

2025-2029 Strategic Plan Foresight Workshop

Nancy Hill,

President-Elect, Director, Ontario

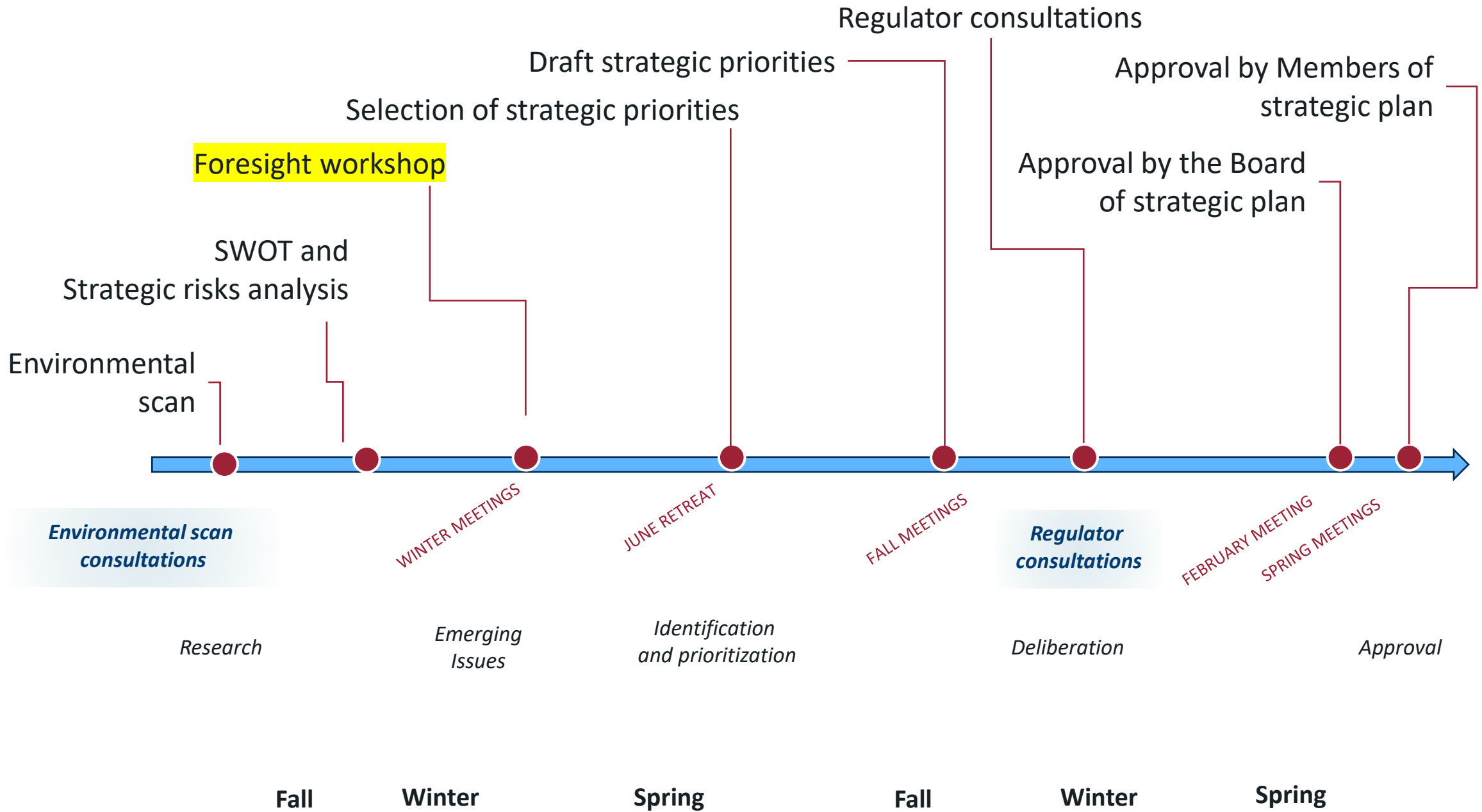
and Chair, Strategic Planning Task Force

February 22, 2023



Workshop Outcomes

- Informed of progress and commitment under current (2022-2024) Strategic Plan
- Understanding of upcoming major trends and risks
- General agreement on potential strategic areas



Context

Gerard McDonald
Chief Executive Officer



Workshop agenda

1. Current strategic priorities
2. Major trends (Environmental scan and risks)
3. Overview of exercise

Lunch

3. Table discussions on potential areas and report back
4. Vote

break ~20 minutes

5. Final plenary discussion
6. Next steps

Vision

**Advancing Canadian
engineering
through national
collaboration**



Purposes of Engineers Canada (1 of 2)

1. Accredite undergraduate engineering programs
2. Facilitate working relationships between the regulators
3. Provide services and tools that enable the assessment of engineering qualifications, foster excellence in engineering practice and regulation, and facilitate mobility of practitioners within Canada
4. Offer national programs
5. Advocate to the federal government
6. Actively monitor, research, and advise on changes and advances that impact the Canadian regulatory environment and the engineering profession

Purposes of Engineers Canada (2 of 2)

7. Manage risks and opportunities associated with mobility of work and practitioners internationally
8. Foster recognition of the value and contribution of the profession to society and spark interest in the next generation of professionals
9. Promote diversity and inclusivity in the profession that reflects Canadian society
10. Protect any word(s), mark, design, slogan, or logo, or any literary, or other work, as the case may be, pertaining to the engineering profession or to its objects

Board's guiding principles

1. Serve the needs of the Regulators
2. Ensure transparency and accountability in the decision-making process
3. Encourage the commitment and engagement of the Regulators
4. Enable equity, diversity, and inclusion in the Canadian engineering profession

Staff's values

- Take pride in creating a culture of teamwork and wellness
- Earn credibility through high-quality work
- Foster new ideas and embrace creative approaches
- Are transparent and accountable
- Create and sustain trusting relationships
- Rely on diverse people and perspectives to enrich our work

2022-2024 strategic priorities

1. Advance the engineering regulatory framework	2. Champion an equitable, diverse, inclusive, and trustworthy engineering profession	3. Uphold our commitment to excellence
1.1. Investigate and validate the purpose and scope of accreditation 1.2. Strengthen collaboration and harmonization 1.3. Support regulation of emerging areas	2.1 Accelerate 30 by 30 2.2 Reinforce trust and the value of licensure	3.1 Uphold our commitment to excellence

Current strategic priorities

Stephanie Price,
Executive Vice President, Regulatory Affairs

Jeanette Southwood,
Vice President, Corporate Affairs and Strategic
Partnerships



Accreditation: *what we have accomplished so far*

- **Benchmarking the Canadian Engineering Accreditation System Report:** comparison of Canadian accreditation systems with international engineering and other Canadian regulated professions' accreditation systems
- **Current and Emerging Practices in Engineering Education Report:** synthesis of current and emerging practices in engineering education within Canada and internationally
- **Engineering Deans Canada consultation:** gathered perspective on purpose and scope of accreditation to chart a path forward for the system
- **Strategic foresight session:** gathered perspectives from across the engineering system on what the engineer of the future will need to do



Accreditation: *what we expect will be accomplished by 2024*

- Publish a path forward report with direction on how to implement systems aligned with the purpose of accreditation and the academic requirement for licensure, based on:
 - Simulations to design, test and evaluate concepts for academic requirement and purpose of accreditation with actors from across the system, and
 - In-person consultation with Regulators, EDC and other stakeholders



Collaboration and harmonization: *what we have accomplished so far*

- Regulators have been consulted on lessons learned from past initiatives
- Legislative authorities were mapped and shared with officials groups
- Developed a national Position paper and a Pan-Canadian consultation plan
- Currently scheduling consultations with regulators



Collaboration and harmonization: *what we expect will be accomplished by 2024*

- In a national consultation, Regulators will clarify their desire for national collaboration, harmonization or both
 - Potentially, a statement of collaboration will be signed by Regulators
- CEO Group will identify area(s) for future collaboration and/or harmonization work



Emerging areas: what we have accomplished so far

- Research paper on energy engineering is in development (to be delivered May 2023)
- Promoting role of engineers in emerging areas through existing national position statements and meetings with federal officials



Emerging areas: what we expect will be accomplished by 2024

- Complete second Regulatory research paper (topic TBD by regulators)
- Develop a national position statement on the role of engineers in emerging areas of engineering practice



Accelerate 30 by 30: what we have accomplished so far

- Completed the regulator-focused Employer Engagement strategy
- Completed Managing Transitions update
- Held a virtual national conference in 2022
- Collected and shared national data, EDI guidance for Regulators and a national 30 by 30 newsletter
- QB completed the New Public guideline for engineers and engineering firms to foster gender inclusive workplaces



Accelerate 30 by 30: what we expect will be accomplished by 2024

- Expanded Employer Engagement strategy, and established employer partnerships across Canada
- Completed National Research Strategy and implement recommendations
- Held two annual national conferences
- Co-developed and distributed EDI resources
- Implemented partnership deliverables



Reinforce trust and value: what we have accomplished so far

- Regulators' advisory group formed
- Conducted primary and secondary research
- Finished discovery and received recommendations on an EIT/engineering graduate outreach program
- Developed key message framework on the value of licensure
- Defined marketing campaign objectives, strategy, audience targeting, and media plan



Reinforce trust and value: what we expect will be accomplished by 2024

- Year one of marketing campaign fielded in spring and fall flights
- Engineering graduate/EIT outreach program underway
- Ongoing assessment of campaign performance underway
- Value of licensure messaging tools
- Foundational research completed



Major trends

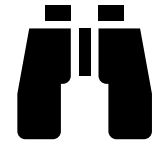
Gerard McDonald
Chief Executive Officer

Enrollment in accredited engineering programs

- Number of CEAB degrees awarded continues to grow
- In 2020, half of CEAB degrees were awarded in Ontario (47.9%), followed by Québec (22.7%)
- Majority of degrees still awarded in traditional disciplines

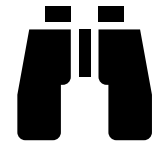
Benchmarking against other accreditation systems

- Canadian engineering accreditation model is similar to others
- Other models include some experimental learning requirement
- Canadian model is the only model with:
 - A minimum path requirement
 - A time-length input requirement for degree length
 - Less industry involvement



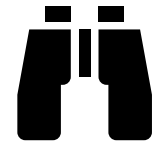
Engineering education trends

- Use of competencies in measuring individual attainment of educational objectives
- Increasing proportion of under-represented groups
- Increasing focus on non-technical skills
- Addressing students' mental health issues
- Offering personalized program delivery and path
- Offering continual learning and micro-credentials for lifelong education



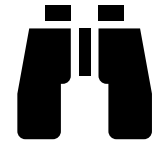
Trends related to under-representation in engineering

- Women represented 14.2% of licensed engineers in Canada in 2020, lower promotion rates and salaries, more likely to leave the profession
- Indigenous engineers more likely to be in lower-level jobs
- Reliance on immigration to balance aging population, less likely to be licensed than Canadian-trained individuals



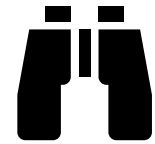
Regulatory trends for Canadian engineering regulators

- Use of competency-based assessment
- Mandatory continuing professional development
- Regulation of engineering entities
- Increasing mobility of engineering work
- New or enhanced overarching legislation and fairness legislation



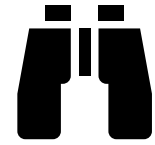
Regulatory trends for regulated professions in general

- Increasing oversight of regulatory functions
- Demonstration of the value of self-regulation in supporting public safety and public interests
- Safety includes physical, psychological and cultural components
- Moving toward right touch regulation



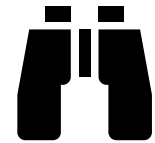
Trends regarding the perception of the value of engineering licensure

- Ongoing media and government scrutiny
- Engineering Regulators have increased public and government communications



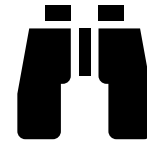
Market trends

- Difficulty recruiting skilled employees
- Lack of succession planning for some businesses
- Inflation and increasing interest rates
- Stagnation in number of engineering license holders
- 2% increase in engineering license holders between 2015-2020, compared to 25% increase in CEAB degrees awarded



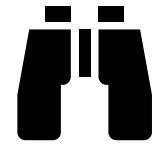
Climate change and sustainability trends

- Engineers can play an important role in support of United Nations Sustainable Development Goals and to support requirements as set out in code of ethics
- Six Canadian Engineering Grand Challenges:
 - Resilient infrastructure
 - Access to affordable, reliable, and sustainable energy
 - Access to safe water in all communities
 - Inclusive, safe, and sustainable cities
 - Inclusive and sustainable industrialization
 - Access to affordable and inclusive STEM education
- Engineering organizations are highlighting their ESG work
- Some regulators are advocating to their governments about profession' role in addressing climate change



Long term financial viability

- 2 main sources of revenues:
 - **Per capita fees:** adopted 2 years in advance, gradually reduced
 - **TD Insurance:** previously split 51/49, current agreement, 10/90, up for renewal in 2030



Board risks

Impact →	1	2	3	4	5
Likelihood ↓	Insignificant	Minor	Moderate	Major	Severe
5 Extremely Likely					
4 Likely	Decreased confidence in the governance functions		Diminished scope and value of engineering regulation Insufficient representation of marginalized groups in engineering		
3 Moderate				Reduced long term financial viability	Decline in the value of accreditation
2 Unlikely					Diminished national collaboration
1 Low					

Overview of the exercise

Break out session

- Identify a facilitator and note taker for your flip chart
- Based on current and planned work, major trends as well as strategic risks:
 - › Discuss potential strategic priorities
 - › Write maximum top 5 strategic priorities on flip chart
- Staff will also be taking detailed notes

Elements of a strategic priority

- ✓ Can be accomplished in 5 years
- ✓ Address major trends/strategic risk
- ✓ National scope, likely to receive Pan-Canadian support
- ✓ Valuable and complementary of regulators' initiatives
- ✓ Within purposes of Engineers Canada
- ✓ Typically requires major resource spending
- ✓ Board wants to track course during planned period

Table discussion and report back

Vote

Final plenary discussion

Plenary discussion

- Are there other elements we should have discussed or that we have not raised yet?

Next steps

Nancy Hill,
President-Elect, Director, Ontario
and Chair, Strategic Planning Task Force

Next steps

- Input will be consolidated and shared with all attendees
- Staff will takeaway strategic priorities and flesh our proposed strategic priorities that will be finalized at the June Board workshop
- Draft Strategic Plan will be submitted for regulators consultations in the Fall

