Futures of Engineering Accreditation

Investigating and validating the purpose and scope of accreditation

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Project Steering Committee

A Vision for Collaboration:

Engineers Canada Strategic Plan 2022-2024

Area of Focus

1. Advance the Engineering Regulatory Framework

Strategic Priority 1.1

Investigate and validate the purpose and scope of accreditation

Futures of Engineering Accreditation

Benchmarking the Canadian enginering accreditation system

Engineering: Australia, France, Malaysia, Poland

Other professions: Nursing, social work, and IT

Benchmarking Findings – Areas of focus

1. Purpose of Accreditation
2. Benefits to Graduates of Accredited Programs within the Licensure/Registration Context
3. **Time-based input measures (key difference)**
4. Discipline-specific program quality
5. **Outcomes (graduate attributes; entry-level competencies) (key similarity)**
6. Learning environment, and leadership and authority
7. **Involvement of Industry (key difference)**
8. **Professional Experience (Experiential Learning) Requirements (key difference)**
9. Roles, Responsibilities, and Quality Consistency and Evaluation

Benchmarking Findings – A deeper dive

3. Time-based input measures (key difference)

- The Canadian engineering education accreditation is extensively granular relative to comparators

5. Outcomes (graduate attributes; entry-level competencies) (key similarity)

- All accreditation systems rely on outcomes to varying degree.

7. Involvement of Industry (key difference)

- Other systems have a requirement for industry advisory panels, faculty licensure requirements were less restrictive, and others also had more direct involvement of industry in programs (e.g. visit team membership, stakeholder engagement, program reviews)

8. Professional Experience (Experiential Learning) Requirements (key difference)

- Virtually all comparators placed high importance on integration of the industry/practical experience in programs, and some comparators integrated industry/practical experience into education delivery with a clear standard for the outcome or purpose of such experiences.

Current and emerging trends in Engineering Education

Flexible and Assessed Pathways (Trend 1)

1. Flexible Entry and Bridging Pathways for Students
2. The implementation of **Competency-Based Assessment**
3. The value of **Micro-credentials**

Open and Inclusive Culture (Trend 2)

4. Increased curriculum focus on **Equity, Diversity, and Inclusion**
5. Increased curriculum focus on **Indigenization**
6. Increased focus on the **Well-being and Whole Student**

Student-Centered Engagement with Complex Problems (Trend 3)

7. Integrating the proper **balance of Behavioural and Technical** skills
8. The importance of **Experiential learning** exposure
9. The importance of **Project/Problem-Based Learning** exposure

What’s next?

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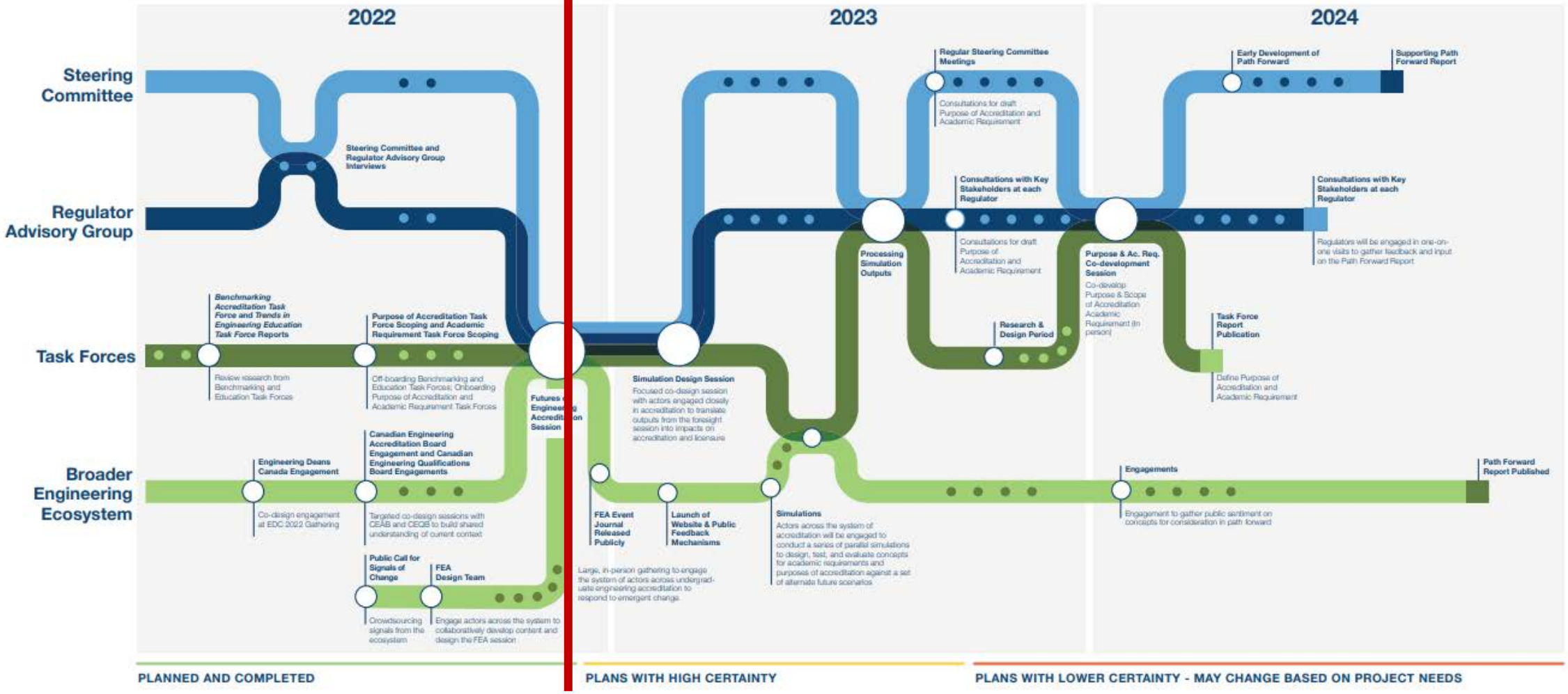
Futures of Engineering Accreditation

Strategic priority 1.1: Investigate and Validate the Purpose and Scope of Accreditation



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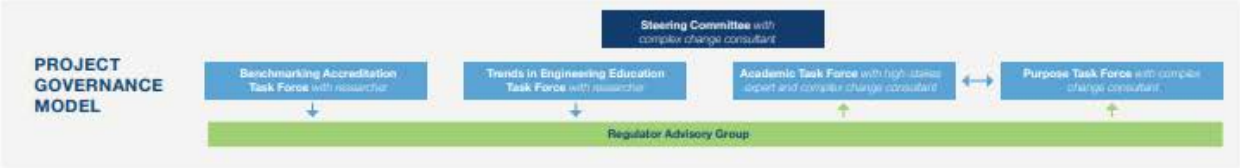
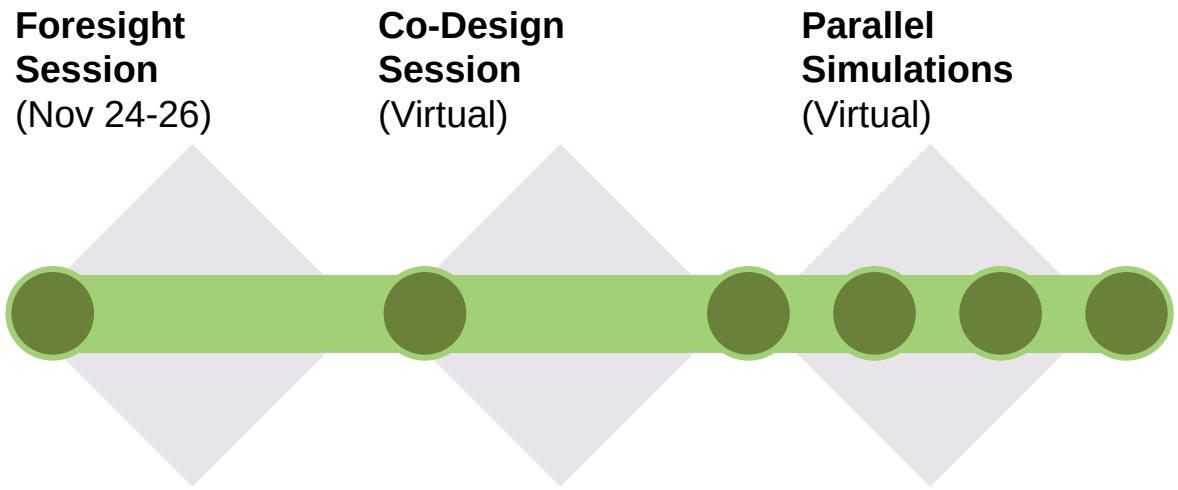


Our current focus – Preparing for simulations

- Foresight session produced a range of perspectives on what the engineer of the future will need to do.
- The session themes will be translated into a set of concepts to test during virtual simulations that will be facilitated in March of 2023.
- Small groups will work together virtually to test concepts for the purpose of accreditation and the academic requirement for licensure.



Keen to get involved? Email fea@engineerscanada.ca with "count me in" in the subject line if you'd like to be involved in the simulations.

Read the full reports

Benchmarking the Canadian Engineering Accreditation System:

https://engineerscanada.ca/sites/default/files/2022-05/Benchmarking%20the%20Canadian%20Engineering%20Consultant%20Report_EN.pdf

Current and Emerging Practices in Engineering Education:

https://engineerscanada.ca/sites/default/files/2022-05/Current%20and%20Emerging%20Practices%20in%20Engineering%20Education_EN.pdf

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