

The Canadian  
Academy of  
Engineering

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L'Académie  
canadienne  
du génie

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# CAE Strategic Plan 2020-2025

May 14, 2020

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# Overview



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# I. Vision



The CAE is in the vanguard of applying engineering principles to the prosperity, well-being and sustainability of Canada and its people.

# II. Mission



The mission of The Canadian Academy of Engineering is to:

1. Recognize and honour outstanding engineering achievements and service to the profession
2. Demonstrate leadership in the responsible application of engineering knowledge for the benefit of Canadians, provide strategic advice to decision-makers, and contribute to shaping the future of engineering.

# III. Values



## **INTEGRITY**

Operating openly, honestly and with professional accountability

## **EXCELLENCE**

Celebrating creativity, technical accomplishment, entrepreneurship, collaboration and impact in Canadian engineering achievement

## **LEADERSHIP**

Providing visionary thinking that inspires positive change and supports equity, diversity and inclusion

## **SERVICE**

Applying a systems approach to social, environmental and economic stewardship in Canada's interests

## **RELEVANCE**

Providing engineering advice that is germane to the prosperity, well-being and security of Canadians

# IV. Goals and Objectives 2020-2025



## GOALS

1. To elect as Fellows, outstanding individuals who represent the full diversity of engineering in Canada
2. To grow the capacity of the Academy to address major engineering challenges related to social, environmental and economic performance
3. To have CAE Fellows recognized for their service to Canada
4. To have the Canadian engineering perspective valued by the public and by decision makers locally, provincially, nationally and internationally

## OBJECTIVES

1. To ensure a rigorous nomination and evaluation process for CAE Fellowship that is fair and transparent
2. To implement a business plan that establishes the resources and partnerships necessary to achieve our Goals
3. To build partnerships that help shape the future of engineering in Canada
4. To create a framework for Fellows to actively contribute their expertise to government on topics of national importance
5. To establish and grow CAE Sections across Canada and develop strong international partnerships

# V. Priorities



CAE Programs will address three transversal priorities for the CAE and for Canada:

## **SUSTAINABILITY**

The CAE will provide an engineering perspective that includes climate change adaptation and mitigation, leadership as a responsible resource economy, the future of energy, the evolution of our built environment, and our opportunities and obligations as a maritime nation

## **PRODUCTIVITY AND INNOVATION**

The CAE will actively address issues related to Canada's productivity and global economic competitiveness in a rapidly changing world including the development of skills for success in the 21<sup>st</sup> Century

## **DIGITAL TRANSFORMATION**

The CAE will encourage the digital transformation of the Canadian economy and the adoption of the highest social, ethical and legal standards.

To achieve our goals the CAE and its Fellows will engage and work collaboratively with government, engineering organizations, other Academies, the private sector and indigenous and northern communities.

# VI. Programs



CAE Programs will be a major contributor to the growth of the CAE over the strategic planning period and to the credibility and influence of the CAE on engineering issues of importance to Canada and the world.

- Programs will be established by the Research Committee to address CAE Priorities
- A Program may include projects, workshops, publications and other activities
- In its totality a Program will aim to address social, economic, policy and technical issues including risks and opportunities for Canadians in the global context
- The initial Program Portfolio includes:
  - Technology Stream: Oceans Engineering, Energy, Built Environment, Transportation
  - Education and Training Stream: Scholarships Program, Special Interest Groups, Workshops, Knowledge Dissemination

New activities will be added to Programs as resources permit. New Programs will be launched on the recommendation of the Research Committee and ratification by the Board.



# VII. Outputs and Outcomes



The CAE will work to ensure that outputs from Programs and from individual Fellows result in impactful outcomes for Canada, Canadians and the world.

## OUTPUTS

- Fellows will participate in Council of Canadian Academies (CCA) assessments and provincial equivalents
- Publications posted on the website will be a primary vehicle for knowledge capture
- Briefings and events with decision makers and the general public will be key mechanisms for knowledge mobilization
- A communications strategy and the creation of Special Interest Groups (SIGs) will help build networks of experience and expertise

## OUTCOMES

- Work by CAE Fellows will be incorporated in policy at various levels of government
- A distinct engineering perspective will be recognized and valued in public discourse
- CAE activities will promote increases in Canadian productivity and competitiveness
- The CAE will have a recognized leadership role in national and international partnerships

# VIII. Fellows and the Academy



## RAISING THE PROFILE OF THE FELLOWS OF THE CAE

- The CAE will increase the visibility of the Academy and of the Fellows by establishing and growing Sections; building a reputation at municipal, provincial and national levels; and participating in major innovation initiatives such as Superclusters
- Fellows will be encouraged to highlight their affiliation with the CAE
- Innovation organizations will be encouraged to have CAE Fellows on their Boards.
- An effective social media presence will be established.

## A NATIONAL AND INTERNATIONAL PLATFORM FOR FELLOWS

- Fellows will be encouraged to use the CAE to increase their influence in service to Canada and the world
- SIGs will unite Fellows with common interests from throughout Canada based on their personal and professional interests

## HONOURS & AWARDS

- The CAE will facilitate Fellows being considered for honours and awards that will raise their profile and that of the Academy

# IX. Regional Sections & National Networks



## REGIONAL SECTIONS

- Regional Sections will be important contributors to achieving the CAE Goals and Objectives
- Regional Sections will play an important role in building international partnerships
- The CAE will work with Fellows to establish new Sections across Canada
- In areas where the number of Fellows is low and/or a group of Fellows is already engaged in similar activity through other organizations, the CAE will investigate partnerships. The Engineering Institute of Canada (EIC) through the Canadian Society of Senior Engineers (CSSE) would be one example
- The CAE will look at ways to strengthen the existing Sections through financial support and engagement with regional stakeholders.

## NATIONAL NETWORKS

- National Networks such as Special Interest Groups (SIGs) or Task Forces will increase communications and exchanges between Fellows with a common interest in a Program or other topic

# X. Partnerships and Stakeholders



## **PARTNERSHIPS**

- The CAE will collaborate with Partners on Programs and on shaping the future of engineering in Canada
- Partners will be recognized on the CAE website and in the Annual Report. Terms of each partnership will be established through an MOU and ratified by the Board
- The CAE will work closely with the Royal Society of Canada and The Canadian Academy of Health Sciences to ensure the success of the CCA and to provide effective support to government on technical priorities.
- International Partners, specifically the Engineering Academies of other countries that are members of the International Council of Academies of Engineering and Technological Sciences (CAETS) are an important class of partnership

## **STAKEHOLDERS**

- The CAE will formalize its list of Stakeholders including the Fellows, funders, sponsors, partners and the general public.
- Stakeholders are important in terms of communications, service and metrics

# XI. International Partners



## INTERNATIONAL ACADEMIES

- The CAE will continue to be an active Member of the International Council of Academies of Engineering and Technological Sciences (CAETS)
- Relationships with selected Academies will be developed by the CAE and by regional Sections based on Programs and priorities
- The CAE will establish bilateral partnerships with selected Academies. These will include traditional partnerships with the NAE(US), the RAE(UK) and NATF(France) as well as with countries that have close technical ties to Canada such as Sweden, Finland, Japan and Germany
- The CAE will also develop relationships with the Chinese Academy of Engineering and the Indian National Academy of Engineering

## OTHER INTERNATIONAL ORGANIZATIONS

- The CAE will partner with other international organizations such as UNESCO or the International Maritime Organization where there is high value to CAE Programs

# XII. Business Model



The CAE Business Model will address the types of activities we invest in, how much we invest, how we raise the funding and on what terms. Today the CAE is primarily a membership fee-based organization. Over the course of this Strategic Plan membership fees will become less than 50% of revenues.

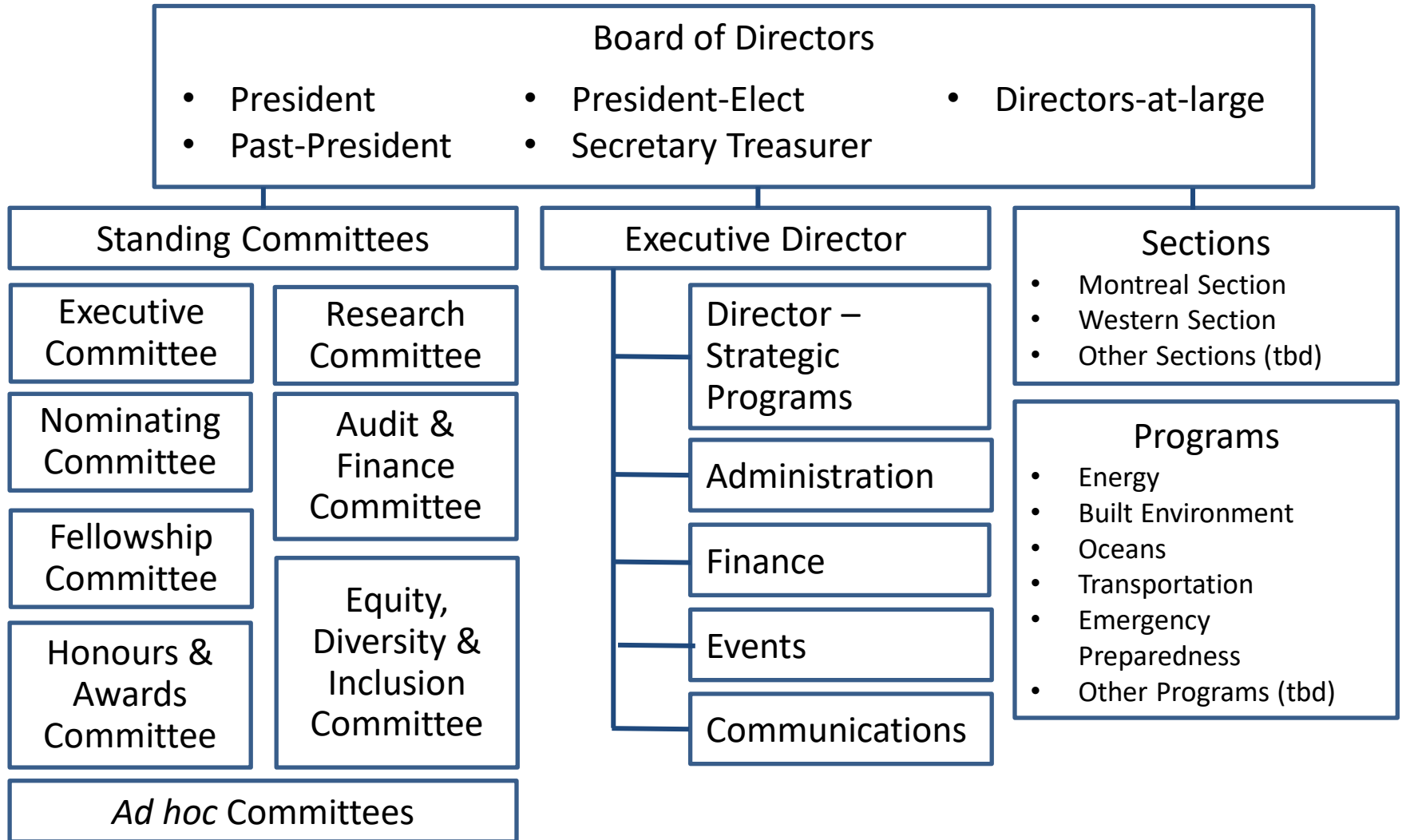
## CORE ACTIVITIES

- include the head office, governance including the Board and Committees, website, Fellowship process, Annual General Meeting, Symposium and Induction Dinner
- Core Activities will be funded principally through Membership Fees

## PROGRAMS

- include all projects, symposia, studies, reports etc. as well as honors, awards, and scholarships.
- Programs will be funded through donations, grants, sponsorships and contracts
- activities will conform to the restrictions placed on a charitable organizations by the Income Tax Act and the Canada Revenue Agency (CRA)

# XIII. Organizational Structure



# XIV. Metrics



## KEY PERFORMANCE INDICATORS (KPI)

Major Metrics relate to Fellows, Core Operations and Programs fall into three categories. Detailed metrics will be included in the operating plan.

## FELLOWS

- KPIs will include makeup of the Fellowship, New Fellows and nominees including diversity, sector (private, academic, government and military), active/retired
- Other metrics may include levels of activity of Fellows, engagement in Sections, National Networks and international initiatives, satisfaction with the Academy

## CORE OPERATIONS

- Financial health of the organization, adherence to the Business and Operating plans, and achievement of Goals and Objectives will be reported to the Board and the AGM

## PROGRAMS

- KPIs will include number of programs established, the growth (and closure) of programs, the number of activities undertaken in each program
- The total revenue per program and breakdown of revenue by support type
- Outputs and Outcomes of programs