

CESAER

The strong and united voice of universities
of science and technology in Europe

€20,000 CESAER Student Challenge 2023

Call for submissions and guide

Executive Summary

The 57 Universities of Science and Technology united in CESAER are launching today the CESAER Student Challenge 2023.

The theme of this year's challenge is **Contribution of Universities of Science and Technology to Sustainability**, and submissions will be evaluated along three dimensions: (i) Novelty, (ii) Scientific and Technological Excellence, (iii) Sustainability and Impact.

This challenge gives student-led teams from our Members the chance to design and showcase their ideas on how science and technology contribute to sustainability. The submission will consist of an abstract and a short video with a deadline for submission on 31 July 2023.

The three best videos will be shown at our CESAER Annual Meetings (CAM) at *Universidad Politécnica de Madrid* in October 2023, and the leaders of the respective teams will be our invited guests to join the CAM with travel and accommodation at our expense. The winning team will win a cash prize of up to €20,000.

Call for submissions

Are you, or do you know, a student or PhD candidate with a brilliant idea for how science and technology can support our society's efforts towards sustainability?

Then our CESAER Student Challenge 2023 is your opportunity to enter a team and benefit from unrivalled access and support from over 50 leading universities of science and technology across Europe. The three best videos will be shown at our CESAER Annual Meetings at *Universidad Politécnica de Madrid* in October 2023, and the team leaders of the respective teams will be our guests in Madrid with travel and accommodation at our expense.

In addition to a cash prize of up to €20,000, our association will provide the winning team with a platform for leaders and experts from our over 50 leading universities of science & technology to further advance their idea.

The students from our [Members](#) are encouraged to motivate inter-institutional, inter- and transdisciplinary and vertically integrated teams to enter this competition, for example, formed through and supported by their [European University Alliance](#).

We are looking for novel ideas along with scientific & technological excellence and sustainability & impact. Diversity in teams, ideas and how you approach the competition is highly encouraged!

Teams are invited to submit an abstract of their idea and a creative video showcasing their idea for a larger public, through a form that will be linked on our [webpage](#).

The [webpage](#) contains all the information that Members and students need during the application process. All materials can be downloaded into a PDF format. We encourage Members to forward the details of the competition to students and PhD candidates at their institution.

Timeline

- Teams are invited to work on their abstract and a video until 31 July 2023.
- In April or May 2023 (date to be defined), an Innovation Workshop will be organised for all interested teams.
- The deadline for the submission of abstracts and videos is 31 July 2023.
- Independent experts will evaluate the abstracts until 31 August 2023
- At the beginning of September 2023, the three best teams will be contacted and their leaders will be invited to CESAER Annual Meetings in Madrid.
- The winner will be announced among the three best teams and the €20,000 cash prize will be awarded on 19 October 2023 during CESAER Annual Meetings at Universidad Politécnica de Madrid.

Guidelines for submissions

Teams will be invited to submit their abstract (maximum 2200 words in total) and a video (maximum 4 minutes) through the form which will be linked on the [webpage](#).

Idea described in the submission

S&T teams are expected to present a novel and exciting idea related to sustainability and aimed at providing solutions to local and global challenges. The idea should emerge from student-led teams and address well-identified scientific, technological and societal needs and goals. We expect any testimony of the proof of the scientific concept and technical feasibility of the idea, and an analysis of the potential user communities (both in science and society). As sustainability is considered in its broader context as defined by the [UN SDG](#), the design must include an analysis of the relation to the UN SDG.

The abstract and video form one submission. The experts will evaluate them as a whole according to the respective criteria. While the teams are obliged to use the abstract form provided, creativity in the format and presentation is warmly welcome for the video.

Content required for the abstract

- Pitch of the idea (maximum 1000 words)
- How does the idea fulfil the criteria of novelty? (maximum 400 words)
- How does the idea fulfil the criteria of scientific and technological excellence? (maximum 400 words)
- How does the idea fulfil the criteria of sustainability and impact? (maximum 400 words)

In addition to the abstract, teams can optionally submit a PDF including additional charts, tables, figures, graphics, schemes or similar.

Eligibility criteria for abstracts

Submitted abstracts must meet the following criteria to be eligible to undergo evaluation:

- Abstracts must contain an explicit link between the idea and one or more of the [UN SDG](#).
- Abstracts must be in English.
- Abstracts must be submitted by 23:59 local time Brussels on 31 July 2023 along with the respective videos.
- The student-leader of the team must be a student enrolled as a bachelor student, a master's student or a PhD candidate at one of our [Members](#) at the date of submission of the abstract.
- Abstracts must be endorsed by the Institutional Liaison from the same institution as the student-leader, and each Institutional Liaison can endorse maximum one abstract.

There is no minimum or maximum team size and teams are encouraged to include students and staff from other [Members](#). We warmly encourage our Members to consider selecting and nominating teams constituted within a European University Alliance (students can check whether their university is part of an alliance [here](#) or on their university's website)

Eligibility criteria for videos

Submitted videos must meet the following criteria to be eligible to undergo evaluation:

- Videos must be in English. It is allowed to have either audio or caption in another language, as long as either audio or caption in English is provided.
- Videos should last a maximum of 4 minutes.
- Videos must be submitted by 23:59 local time Brussels on 31 July 2023, along with the respective abstracts.

Videos give students an opportunity to be creative and showcase their idea in an exciting way (e.g. 'elevator pitch'-style). The teams are encouraged to develop their videos to target a university-educated audience, without specialist knowledge in the area of the idea.

Evaluation

Submission

A submission will consist of two parts: an abstract and a video. The evaluation will be conducted on both parts as a whole (i.e. they are not evaluated separately except for the eligibility check).

Eligibility check

The Secretariat will conduct an eligibility check of all submissions, and the Co-Chair of Task Force Learning & Teaching, Justyna Szostak, will approve the eligibility check. Only submissions deemed eligible will be evaluated further.

Criteria

The submissions will be evaluated along three dimensions, i.e. (i) novelty of the idea, (ii) scientific and technological excellence, and (iii) sustainability and impact.

Novelty of the idea

- Originates from novel approaches to address scientific and technological questions and problems;
- Responds to the needs of specific stakeholders and the abstract shows an understanding of their specific situation;
- Has never been publicly presented or displayed;
- Goes beyond the state of the art of the area.

Scientific and technological excellence of the idea

- Displays scientific and technological excellence and is described in relation to the state-of-the-art with suitable references;
- Is deemed feasible;
- Displays horizontal integration, i.e. inter- and, trans-disciplinary approach linking SSH with STEM (the more explicit and clear, the better).

Sustainability and impact of the idea

- Contributes to ecological, social and economic sustainability including an explicit link to one or several of the [UN SDG](#);
- Includes suitable preliminary indicators to estimate impact and contribution to sustainability;
- Involves our [Members](#) (the more, the better);
- Analyses and engages relevant stakeholders.

Examples from the previous edition

The following examples are provided for inspiration.

- [Blockchain SPV](#) (Led by Olakunle Alao from UCD)
- [Blue Engineering](#) (Led by from Anton Schaefer TU Berlin)
- [Hyperloop](#) (Led by Leonhard Döring from KIT)
- [Second hand mobility](#) (Led by Carlo Schmid from TU Berlin)
- [Space Sustainability](#) (Led by Matteo Manzi from Strathclyde)

Prospective participants are invited to consider that some aspects of the competition have changed since the previous edition. You may therefore wish to study the guidelines above carefully before preparing your submission.

What is CESAER?

<https://www.cesaer.org/>

Mission

Rooted in advanced engineering education and research, CESAER is an international association of leading specialised and comprehensive universities with a strong science and technology profile that advocate, learn from each other and inspire debates. Our Members champion excellence in higher education, training, research and innovation, contribute to knowledge societies for a sustainable future and deliver significant scientific, economic, social and societal impact.

Aims

The aims of the association are to:

1. Advocate Members' interests by aiding policymakers and funders shaping European strategies, policies and programmes for research, education, innovation and university leadership;
2. Learn from each other by sharing and spreading intelligence, knowledge and best practice in research, education, innovation and university leadership;
3. Safeguard sustainable funding by advocating and shaping sustainable competitive and non-competitive funding streams to our Members from different sources at various levels;
4. Lead debate on key issues by advancing reflection and understanding of the roles of science and technology in knowledge societies for a sustainable future;
5. Amplify the Members' and Association's strengths by supporting Members in displaying their excellence and distinctiveness in Europe and beyond.

Activities

The aims of the association will be achieved by the following activities:

- Monitor European strategies, policies and programmes and inform Members;
- Undertake consultations and surveys amongst Members and represent and advocate their collective interests;
- Publish inputs, positions, white papers and press releases;
- Liaise with European institutions and other stakeholders;
- Share experiences, identify best practice and provide guidance;
- Establish and empower committees, task forces and workgroups;
- Organise events, such as meetings, workshops and conferences;
- Support Members' communication and outreach activities in Europe and beyond;
- Engage with Members and encourage active participation in the work of the Association.