemistry
Environmental
Engineering Systems and Computing
Environmental Systems
Geological
Geomatics
Green Process
Industrial
Industrial Systems
Integrated
Mechatronics and Biomedical
Management
Manufacturing
Materials and Biomedical
Mechanical
Mathematics and Engineering
Materials
Mechanical Systems
Mineral Resources
Mechatronics
Process
Mining
Nanotechnology
Mining and Mineral Resource
Nuclear
Oil and Gas
Petroleum
Ocean and Naval Architectural
Petroleum Systems
Mechanical and Biomedical
Software
Software and Biomedical
Software Systems
Space
Sustainable Design
Sustainable and Renewable Energy
Sustainable Energy
Systems Design
Water Resources

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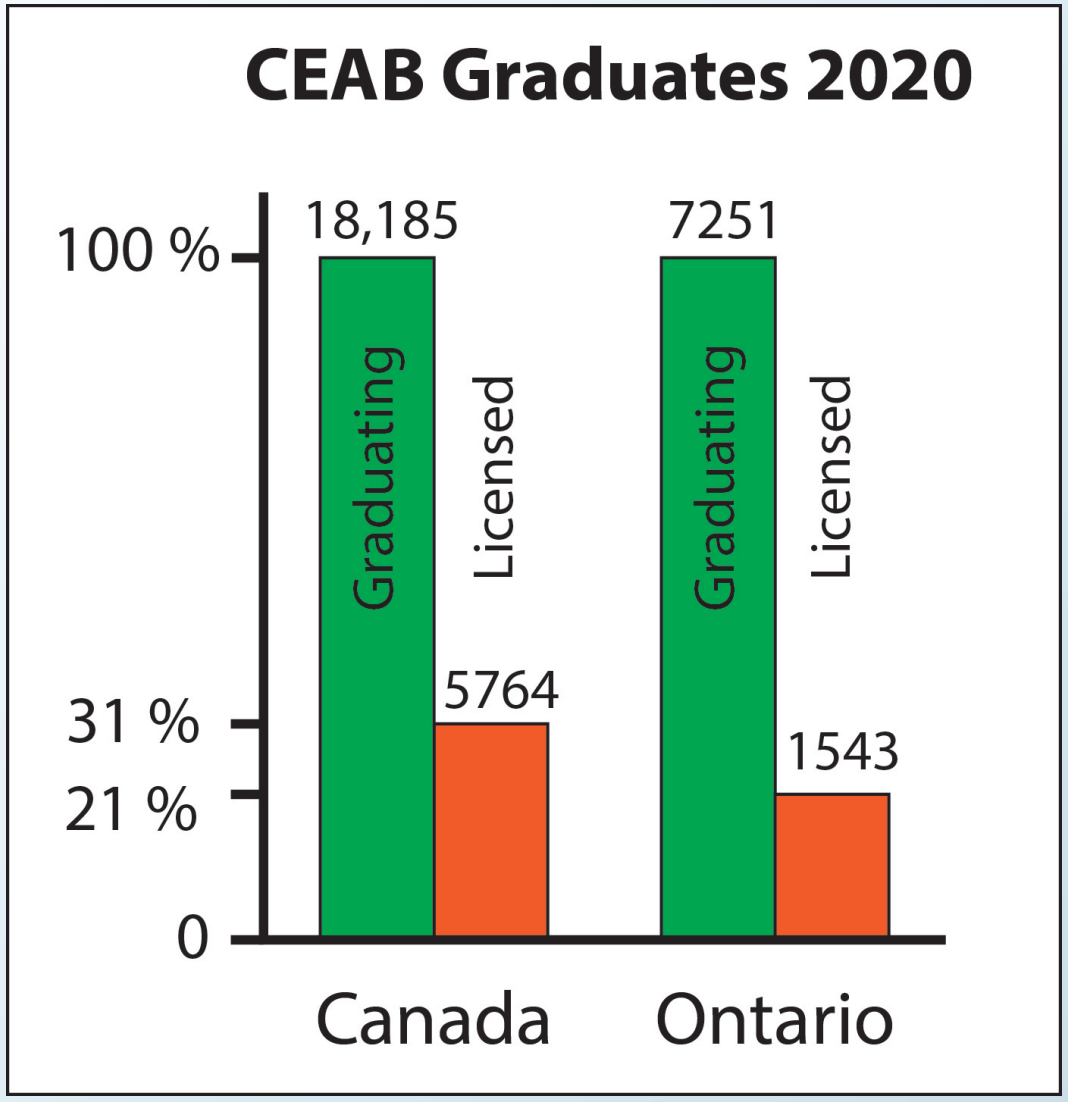

2023 Graduating Class Survey
Systems Design Engineering

QUESTION:

Who plans to get their P.Eng.?

RESPONSE:

3.8 %