



Shape knowledge societies
in Europe and beyond
for a sustainable future

Annual Report
2021

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Together with over 1,400 volunteers and leaders from our [Members](#) we explored and conceptualised the contribution of universities of Science and Technology (S&T) to ecological, economic and social sustainability. Sustainability is high on the European and global agendas and research, education and innovation play vital roles in the systemic transformations needed to attain the United Nations Sustainable Development Goals (UN SDG). Our association thus forged a strategic alliance with the International Sustainable Campus Network (ISCN), Science Europe and the [University of Strathclyde](#) and co-organised a [Symposium 'Science for Net-Zero Transition'](#) in the context of the 2021 United Nations Climate Change Conference (COP26). As an outcome of this event, the four partners launched a [joint call for collective global action](#) to help tackle climate change.

Linking the Social Sciences and Humanities (SSH) with Science, Technology, Engineering and Mathematics (STEM) is crucial to contribute to sustainability effectively. Together with the Network of Universities from the Capitals of Europe (UNICA) we published an [open letter](#) with recommendations on effective funding for inter- and transdisciplinary research.

In collaboration with the Royal Academy of Engineering (RAEng) we also focused on key (emerging and innovative) technologies for the 21st century and their impact on society, through the hosting of a joint [conference](#) and a published joint statement '[Key Technologies Shaping the Future: Foresight and strategic recommendations](#)'.

Our association celebrated its [thirtieth anniversary year](#) from October 2020 to October 2021 and holding a student-led [Competition Best Idea 2021](#) constituted the grande finale of these celebrations. Nineteen teams led by a student enrolled at our Members designed ideas on the contribution of S&T to sustainability by linking SSH with STEM and with emerging technologies. The [Second Hand Mobility team](#) from Technische Universität Berlin led by Carlo Schmidt was [announced as a winner](#). The competition was a big success and increased student engagement and involvement in our association.

Over the past year, our network continued to be an active and constructive partner in the shaping of the European Research Area (ERA), the European Education Area (EEA) and the European Strategy for Universities.

Flexibility and inventiveness guided us to carry out our work plan together in these challenging times. Over the past two years, we have grown from strength to strength, and we thank the European institutions and our partners for advancing together.



Rik Van de Walle

President of CESAER
Rector of Ghent University



2021 not only marked the end of our biennial working cycle from 2020 to 2021 and term of office of our Presidency and Board, but also the conclusive follow up on the decision of the twenty-seventh ordinary General Assembly in Leuven in October 2015 to establish CESAER as 'the strong and united voice of universities of S&T in Europe'. The thirty-fourth ordinary General Assembly on 3 February thus reviewed the strategic vision and direction of our association 2025 and advanced our adherence to six principles guiding our work, i.e. (i) defend scientific integrity, academic freedom and institutional autonomy; (ii) safeguard equality, diversity and inclusion; (iii) encourage cooperation amongst Members; (iv) foster strategic partnerships; (v) balance 'as open as possible and as closed as necessary'; and (vi) adopt a global perspective.

Importantly, the thirty-fifth extraordinary General Assembly on 15 October amended our [Articles of Association](#) to conclude several waves of reforms and transformations of our association since 2015. It also [re-elected](#) Rik Van de Walle for a second term as our President and [elected](#) seven Directors 2022-2025. Our Board on 10 December [elected](#) Mihnea Costoiu as Vice President and Jennifer Herek as Vice President & Treasurer. The new leadership of our network including the (Co-) Chairs of [seven task forces](#) co-designed and initiated our next biennial working cycle from 2022 to 2023.

On 1 January 2022, we warmly [\(re-\) welcomed](#) five (new) Members to our association and network, i.e. (i) Institut Polytechnique de Paris, (ii) National Technical University of Athens, (iii) Sapienza University of Rome, (iv) Slovak University of Technology in Bratislava and (v) University of Southampton.

In the course of 2021 and the beginning of 2022 the Secretariat based at KU Leuven was reinforced with Mattias Björnmalm [appointed](#) as Deputy Secretary General, Indrė Antanavičiūtė switching to Office Manager, Louise Drogoul [promoted](#) to Advisor for Innovation & Sustainability, Lloyd Anthony Huitson [appointed](#) as Senior Advisor for Learning & Teaching and Gary Paterson [appointed](#) as Communication & Outreach Officer.

2021 thus was conclusive in establishing our network as an international association of leading specialised and comprehensive universities of S&T that learn from each other, advocate 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.

All our Members excel in engineering and deliver key political and societal strategies and transformations to help tackle the tremendous local and global challenges of our times. Together with our Members, we look forward to continuing our active and constructive contributions and engagements at the regional, national, European and global levels.

David Bohmert

Secretary General



In 2021,
we had **53 Members**
from **26 countries**
in **Europe and beyond** which:



Over **1,400** staff from our Members
were involved in our association as
volunteers and leaders.



Educated over
1.1 million students,
of which over
200,000 are international;
Employed over
96,000 academic staff.

Staff from our Members contributed with
26 (co-) authorships of publications, **3**
editorials and **10 op-ed articles**.
In the last year we published
10 positions and open letters.



Under Horizon 2020, our Members have secured a total of:

1,150 grants from the European
Research Council ([ERC](#));
2,499 grants from Marie
Skłodowska-Curie Actions ([MSCA](#));



9,464 Collaborative projects
with a collective combined
value of over **€5 billion**.



Mission

Our mission is structured along five aims:

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

We carry out the following activities to achieve our five aims:

- 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.

We provide the following benefits and added value to our Members:

- A strong and united voice of universities of science and technology in Europe, taking into account a range of needs and positions;
- Collective and acknowledged representation, connections and advocacy on key issues such as the European Research, Education and Innovation Areas and the EU funding programmes to senior policymakers, politicians and funders at the heart of European decision-making;
- Privileged access to and exchange with leaders, experts and volunteers from leading universities of science and technology;
- Amplified efforts and impact at regional and national levels through international best practice by the collective of Members;
- Support to positioning leaders and experts of Members at the European level;
- Access to intelligence and resources in the Extranet exclusively for Members;
- Exclusive access to dedicated trainings such as CESAER Professional Week;
- Stewardship and professional support by the Secretariat;
- Sharing of best practice and tailored benchmarking data between members from various data sources and surveys;
- Being part of a network of peer leading research-intensive universities of science and technology fostering and multiplying cooperation, including learning and teaching, excellent research and innovation, and infrastructures;
- Attractive range and programme of events such as CESAER Annual Meetings and workshops every year;
- Opportunities to set agendas, inspire and pave the way for developments directed towards shaping knowledge societies for a sustainable future;
- Collective safeguarding of scientific integrity, academic freedom and institutional autonomy;
- Inclusive and respectful working environment that celebrates equality and diversity;
- Participation in a range of bodies that strengthen Members' expertise in learning and teaching, excellent research and innovation, leadership, and strategic influence.



In 2021, we united the following 53 Members from 26 countries in Europe and beyond:

- 1. Aalborg University (DENMARK)
- 2. Aalto University (FINLAND)
- 3. Brno University of Technology (CZECH REPUBLIC)
- 4. Budapest University of Technology and Economics (HUNGARY)
- 5. Chalmers University of Technology (SWEDEN)
- 6. Czech Technical University in Prague (CZECH REPUBLIC)
- 7. Delft University of Technology (NETHERLANDS)

- 8. Ecole Polytechnique Fédérale de Lausanne (SWITZERLAND)
- 9. ETH Zurich (SWITZERLAND)
- 10. Gdańsk University of Technology (POLAND)
- 11. Ghent University (BELGIUM)
- 12. Graz University of Technology (AUSTRIA)
- 13. Institut National des Sciences Appliquées Lyon (FRANCE)
- 14. Instituto Superior Técnico (PORTUGAL)
- 15. Istanbul Technical University (TURKEY)

- 16. Karlsruhe Institute of Technology (GERMANY)
- 17. Kaunas University of Technology (LITHUANIA)
- 18. KTH Royal Institute of Technology (SWEDEN)
- 19. KU Leuven (BELGIUM)
- 20. Leibniz Universität Hannover (GERMANY)
- 21. Lund University (SWEDEN)
- 22. Norwegian University of Science and Technology (NORWAY)
- 23. ParisTech (FRANCE)
- 24. Politecnico di Milano (ITALY)
- 25. Politecnico di Torino (ITALY)
- 26. Poznan University of Technology (POLAND)
- 27. Riga Technical University (LATVIA)
- 28. RWTH Aachen University (GERMANY)
- 29. Tallinn University of Technology (ESTONIA)
- 30. Technion - Israel Institute of Technology (ISRAEL)
- 31. Technische Universität Berlin (GERMANY)
- 32. Technische Universität Braunschweig (GERMANY)
- 33. Technische Universität Darmstadt (GERMANY)
- 34. Technische Universität Dresden (GERMANY)

- 35. Tomsk Polytechnic University (RUSSIA)
- 36. TU Wien (AUSTRIA)
- 37. Universidad Politécnica de Madrid (SPAIN)
- 38. Universidade NOVA de Lisboa (PORTUGAL)
- 39. Universitat Politècnica de Catalunya (SPAIN)
- 40. Universitat Politècnica de València (SPAIN)
- 41. Université Catholique de Louvain (BELGIUM)
- 42. Université Grenoble Alpes (FRANCE)
- 43. Université Paris-Saclay (FRANCE)
- 44. University College Dublin (IRELAND)
- 45. University of Belgrade (SERBIA)
- 46. University of Porto (PORTUGAL)
- 47. University of Sheffield (UNITED KINGDOM)
- 48. University of Strathclyde (UNITED KINGDOM)
- 49. University of Stuttgart (GERMANY)
- 50. University of Surrey (UNITED KINGDOM)
- 51. University of Twente (NETHERLANDS)
- 52. University POLITEHNICA of Bucharest (ROMANIA)
- 53. Warsaw University of Technology (POLAND)





Rik Van de Walle
President



Mihnea Costoiu
Vice President



Orla Feely
Vice President for Resources & Treasurer



Aalborg University

Henrik Pedersen
(Dean of Faculty of IT & Design)



Delft University of Technology

Karel Luyben
(Rector Magnificus Emeritus)



Instituto Superior Técnico

Maria de Fátima Montemor
(Vice-President for Research and International Affairs)



Karlsruhe Institute of Technology

Thomas Hirth
(Vice President for Innovation & International Affairs)



KTH Royal Institute of Technology

Mikael Östling
(Deputy President)



Tomsk University of Technology

Olga Mazurina
(Rector's Delegate for International Affairs)



Université Paris-Saclay

Marc Zolver
(Vice-President for International Affairs *CentraleSupélec*)



Politecnico di Torino

Roberto Zanino
(Rector's Delegate for European Relations)



University of Strathclyde

Tim Bedford
(Associate Principal Research & Knowledge Exchange)



Areas of work

In 2021, we worked in nine domains and deployed nine corresponding task forces, i.e. [Benchmark](#), [Competitive Funding](#), [Human Resources](#), [Infrastructures](#), [Innovation](#), [Key Technologies](#), [Learning & Teaching](#), [Link SSH with STEM](#) and [Open Science](#).



Benchmark

The key area of interest for the Task Force Benchmark was to better understand and influence the approaches and metrics used for ranking, benchmarking and assessing to enable fair and reasonable performance analysis, reflecting the strengths and challenges of our Members. The Task Force Benchmark provided a forum for deep and informed discussions about data, indicators, rankings and assessment systems. It engaged with ranking compilers, contributed to the development of next-generation metrics and facilitated evidence-based policymaking. Departing from its [white paper](#) 'Next Generation Metrics' (June 2020), the task force together with ISCN focused on how to optimise the measuring of the contribution of universities of S&T to sustainability. The task force also guided the analysis of our Members' performance and engagement levels - offering an annual view of trends through the Annual Member Monitor. This tool offers a view on our Members as a collective group - helping to identify the key messages to promote our association and also strengthen our impact on society.

Competitive Funding



The Task Force Competitive Funding supported our Members in participating in and shaping of European funding policies and programmes, with specific focus on Horizon Europe and Erasmus+. In addition, it provided insights and shared best practice concerning competitive funding from regional, national, European and international sources. The task force led our association's advocacy, notably in defending scientific integrity, academic freedom and institutional autonomy, and promoting sustainability in the broadest sense. The task force also acted as a vanguard for fostering strategic relationships with key partners especially in and around Brussels, including the European University Association (EUA), Science Europe, UNICA and the League of European Research Universities (LERU). It led the development of our association's positions '[Seize opportunities for digitalisation in education and training](#)' (November 2020), '[Towards a truly reinforced European Research Area](#)' (October 2020), '[Towards a dynamic European Education Area driven by excellence](#)' (October 2020), and '[Go beyond resilience to tackle local and global challenges](#)' (March 2021) as well as shaping the European Strategy for Universities and the full roll-out of the European Universities Initiative. It provided input on numerous topics ranging from to the Marie Skłodowska-Curie Actions Green Charter, the European Commission report 'Towards a 2030 vision on the future of universities in the field of R&I in Europe' to the EU guidelines for tackling R&I foreign interference. The task force also led a range of advocacy efforts, including (i) promoting third country participation to Horizon Europe and to the European Institute for Innovation & Technology (EIT) underlining the [vital importance of cooperation between EU and Switzerland for research and innovation](#) (June 2021), (ii) shaping the ERA including joint open letters on the [ERA Transition Forum](#) (April 2021) and [ERA governance](#) (October 2021), and (iii) [Recommendations on effective funding for inter- and transdisciplinary research](#) (December 2020).

Human Resources

The Task Force Human Resources (i) supported our Members in the implementation of the pledges from the '[Declaration on Equality, Diversity & Inclusion](#)', (ii) explored influences of digital transformation on the future of studying and work, and (iii) shared good practices of staff recruitment and promotion, especially in relation to open science. The task force provided dedicated support to our Members with the implementation of the [EDI pledges](#), including workshops and the EDI.Lab series. The task force contributed to the work on (i) training, incentives and evaluation of researchers, and (ii) review and update of Charter & Code under the Portuguese and Slovenian Presidencies of the Council of the EU and the European Research Area & Innovation Committee (ERAC).



Culture and Vision Workshop (top-down)



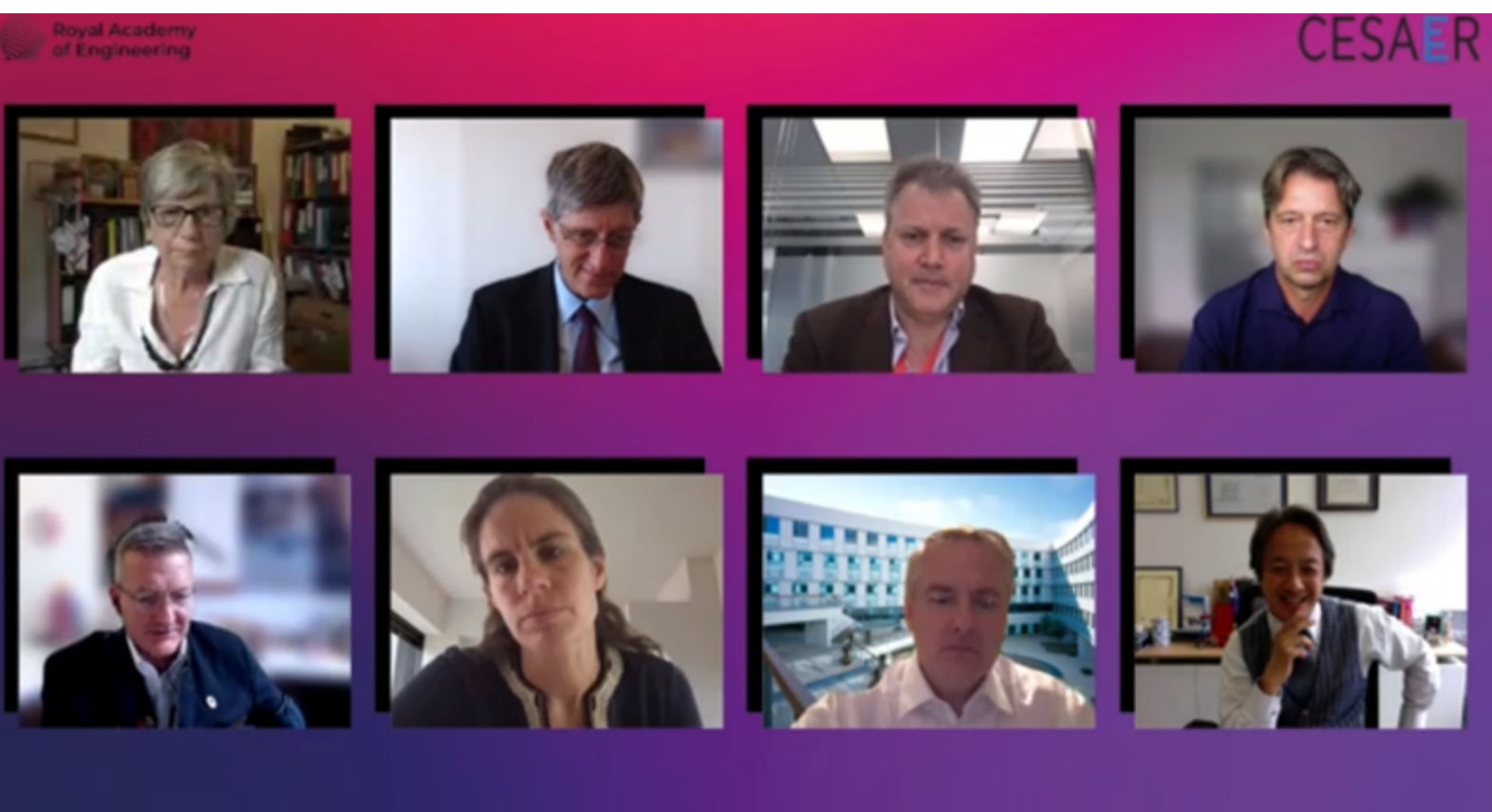
Infrastructures

Building upon its [white paper](#) 'Universities of Science and Technology (S&T) as engines of excellence, talent and innovation' (March 2019), the Task Force Infrastructures conceptualised and advanced its understanding of the management and operation of (university-related) infrastructures.' It also contributed to the evaluation of the European Research Infrastructure Consortium (ERIC) Regulation.

Innovation

The Task Force Innovation promoted 'disruptive innovation' and impact strategies for our [Members](#) and their contribution to knowledge societies for a sustainable future. It supported the development of sustainable regional innovation ecosystems for universities of S&T, and advocated shaping European innovation policies, strategies (especially towards the European institutions) and EU funding instruments such as the innovation pillar of Horizon Europe. Its key focus has been on increasing (i) dissemination and exploitation of scientific knowledge and technology, (ii) and cooperation with business, industry, public services, not-for-profit organisations and society at large. It has also promoted the evolution of 'traditional' knowledge and technology transfer between academic and non-academic partners in order to accelerate, safeguard and improve the implementation of solutions tackling local and global challenges in terms of ecological, economical, and societal sustainability. The task force continued to engage with key strategic European partners such as the European Association of Research and Technology Organisations (EARTO), the European Round Table for Industry (ERT) and Business Europe, our contribution to good practices for Research Data Management (RDM) to the ongoing work of the Task Force Openness of Science & Technology.

Key Technologies



We deployed a joint Task Force Key Technologies together with RAEng which took a broad and long-term perspective guided by the UN SDG centred on how universities in the long-term can best position themselves to contribute to sustainability. It organised a flagship online [conference](#) 'Key technologies shaping the future' and finalised a [conference statement](#) 'Key Technologies Shaping the Future: Foresight and strategic recommendations'. Strategic foresight related to key technologies is of increasing importance in our changing world, as described in the conference [speech by our President](#). The task force worked together with the National Academy of Engineering in the US. Our engagement with RAEng underlines our association's continued commitment to working closely with the UK, after the exit from the EU, to contribute to a "global community for making a difference to lives all over the world", [in the words](#) of the task force Chair, Max Lu.

Learning & Teaching

The Task Force Learning & Teaching led our advocacy in (European) higher education policy and led our contributions and the development of our positions on the European Education Area (EEA), the European Strategy for Universities and the New Digital Education Action Plan. The task force supported our Members in the European Universities Initiative, e.g. through a Symposium on Advancing European Universities under the Portuguese Presidency of the Council of the EU in June 2021 and a 'Dos and Don'ts for European Universities alliances'. The task force also exchanged views and best practice about how to provide research-based STEM education and training - particularly in absence of laboratory experience - under the Covid-19 pandemic.

Link SSH with STEM



Building on our [joint letter](#) 'Recommendations on effective funding for inter- and transdisciplinary research' (December 2020) with UNICA, the Task Force Link SSH with STEM advanced our understanding of intra- and interinstitutional approaches to linking SSH with STEM. It also paved the way for the enlargement of our strategic partnership with ScienceEurope and EUA which delivered three messages to the conference on the future of Europe, i.e. (i) [a call for interdisciplinary research](#), (ii) [support research organisations, researchers, and teachers working in interdisciplinary areas](#), and (iii) [suitable assessment to interdisciplinary research](#).

The Task Force Open Science promoted open science as a cornerstone of the UN SDG, including facilitating the full use and re-use of research findings and research data (e.g. rapid, wide, and open dissemination of research findings to guide the response to Covid-19). The task force strongly supported the working of the European Open Science Cloud (EOSC) Association of which our association is a [founding member](#), including Karel Luyben as the Co-Chair of the task force and the [President of the EOSC Association](#). The task force has also further strengthened its strategic partnership with ‘cOAlition S’ in the areas of open access and rights retention, and with key partner associations such as ScienceEurope and EUA, including through the publication of the joint statement ‘[All publishers must provide researchers with clarity and transparency on Open Access](#)’ (May 2021). The task force also led our advocacy to ensure that open science is fully recognised in modern research assessment practises, such as the ‘open science assembly on research assessment’ organised by the European Commission in March 2021. The task force organised a workshop (October 2021) on ‘Scientific data and technologies: as open as possible and as closed as necessary’ as part of the follow-up from our association to the highly successful event ‘[Openness and commercialisation: How the two can go together](#)’ in December 2020, which contributed to taking a broader view on supporting open science in light of recent developments at the European level including the topics of [foreign interference and knowledge safety](#).

The annual subscription in 2021 amounted to €12,000. The annual account for our fiscal year from 1 October 2020 to 30 September 2021 was:

TYPE OF COSTS	ACCOUNT 2020-2021 (TO THE NEAREST €1,000)
INTERNAL BODIES	46,000
SECRETARIAT	39,000
EVENTS	1,000
PROJECTS	0
ICT	10,000
ADMINISTRATION	2,000
SALARIES	458,000
TOTAL EXPENSES	574,000
TOTAL INCOME	624,000
TO RESERVE	50,000

The Secretariat ensures the execution and implementation of the decisions by the General Assembly, the Board and the Presidency and manages and supports the daily operation of the association. The Secretariat has six full-time equivalents supporting our over 1,400 volunteers and leaders.

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