**Board Member Participants**

Officers

President: Manual Solanet, Argentina (ANI)

President-Elect: Pascal Viginier, France (NATF)

Past President: Oh-Kyong Kwon, Korea (NAEK)

Secretary/Treasurer: Ruth David, US (NAE)

Directors (2020-2021)

Hideaki Koizumi, Japan (EAJ) Jose Albarran, Mexico (AIM) - ABSENT

David Thomlinson, UK (RAEng) Peter Mascher, Canada (CAE)

Directors (2021-2022)

Rita Hofmann-Sievert, Switzerland (SATW) Nasim Khan, Pakistan (PAE)

Elisabeth Monard, Belgium (BACAS) Ulrich Wagner, Germany (acatech)

**Other Participants**

Diana Xu, Germany (acatech) Elin Elliot, Sweden (IVA)

Vladimir Androcec, Croatia (HATZ) Narai Kim, Korea (NAEK)

Inkyu Lee, Korea (NAEK) Bob Pullen, South Africa (SAAE)

Bruno Revellin-Falcoz, France (NATF) Kylie Walker, Australia (ATSE)

Yves Bamberger, France (NATF) Jesse Zhu, Canada (CAE)

Hugh Bradlow, Australia (ATSE)

**Welcome and Introductions**

President Solanet opened the meeting at 0830 ART by welcoming all participants and providing a brief description of the events to follow throughout the week.

1. **Action**: Approval of Agenda Ruth David

The meeting agenda was approved as presented.

1. **Action**: Approval of Board Minutes of 12 October 2020 Ruth David

The minutes from 12 October 2020 were approved as presented.

1. **Report of the Secretary/Treasurer** Ruth David
2. **Information:** 2020 Financial Audit Report

The Treasurer reported that the 2020 Financial Audit had been completed with no issues identified by the Audit Committee. A copy of the Financial Summary, signed by Audit Committee Chair David Thomlinson was provided in the board materials.

1. **Information:** 2021 Financial Status

An update on year-to-date financial status was provided by the Treasurer, who noted that projected expenses were well below budget due to the lack of travel. It also was noted that the CAETS website had been moved to a managed services site to provide additional security and back-up support at a discounted cost of $140 per year due to CAETS nonprofit status. Previously the website had operated under a shared hosting agreement at no cost to CAETS.

1. **Action:** Approval of 2022 Operating Budget

The Treasurer presented the proposed 2022 Operating Budget, noting that projected expenses were less than projected dues receipts in spite of the expectation that travel expenses would resume. The Treasurer noted that in future years CAETS will likely generate surplus funds annually that could be used to support strategy implementation. The budget was approved as presented.

1. **Information:** Options for international funds transfers

The Treasurer noted that, at member request, a number of alternatives for international funds transfers had been investigated. Findings indicated that options available either lacked full coverage for all CAETS members or would be significantly more costly to implement.

1. **Information:** 2022 Rotation Schedule

The CAETS Rotation Schedule for 2022 was provided in the board materials. The Secretary noted that nominees for the 2023 cycle would be solicited from Finland (President-Elect), Netherlands, Hungary, Spain, and Serbia.

1. **Discussion**: Communications Committee

Communications Committee Chair Hugh Bradlow reported that the committee met (virtually) on 17 September 2021 and identified establishment of the annual cycle for the CAETS Communications Prizes as a priority. He noted that the Committee recommended 2 changes to the rules: 1) 5 minute maximum for the video; and 2) allowable re-entry of submissions – twice for High Potential Innovations and once for Engineering Success Stories. In an effort to attract more entries in future years he indicated that ATSE would provide a marketing and communications kit to participating academies to support local entries. The committee also opted to encourage entries generated on social media platforms as these are low cost and tailored to be engaging to a public audience. Additionally, the committee encourages member academies to seek sponsorship from government or business to help defray program costs. The committee also endorsed the Operating Procedure for the Communications Committee as described in the Operating Guidelines, and agreed that ATSE would provide a Style Guide for CAETS Statements.

1. **Discussion**: Energy

Energy Chair Yves Bamberger focused on “how to maximize CAETS output” in his presentation to the Board and recommended development of communities/networks of academy fellows in addition to the traditional reports, events and recommendations (statements). This concept might provide more sustainable communications channels among member academies, benefiting both the individual academies and the CAETS collective. Such communities could be formed around topics selected for working groups as a start, but might extend to other areas as well. The Secretary/ Treasurer agreed to formulate options that could be included in a future version of the CAETS Operating Guidelines with Board endorsement.

1. **Discussion**: Engineering Education

Engineering Education Chair Jesse Zhu summarized areas of discussion during the recent meeting of the working group, including inviting presentations from member academies to inform the discussion, seeking broader consultation from member academies, and drafting a charter for the working group in accordance with the Operating Guidelines.

1. **Discussion**: Sustainable Development Goals

SDG Chair David Thomlinson noted that the working group met three times in 2021 to facilitate exchange between member academies; meetings featured presentations from member academies and discussions on deliverables. A survey was conducted I June 2021 to reveal CAETS academies’ experiences when working with governments and political bodies on sustainability issues. He also noted that the working group intended to develop a CAETS-level statement to promote the role of engineering in achieving the SDGs, targeting release to coincide with COP26. Finally, he noted that copies of presentations given by member academies in 2021, a summary of the survey findings, and additional resources relating to academies’ own initiatives are available to all via the CAETS website.

1. **Discussion:** Diversity and Inclusion

D&I Chair David Thomlinson noted that the working group met early in September and held a thematic discussion focusing on engaging difficult to reach sectors and groups on D&I. Topics included an ATSE SME Initiative on improving D&I in small mainly tech SMEs; a collaboration with Lewis Hamilton on improving representation of Black engineers in the UK motorsports industry; ATSE Reconciliation Action Plan to embed indigenous perspectives into all ATSE work; and the IVA Job Leap program which helps qualified engineers, scientists, architects and economists coming to Sweden as refugees, immigrants or spouses enter the job market through 4-month internships.

1. **Discussion**: CAETS Strategy and Operating Guidelines Tuula Teeri/Ruth David

IVA President Tuula Teeri, who led the CAETS Strategy Development effort introduced the discussion, observing that while the original intent was to have a draft strategy in 2020, progress was impacted significantly by the COVID pandemic. She also noted that the Board had been provided an opportunity to review and provide feedback on drafts prior to dissemination to the Council in June, and that the Council would vote on proposed amendments to the CAETS Bylaws as well as determine whether to endorse for implementation the Preliminary Operating Guidelines.

a. **Action**: Recommendation to Council

The Secretary noted that one member academy had suggested inclusion of “and see” in the recommended amendment to Article 2. Section 5. to read: “Both annual meetings and special meetings of the Council may be held via teleconference or video conference provided all persons can hear ***and see*** each other and the means exist to attribute member votes.” The Board agreed not to add that language as limited bandwidth may preclude use of video. The Bylaws Amendments distributed to the Council were recommended for adoption by the Council with no changes.

Several updates were suggested to the Preliminary Operating Guidelines. In Section 1. Annual Meeting Host, the Board agreed with addition of a sentence in the introductory paragraph: *“In order to leverage the international character of CAETS, the host academy should select a theme for the technical session that addresses global or regional challenges and opportunities and recruit a broad spectrum of speakers from relevant countries and member academies.”*  In Section 5. Working Groups, Item f, Meetings, due to concerns about the burden of organizing meetings, the Board agreed to change the language to “Virtual meetings every 3-4 months are encouraged as a means to maintain engagement and momentum.” In Section 9. Secretariat, Item f, sub-item v, a sentence was added to formalize calls for featured content for the website: “Additionally, a semi-annual call for reports and publications will be initiated.”

1. **Discussion:** CAETS Dues Structure Ruth David

The Secretary noted that the CAETS Strategy included a periodic review (every 5 years) of the CAETS dues structure to ensure equity across members and facilitate member development. She also observed that the overall structure had not been reviewed since the 3-tier format was adopted in 2005. The Board was assigned responsibility for the review process and is to formulate a recommendation for consideration by the Council during the 2022 Annual Meeting.

**Action**: Initiate Ad Hoc Review

After discussion, the Board appointed an ad hoc group to include one founding member academy representative (Sweden), who will chair the review process, together with four additional members representing the primary 3 tiers in the existing structure (United Kingdom, Korea, Argentina, and South Africa).

1. Information: IVA Working Group on Cyber Threats

Gosta Lemne, IVA, introduced IVA Fellow Pontus Johnson, who provided an overview of activities by an IVA working group on the topic of “Addressing Cyber Threats to Nuclear Weapons Systems.” The group made a technical assessment of the threats, based on openly available information, and will use it to inform and educate decision makers as well as the science and technology communities. CAETS member academies were invited to join this activity to explore possible measures that might be taken to reduce the risk that internet and other international networks are used for cyber attacks on nuclear weapon systems. It was noted that this was an IVA-sponsored activity.

1. New Business

CAETS President Solanet invited identification of new business items by participating Board members. Hearing none, the meeting was adjourned at 1115 ART.