

# Accountability in Accreditation 2023 Summary Report

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## Executive Summary

The Accountability in Accreditation Committee (AinA Committee) was struck by the Canadian Engineering Accreditation Board (CEAB) in February 2019. The Committee was created in response to the Engineers Canada Board's desire to provide stakeholders with a robust, evidence-based accreditation system, designed to acknowledge and address weaknesses in a data-driven, fact-based manner. This data collection cycle presented in this 2023 report spanned the period from June 2022 to April 2023, and contains an overview of the findings, including the AinA Committee's subsequent observations and recommendations.

The 2023 report represents the AinA program's second full data-collection cycle. As with last year's findings, readers are reminded that the initial thresholds for concerning/risk ratings were set to be deliberately sensitive and alterations may be required in the future. The AinA Committee is not recommending changes to the thresholds, but the committee members will undertake a review of thresholds in 2024/2025.

While all stakeholder groups are included in this year's reports, some groups were represented by a small number of respondents and one respondent was sometimes sufficient to move a measure into a concerning/risk category. As a result, continued monitoring is recommended for all measures.

Several themes identified in previous reports carried through to this year, and they are consistent with feedback the CEAB previously heard from stakeholders in other venues. As such, the recommendations made in this report can often be tied to on-going work and initiatives currently being directed to the CEAB.

With each cycle, a picture is emerging of the overall level of confidence in the accreditation system by stakeholders. While there are certainly areas for improvement, the AinA Committee believes that the results indicate that stakeholders who participated in the surveys have strong confidence in the accreditation system.

In this report, the AinA Committee makes several recommendations to the Engineers Canada Board, the CEAB, the Policies and Procedures Committee (P&P Committee), the CEAB Training Documentation and Resources Working Group, and the CEAB Secretariat regarding stakeholder engagement, communication and training needs, and messaging for accreditation system stakeholders to clarify intents and purposes. In addition to these specific issues, the AinA Committee recommends continued monitoring of all measures.

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## Introduction

### **Background on the Accountability in Accreditation Program**

In recent years, the Engineers Canada Board, regulators, and higher education institutions (HEIs) have called for greater transparency from the Canadian Engineering Accreditation Board (CEAB). Stakeholders have sometimes remarked that the work of the CEAB is a complicated, unknowable “black box” process, where surprises happen, and autonomous decisions are a regular occurrence. Given this situation, the Engineers Canada Board called for a robust, evidence-based accreditation system designed to acknowledge and address weaknesses in a data-driven, fact-based manner, going so far as to make accountability in accreditation a strategic priority of the [Engineers Canada’s 2019-2021 Strategic Plan](#). This strategic priority mandated the CEAB to provide a documented, annual performance measurement process, better communication, documented continual improvement processes, and greater transparency to accreditation stakeholders.

To address the Engineers Canada Board’s call for greater accountability in accreditation, the CEAB struck the Accountability in Accreditation (AinA) Committee in February 2019. At the time of this report, the AinA Committee is composed of the following members:

- Ray Gosine, Ph.D., FCAE, FEC, P.Eng. (Chair)
- Suzelle Barrington, FIC, PhD, ing. Agr.
- Pierre Bourque, ing., PhD
- Ernest Barber, FAIC, FCSBE, FEC, FGC (Hon.), Pag (ret), P.Eng.
- Kyle Marcotte, P.Eng.
- Ramesh Subramanian, FEC, P.Eng.

### **The 2023 data-collection cycle**

The 2023 report represents the Accountability in Accreditation program’s second full data-collection cycle. As with last year’s findings, readers are reminded that the initial thresholds for concerning/risk ratings were set to be deliberately sensitive and alterations may be required in the future. The AinA Committee is not recommending changes to the thresholds at this time but will review thresholds in 2024/2025. While all stakeholder groups are included in this year’s reports, some groups were represented by a small number of respondents and one respondent was sometimes sufficient to move a measure into a concerning/risk category. As a result, continued monitoring is required for all measures.

Several themes identified last year carried through to this year, and they echo the feedback the CEAB has heard from stakeholders in other venues in the past. As such, the recommendations made in this report can often be tied to on-going work and initiatives currently being directed to the CEAB.

Overall, according to the AinA Committee analysis, the results indicate that stakeholders who participated in the surveys have strong confidence in the accreditation system. While there are systematic improvements being made to the system regularly, the results of this year’s surveys indicate that training and clarity in stakeholder roles are areas that need attention. Moreover, Engineers Canada is currently exploring [the Future of Engineering Accreditation](#) as part of its 2022-2024 strategic plan, and the AinA Committee feels this work could inform some of those discussions, particularly in regard to the strong confidence stakeholders have in the accreditation system.

The data collection cycle was launched in June 2022 and concluded in April 2023. The following groups were invited to complete feedback forms (sample forms are included as Appendix A of this report):

- Twenty-one HEIs, representing seventy-five programs, that received an accreditation decision in June 2022,
- All provincial/territorial engineering regulators,
- Twenty-three HEIs, representing 79 programs that received an accreditation visit in the 2022/2023 cycle,
- 2022/2023 visit cycle visiting team members (visiting team chairs, visiting team vice-chairs, program visitors, and general visitors), and
- Student leadership at institutions that received visits in the 2022/2023 cycle.

### **How to read the Accountability in Accreditation 2023 Summary Report**

The 2023 Report is divided into two parts:

1. The Accountability in Accreditation 2023 Summary Report: This document contains the AinA Committee's summary of findings of stakeholder surveys, and its recommendations for specific measures.
2. The Accountability in Accreditation 2023 Report: This Excel document contains a quantitative analysis of the findings of the stakeholder survey. The brief dashboard is provided (upon request) to all stakeholders as an Excel document to be read in conjunction with this report. The full dashboard is available to CEAB members.

The AinA Committee recommends that readers begin with the Summary Report and use the Excel document to augment their reading of the information provided in the analysis.

There are several considerations the AinA Committee would like readers to keep in mind while reviewing the 2023 findings:

- As stakeholders monitor progress via the AinA reports they should be aware of the timescale required for changes within the accreditation system. Changes made to accreditation criteria/policy/procedures will likely not impact stakeholders for at least three to five years.
- Initial thresholds for risk/concerning/achieving ratings were set to be deliberately sensitive, and alterations may be required in the future. The AinA Committee is not recommending changes to the thresholds at this time but will review the thresholds in 2024/2025. Moreover, due to the sensitivity of the thresholds, one respondent was sometimes sufficient to move an indicator into a concerning/risk category.
  - For example, one program reviewer (of 44) indicated that they felt the timelines for the accreditation process provided by the CEAB were not clear. Further, one program visitor indicated they only partially felt the timelines for the accreditation process provided by the CEAB were clear. According to the thresholds, this result is considered at risk, even though 42 of the surveyed individuals (or 96%) indicated that they felt the timelines were clear. (5.A.5.1a)
- A new methodology has been introduced to analyze the data for measures 3.7a, 3.7b, 5.5a, 5.5b, 5.6 and 6.3a. These measures are 'matrix' measures, in which various points of data are combined into a single finding. Previously, each stakeholder group has been considered individually to produce a finding. The methodology has been updated in this report to reflect an overall average, rather than an individual average.

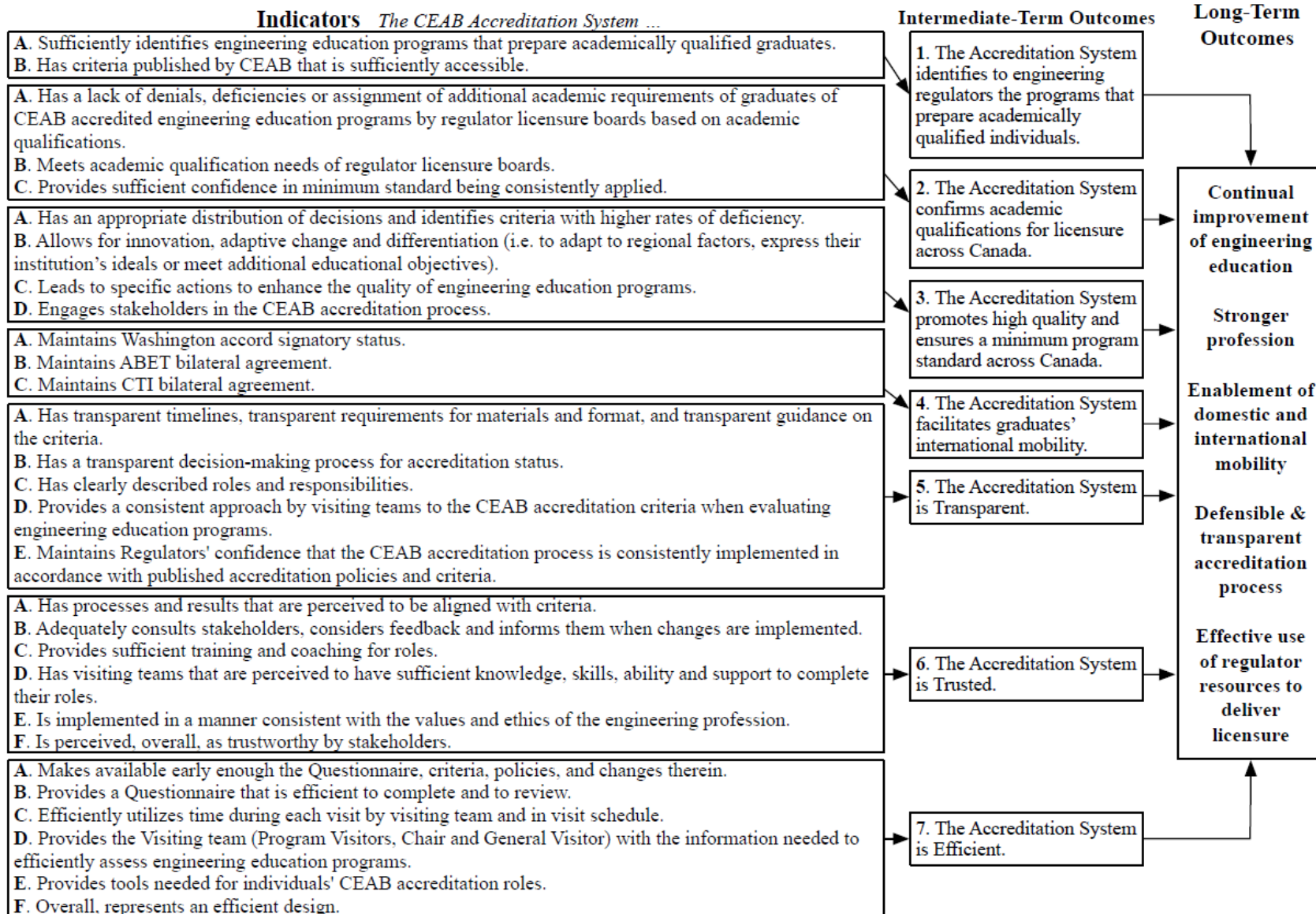
- A limited number of regulators responded to the survey in 2023, but because the data provided would not identify the respondents, their responses were included in the report. However, in keeping with the established methodology, and because fewer than five responses were received from HEIs post-decision, that data set was excluded from this report.

### **Next Steps**

With regards to next steps, the AinA Committee has identified to the Engineers Canada Board, the CEAB, the Policies and Procedures (P&P) Committee, the CEAB Training Documentation and Resources Working Group, and the CEAB Secretariat staff where follow-up should be considered to respond to the findings of the report. All five groups will review the findings of the report and incorporate necessary initiatives into their respective workplans for the coming year(s).

Data collection for the 2024 report began in June 2023 and will continue through April of 2024. The AinA Committee will meet later in 2023 and 2024 to discuss the strengths and opportunities for improvement to the AinA program, to discuss how best to use the qualitative data collected via the surveys, and to decide on any adjustments that need to be made for deployment in the 2025 data-collection cycle.

# Program Logic Model for Engineers Canada Accreditation System



A program logic model (PLM), as presented above, is a graphical depiction of the connections between the activities and desired short-term and long-term outcomes of a program or service. PLM's identify plausible "chains" of causes and effects and usually include:

- the inputs required by the program (e.g. staff time)
- the expected immediate outputs arising from the program (e.g. documents produced)
- the desired outcomes (e.g. a trusted accreditation system)
- the related indicators (e.g. stakeholders are adequately consulted on proposed changes).

PLM's are often used in evaluation to demonstrate the underlying logic of a program and what evidence will be used to show achievement of desired outcomes. A PLM can also be used in a diagnostic capacity to identify where a program or service is not functioning optimally and to suggest options for improvement.

The PLM designed for the Engineers Canada accreditation system shows the connections between the accreditation inputs (resources, activities) and outputs, as well as the indicators associated with the seven key outcomes. ([The full PLM can be viewed on the website here](#); the PLM presented here is a truncated version, showing only the indicators and outcomes related to the findings of this report.) While the dashboard includes colour-coding of the indicators and metrics to help the reader identify areas of risk and concern, and areas that are achieving results as expected, the AinA Committee has decided to exclude a colour-coding of the PLM's indicators in this year's report. The Committee feels it is too premature in the reporting cycle to include this information, but it will be provided in future iterations of the report.

## Trends

The AinA Committee would like to provide comments on the following trends identified in this year's data:

### *Training*

The results of several measures indicate the need for improved elements in the CEAB's training program, specifically the need to improved training materials which speak to important underpinnings of the accreditation program (such as the minimum path and the audit-nature of a visit), the importance of stakeholder engagement in accreditation processes, the role(s) of stakeholders in the accreditation system, and how the criteria are understood and assessed. The CEAB Training Documentation and Resources Working Group was struck in 2021 to address some of these issues, among others, and the results of that work are beginning to be implemented.

### *Stakeholder engagement*

Respondents expressed differing views with respect to levels of stakeholder engagement in the accreditation process. The roles and responsibilities of the various participants in the accreditation process need to be better understood by all stakeholders in the accreditation system. This is especially the case for program visitors and general visitors. In addition, the roles and responsibilities of the Engineers Canada Board are not well understood by all participants.



### *Communications*

The data identified several areas where stronger communication materials are required on the following:

- Access to information and materials,
- The scope and benefits of accreditation,
- The CEAB decision-making process,
- The roles and responsibilities of stakeholders in the accreditation system, and
- General clarification of documents and expectations.

### *Messaging for accreditation system stakeholders to clarify intents and purposes*

The feedback provided by representatives from HEIs and members of visiting teams supports what the members of the Committee have heard in other venues which is that there are issues of efficiency with the current system. The members of the AinA Committee note that the CEAB has a number of on-going initiatives that are intended to improve the efficiency of the accreditation system (such as the implementation of a web-based accreditation data management system: Tandem, revised required visit materials, and training and documentation improvements are specific examples), and the Engineers Canada Board has an ongoing initiative under Strategic Priority 1 (to investigate and validate the purpose and scope of accreditation) that may provide further insight and actions with respect to this issue.

## Conclusions and Recommendations

The AinA Committee believes that the results detailed in this report are accurate and reliable given that the qualitative and quantitative data is reflective of messaging that stakeholders have shared with the CEAB in the past. However, before taking definitive action on several indicators, the AinA Committee feels more information is required to understand root-causes of issues and, as such, the majority of indicators will continue to be monitored until trends can be identified and plans to address them can be developed.

Notwithstanding the need to collect additional information, and because of the consistent messaging received from stakeholders to date, there are several actions that the AinA Committee feels would be appropriate to take at this time:

- It is recommended that the CEAB identify the issue of lack of student access to the CEAB accreditation criteria to the CFES and ask them how to improve this measure. (It is noted, however, that the percentage of respondents who indicated they had sufficient access to the CEAB criteria has improved over last year.) (Measure 1.B.1.4)
- Due to the low rate of participation by HEI post-decision respondents, it is recommended that the CEAB Secretariat explore strategies on how to increase response rates. (Measures 3.B.3.3, 3.B.3.5, 5.B.5.4a, 5.D.5.6, 6.A.6.2, 6.B.6.3a, 6.E.6.8, 6.F.6.9, 7.E.7.10b, and 7.F.7.11)
- It is recommended that the AinA Committee undertake a meta-analysis of the survey comments in 2024/2025 to better understand the perspectives of stakeholders on the opportunities that students have to provide feedback on the accreditation process. (Measure 3.D.3.6a)
- It is recommended that training be provided to HEIs to stress the importance of senior administration and external stakeholder involvement in the program(s) and accreditation process. Monitor closely as engagement of stakeholders is crucial to the CEAB accreditation system. (Measure 3.D.3.7a)

- It is recommended that the CEAB Secretariate review the materials available to HEIs to clearly describe the decision-making process. It is also recommended that the CEAB share the findings of the Accountability in Accreditation 2023 Report with members of the CEAB Training Documentation and Resources Working Group and flag the issue for their consideration. (Measures 5.B.5.4a and 5.B.5.4b)
- It is noted that the General Visitors appear to be lacking knowledge about the various roles of stakeholders in the accreditation system. As such, it is recommended that the P&P develop a "roles and responsibilities" guide that includes briefing notes/flow charts and training material to describe each stakeholders' role in the accreditation process, and that this document be used for all future training considerations. (Measure 5.C.5.5.a)
- It is recommended that the regulators consult with each other to share best practices around the appointment of General Visitors to visiting teams. It is noted that OIQ's process appears to be strong as General Visitors are appointed from among regulator staff. (Measure 5.C.5.5.a)
- It is recommended that the P&P "roles and responsibilities" guide include briefing notes/flow charts and training material to describe each stakeholders' role in the accreditation process. (Measure 5.C.5.5.b)
- Various respondents across the stakeholder groups noted that the CEAB accreditation process did not present an efficient design, where the time (and resources) that were invested in it were worthwhile (i.e. returned value). The AinA Committee will continue monitoring this metric. The CEAB has a number of on-going initiatives that are intended to improve the efficiency of the accreditation system (such as the implementation of a web-based accreditation data management system: Tandem, revised required visit materials, and training and documentation improvements are specific examples), and the Engineers Canada Board has an ongoing initiative under Strategic Priority 1 (to investigate and validate the purpose and scope of accreditation) that may provide further insight and actions with respect to this metric. (From Open Questions 1, 2 and 3.)

Members of the AinA Committee would like to thank the stakeholders who participated in this round of data collection. The Committee looks forward to working together to further refine the operations of the accreditation system.

## Appendix A – Sample Feedback Forms

Feedback forms are distributed to stakeholders at specific times during the accreditation cycle. For a sample of the feedback forms, please visit the Engineers Canada website here:

- Regulators ([Sample survey](#))
- Visiting team members (each visitor receives a role-specific set of questions) ([Sample survey-team chair](#) [Sample survey-team vice-chair](#) [Sample survey-general visitor](#) [Sample survey-program visitor](#))
- CEAB Members ([Sample survey](#))
- Engineers Canada Board members ([Sample survey](#))
- Engineers Canada staff ([Sample survey](#))
- Institutions' deans or other officials (both after a visit and after a decision) ([Sample survey-post visit](#) [Sample survey-post decision](#))
- Student leadership at visited institutions ([Sample survey](#))

The data collected from these surveys is non-identifiable, except by the respondent's role, and provides valuable insight into the working of the accreditation system and how it may be improved.