

50 YEARS OF RESEARCH NETWORKS

What makes COST unique

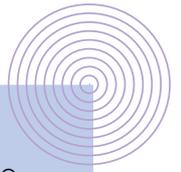
COST Annual Report 2021



Contents

01 ABOUT US	4
02 MESSAGE FROM THE PRESIDENT	5
03 INTRODUCTION FROM THE DIRECTOR	6
04 HIGHLIGHTS OF 2021	7
COST Awareness Day for Near Neighbour Countries	8
Successful launch of Virtual Networking Tools	8
COST Innovators Grant	8
COST 50 years and Ministerial Conference	9
Dedicated newsletter on COST Actions and COVID-19	10
Final Impact Assessment	11
50 years of science without borders	11
COST Academy continues to empower researchers	12
05 SUCCESS STORIES	13
Sustainable networks can build circular society	14
COST, a key player for international cooperation	16
COST drives inclusive excellence	18
Strengthening academy and industry relations	22
Towards a Sustainable Europe	26
Interdisciplinary in COST Actions	30
Empowering young researchers	34
06 KEY FIGURES OF 2021	35
07 EVENTS	39
08 MEDIA	43

About us



COST provides networking opportunities for researchers and innovators in order to strengthen Europe's capacity to address scientific, technological and societal challenges. At COST, there are three strategic priorities: Promoting and spreading excellence; fostering interdisciplinary research for breakthrough science; and empowering and retaining young researchers and innovators. COST implements its mission by funding bottom-up, excellence driven, open and inclusive networks for peaceful purposes in all areas of science and technology.

WHO CAN PARTICIPATE?

Researchers and innovators from universities, public and private institutions, NGOs, industry and SMEs. Particular emphasis is placed on activities involving researchers from Inclusiveness Target Countries (ITCs) with a view to increasing their participation.

Researchers from [Near Neighbour Countries and International Partner Countries](#) can also take part in a COST Action.

HOW?

COST does not fund research, but provides support for networking activities carried out within COST Actions. In this way, it coordinates nationally funded research. COST invites researchers across Europe to submit proposals for Actions through a continuous [open call](#), no matter what their field of interest.

Further information on how to apply [here](#).

NETWORKING TOOLS



Meetings, workshops, and conferences –

Meetings are organised by the COST Action management committees in any COST country participating in the network and are open to the entire scientific community.



Short-term Scientific Missions (STSMs) –

STSMs are exchange visits between researchers in the network which enable scientists to visit an institution or laboratory in another COST country.



Training Schools – They offer training in a relevant or new subject at one of the Action's laboratories which provides unique equipment and/or know-how.



Dissemination activities –

COST encourages and supports Action's participants to disseminate the outcome of their research to other COST networks, the wider scientific community, policymakers, the media, and society at large.



Inclusiveness Target Country (ITC) Conference Grants –

These grants help PhD students and early-career investigators from ITCs attend international related conferences that are not organised by a COST Action.



Virtual Networking Tools (VNTs) –

These are two new instruments that aim to promote virtual collaborations to complement traditional collaboration activities (Virtual Networking Support), as well as to strengthen the existing network (Virtual Mobility).

Message from the President



50 years of science without borders

The COST Ministerial Conference in May 2021 was a defining moment in COST's history. Ministers and high-level representatives from the COST Members confirmed their political commitment to the COST framework. COST was recognised as an essential instrument supporting research collaboration for five decades. In this spirit, COST was re-confirmed as the leading science networking tool in the European Research Area (ERA).

When I came into office in June 2021, I was able to witness COST's success first-hand, justifying its value. As the oldest research networking organisation in Europe, COST has much to offer to Horizon Europe and we are proud to step into this new Framework Programme with the extensive knowledge and skills that we have garnered from the involvement of 500,000 researchers over the last half century. COST keeps pace with new developments in science and technology, evolving constantly.

What does COST look like today, and what are its key strengths? COST's core instrument, the COST Actions, are open, inclusive, and interdisciplinary networks of researchers and innovators that transcend borders (regardless of geographical boundaries, gender, or age group). COST Actions advance science, stimulate knowledge sharing while pooling resources and building trust at pan-European level across different fields of science and technology.

Scientific excellence is a fundamental value of COST. But Actions operate in an inclusive manner and are

instrumental in bridging the European 'innovation divide', taking advantage of Europe's diverse, multi-cultural, and highly skilled population. On top of this, COST Actions offer easy access for researchers from less intensive research areas also known as Inclusiveness Target Countries (ITCs). In 2021, ITCs participated in 74% of COST Actions. In Horizon 2020 39% of spin-off proposals involved partners from ITCs.

The key findings from the Final Impact Assessment under Horizon 2020 noted that participation in COST Actions increases the likelihood of success when applying to other European programmes, making it an efficient pre-portal to other EU funding instruments. Did you know that on average 37% of COST Action follow-up proposals under Horizon 2020 were successful? It also provides examples of COST's impact on the research community, notably including some scientific breakthroughs. COST Actions are described as 'small worlds' and the Final Impact Assessment report provides proof in figures of all the hard work carried out to achieve the successes mentioned above.

As a result of COST's openness and focus on innovation, COST Actions work towards finding creative solutions to problems often high on the agenda of the ERA.

COST's importance is made clear through its legacy and longevity. As a lifelong advocate of the importance of science, I am honoured to have held the Presidency during the milestone occasion of COST's 50th birthday. Reflecting on the past is a key method to identify the opportunities of the future. It is with this mindset that I can state that COST and all those involved in the programme, most certainly have even bigger and better achievements in store for them.



Prof. Alain Beretz,
President of the COST Association

Introduction from the Director

COST: the most empowering research programme in Europe

Last year, 2021, was one of transition, of challenges, and hurdles. It was also a year of outstanding achievements, that represent the success of the entire COST Association. The research community's resilience and adaptability has been remarkable. COST too has worked incredibly hard to ensure the continuity of scientific excellence.

The steps taken to secure the 7-year Framework Partnership Agreement and 3-year Specific Grant Agreement under Horizon Europe (2021-2028), continuing the excellent cooperation with the European Commission, stand out as strong examples of COST's commitment to its participants.

In parallel, COST spent much time and effort setting up new methods of networking to benefit COST Action participants in the pandemic and beyond. Developing the Virtual Networking Tools (VNTs) was a positive step to reinforce connections between researchers and innovators and facilitate dialogues within the COST Action networks.

It is timely that COST implements new methods of networking, which will never replace face-to-face interaction, but instead complement and enhance existing forms of physical networking. COST is looking towards the future under Horizon Europe and intends to continue its progress in providing stewardship to the Actions and the research community as a whole. At the same time, COST prioritises scientific excellence to achieve breakthrough science to strengthen Europe's capacity to address scientific, technological and societal challenges.

It goes without saying that COST empowers its research community in this endeavour, by providing a bottom-up framework, easy access, and a set of simplified COST Rules. In 2021, a rigorous simplification exercise was carried out to reduce the number of reference documents for the Actions, making them more user-friendly, and above all, clear.

COST Actions break down barriers and make science matter. They are open to researchers and innovators from non-COST countries all over the world. Dedicated



awareness days and other outreach events are organised for Near Neighbour Countries (NNCs), International Partner Countries (IPCs) and strategic regions.

COST's unique stewardship approach has continued to enhance the work of researchers and innovators. Trainings, under the umbrella of the COST Academy, which are particularly welcomed by young researchers, guide researchers in developing leadership skills and taking on new responsibilities. Open spaces for debate on hot topics related to the European Research Area are provided by both the thematic COST Connect events and the Cross-Cutting Activities, which put Action participants in touch with each other and with stakeholders in their field. Our policy workshops create additional value, for example by focussing on how to approach stakeholders or ensure sustainability after the Action has ended. COST Action participants with innovative projects have the opportunity to apply for a COST Innovators Grant, a one-year extension to further build on their ideas, facilitating links between scientific research and marketable applications.

Looking back at the legacy of Horizon 2020, I am extremely glad to say that COST has enhanced the quality and value of its programme and at the same time upheld its unique stewardship approach. I fervently believe that the past year shows that COST empowers and connects researchers and innovators by creating unique spaces where scientists are in the driving seat. I'm confident that, with this track record, COST will continue to be the most empowering research programme in Europe.



Dr Ronald de Bruin,
Director of the COST Association

Highlights of 2021



12 MARCH 2021

COST Awareness Day for Near Neighbour Countries

COST organised an online informative event specifically dedicated to the [Near Neighbour Countries' \(NNCs\)](#) research communities. With the purpose of informing and raising awareness on the opportunities offered by the COST Programme, this event triggered lots of interest as it brought more than 350 participants to follow the event online. This initiative follows in the footsteps of growing initiatives COST undertakes to contribute to the internationalisation process of the R&I communities.

[Find out more](#)

28 APRIL 2021

Successful launch of Virtual Networking Tools

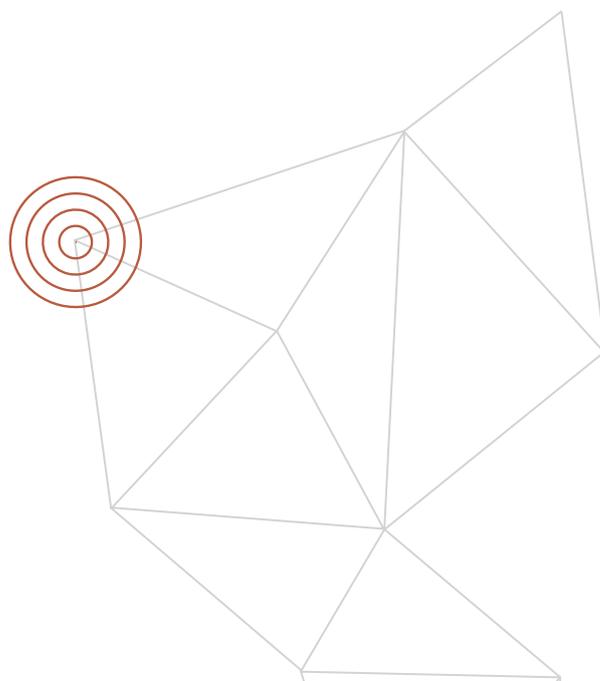
As a response to the COST Actions' increasing need for support with virtual networking activities in times of COVID-19, COST launched, on 28 April 2021, two new dedicated instruments gathered as the new Virtual Networking Tools (VNTs). This initiative built on an earlier consultation COST ran with ongoing Actions' leadership to better understand and frame the community's requirements in these special times. Launched as a pilot scheme until the end of the Horizon 2020 programme, the VNTs added value was swiftly harnessed by COST Actions. In six months, 570 VNT Grants were awarded to participants from all 39 COST Members, demonstrating a high uptake even when introduced in a tight timescale. At the same time, 57.5% of the VNT Grants were awarded to women researchers and almost 50% to young researchers. Overall, a budget of around €1 million was spent to support this new networking activity. Its purpose of serving virtual collaboration went beyond the specific pandemic context as VNTs were found to help complement face-to-face collaboration rather than compensating it. They continue operating under Horizon Europe as a COST networking tool.

[Find out more](#)



“COST Actions allow us to submit those proposals to Horizon 2020 that we could not have submitted otherwise. I believe that the main objectives of scientists are to be visible, to publish and to communicate effectively. COST Actions contribute greatly to achieve these objectives. COST enables networking and breaks down silos!”

Dr Igor Kotsiuba,
[COST Action on Digital Forensics](#)



28 MAY 2021

COST Innovators Grant

On 28 May 2021, four new COST Innovators Grants (CIGs) were approved for funding by the Committee of Senior Officials (CSO). Launched with the aim of complementing existing initiatives on innovation in Horizon 2020 and Horizon Europe, and focusing on networking activities, the CIGs help to enhance the pace and success of breakthrough innovations. This grant builds bridges between the scientific research

performed in COST Actions and marketable applications and/or societal solutions and helps to further explore innovation potential. The four approved CIGs in 2021 cover topics ranging from nuclear magnetic resonance to medical engineering, biomaterial database, and clinical medicine.

[Find out more](#)

4 MAY 2021

COST 50 years and Ministerial Conference

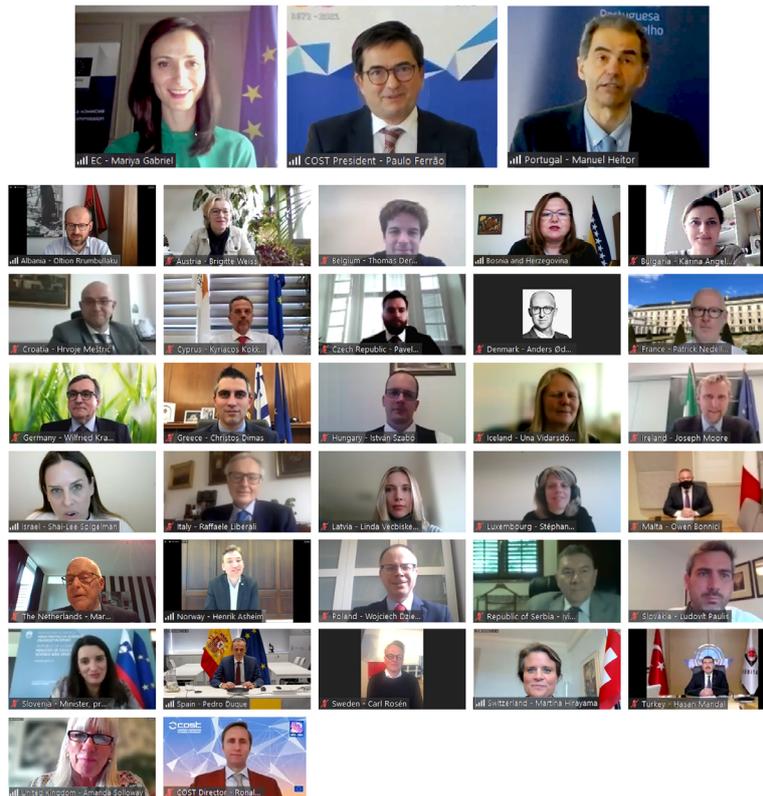
On 4 May 2021, Ministers from the COST Members confirmed their political commitment to the COST programme. Overwhelming support was expressed to reinforce the role of COST in a renewed and

stronger European Research Area by promoting its bottom-up, open, inclusive, and global networks.

[Find out more](#)



COST Ministerial Conference 2021 4 May 2021





SEPTEMBER 2021

Dedicated newsletter on COST Actions and COVID-19

The initial [Network of Actions](#) set up in April 2020 continued to grow, flourishing from the original nine COST Actions into a mega-network of 76 Actions

across 12 scientific fields, thanks to the networking possibilities enabled by COST.

This dedicated newsletter presented some of the main achievements as well as COST Actions' latest activities and results related to COVID-19. Interviews, videos, and articles were produced to provide further insights and references.

[Find our more](#)



COST and Horizon 2020 - key figures at a glance



92.000 individual researchers engaged in networking tools



On average 60 Actions launched a year



669 Actions active



6 OCTOBER 2021

Final Impact Assessment

2021 also marked the end of the European Commission's seven year programme under which COST previously operated. On 6 October, COST's Final Impact Assessment was published, highlighting the important role played by COST in the European R&I landscape. This in-depth study underlined several of COST's unique features and assets such as the structure of the COST Actions, the easy process, the openness, and its stewardship approach.

As shown in the Final Impact Assessment, COST is recognised as a career accelerator by young researchers.

ITC researchers are key players as well; they are included in about 84% of connections, against 58% for non-ITC countries. The Assessment also underlines that the COST network is more gender-inclusive than previous framework programmes, reaching 42% of women participants.

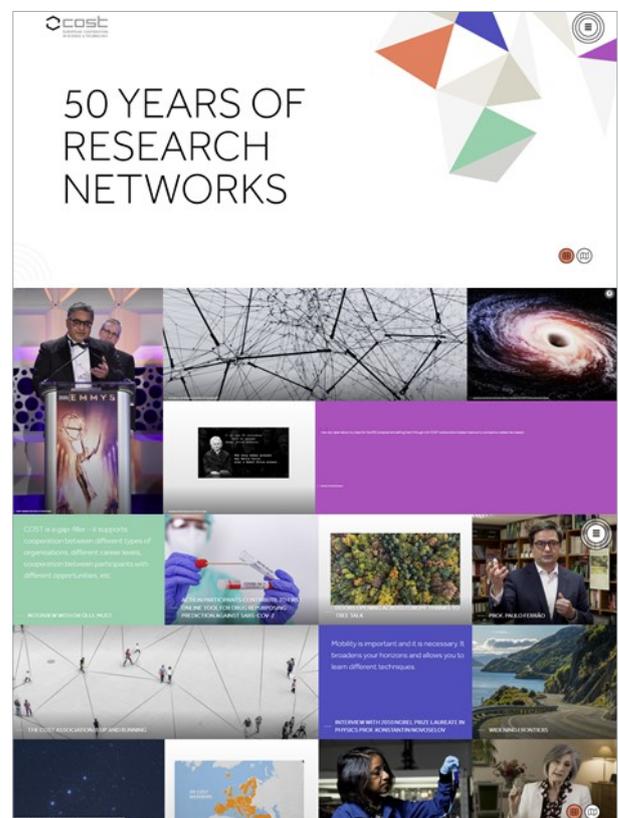
In that respect, COST truly is the largest and most important networking instrument for researchers in Europe.

[Find out more](#)

22 NOVEMBER 2021

50 years of science without borders

2021 marked COST's 50 years anniversary. This special occasion was celebrated throughout the year with a dedicated campaign that started at the COST Ministerial Conference in May until COST's official birthday on 22 November 2021. Several initiatives were put together to pay tribute to the most compelling achievements: a special '50 years' [website](#) and [publication](#) featured COST's milestones through interviews, videos, and success stories; an engaging online campaign was launched highlighting insightful input from COST Actions' communities; and new multimedia content was produced to present COST's history creatively.



Find all related initiatives in the special 50 years COST newsletter (November 2021) [here](#).

COST Academy continues to empower researchers

In 2021, the COST Academy workshops continued to take place fully online, offering COST Action participants the trainings delivered as part of the COST Stewardship activities. More than 30 COST Academy events occurred, ranging from Grant Holder Manager events to Science Communication and Chair trainings. During the year the COST Academy also launched new online modules on new COST rules for Grant Holder Managers and Chairs. Finally, two successful Leadership workshops for young and ITC researchers took place on the 3 and 6 September 2021, with the purpose of encouraging young researchers from less-research intensive countries to run for leadership positions in COST Actions.

More information on the workshop for young and ITC researchers [here](#)

More information on the COST Academy [here](#)

**35% of participants
of leadership
workshops take over
leadership positions
in COST Actions**



Success stories



Sustainable networks can build circular society

Facilitating networking is at the core of COST Actions. The collaborations and connections established are often very long-lasting and the starting point for sustained threads of research activities.

An example is [COST Action NORMFORBUILDING \(TU1301 – NORM for Building materials\)](#). This Action stimulated a continuing collaboration between scientists, industry and regulators to gather appropriate knowledge, experiences and technologies, and boost research on the safe reuse of waste streams containing enhanced concentrations of Naturally Occurring Radioactive Material (NORM).

In the context of establishing a viable circular economy and the [European Green Deal](#), there is growing interest in the development of new construction materials from a range of industrial waste streams. However, any recycled waste materials must be safe for reuse and many processes concentrate toxic or harmful substances in their waste streams including NORM.



Professor Wouter Schroeiers, Chair of former COST Action NORMFORBUILDING

The Chair of the Action was Professor Wouter Schroeiers of the University of Hasselt in Belgium. He describes two main research outputs from the Action.

“The Action stimulated lots of new research and collaborations resulting in a big boost of publications in the field.”

Prof. Wouter Schroeiers, Faculty of Engineering Technology, Belgium

“Firstly, we published a holistic evaluation of NORM reuse practices in a book ‘Naturally Occurring Radioactive Materials in Construction’ with contributions from over 50 COST Action partners,” he explains. “And secondly we developed a semi-automatic data mining tool for gathering information and established an accessible, updatable database containing all the available knowledge in the field.”

In addition, the main continuing outcome of the Action was the formation of a new [European NORM Association \(ENA\)](#) through the merger of two existing networks that was effectively catalysed by the Action’s activities.

The establishment of the new association was a significant step. “The size of the organisation means it can have more impact. ENA provides a clear, single voice towards the legislators to enable them to better understand feasible reuse options for NORM,” says Prof. Schroeiers.

CONCRETE SOLUTIONS

Under the umbrella of ENA, research initiated by NORMFORBUILDING is continuing. "The Action stimulated lots of new research and collaborations resulting in a big boost of publications in the field," explains Prof. Schroeyers.

The main findings from the Action are leading to new types of production processes, complemented by suitable separation and pre-treatment techniques, that are providing novel materials for the construction sector including research towards new types of phosphor-gypsum-based construction materials.

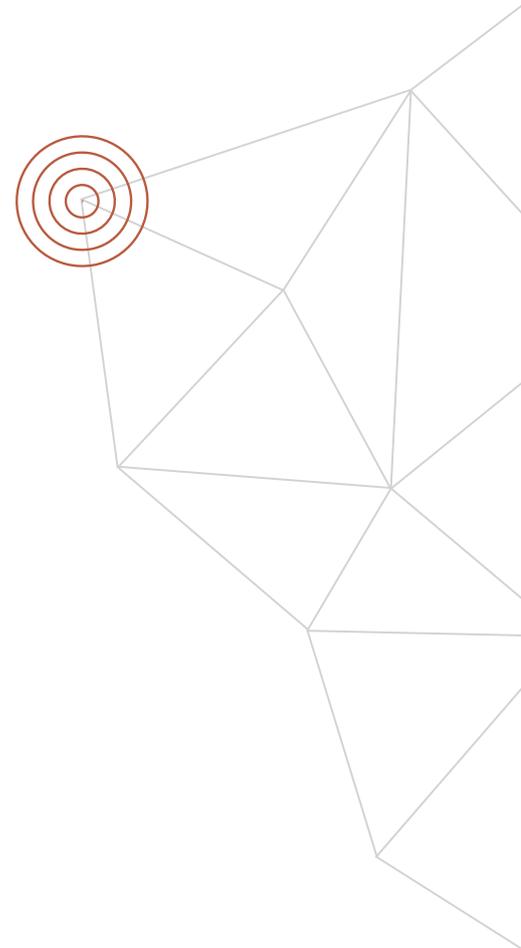
"There is now much greater connection between industry and research. Industry comes to us for specific solutions and there is a much more integrated approach," comments Prof. Schroeyers. "And we want to go further: in Belgium, currently, we are making a first attempt at enhanced landfill mining that could produce safe and high-quality materials from an extremely heterogeneous waste source."



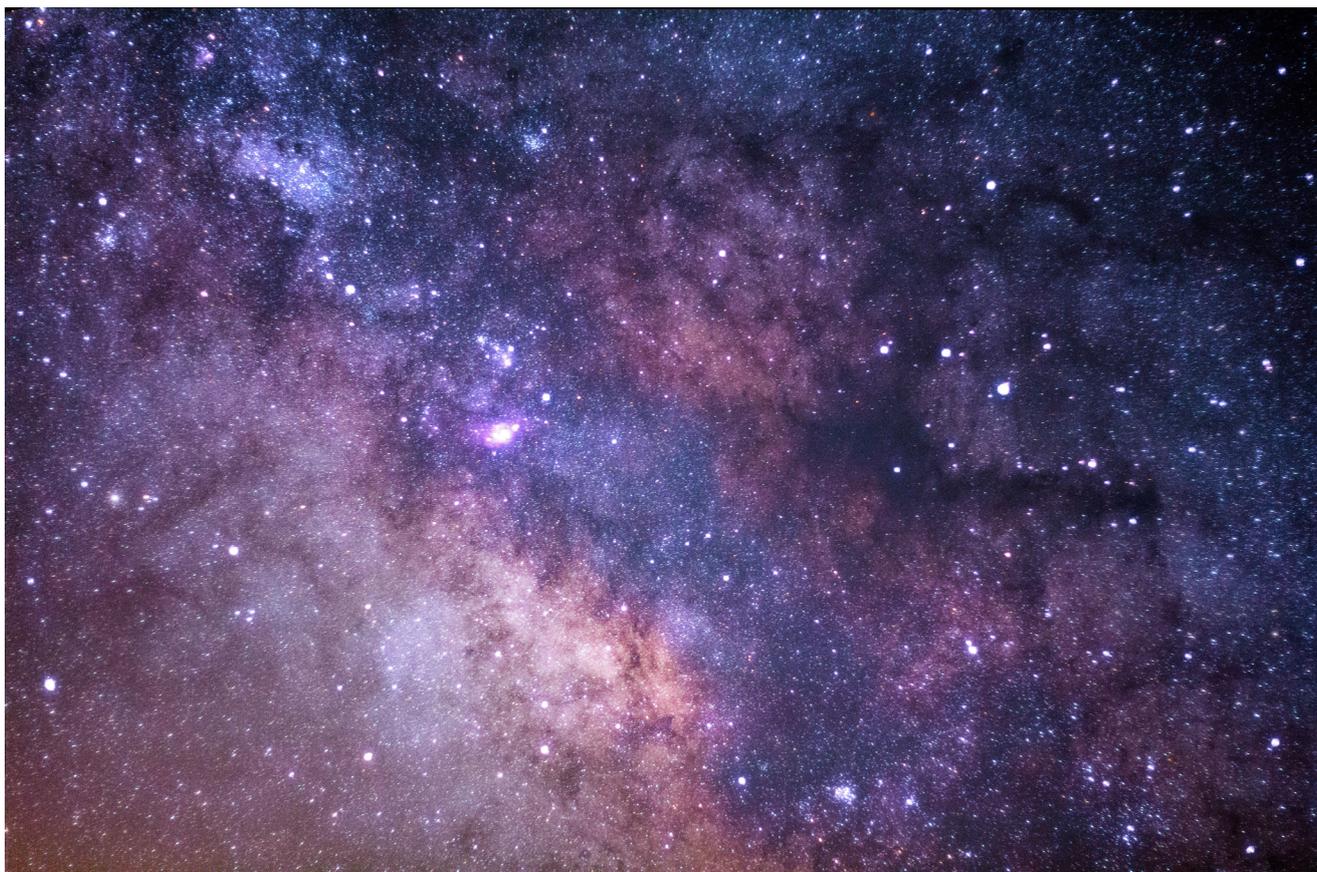
2021 saw the launch of the [RadoNorm project](#) under the EURATOM Horizon 2020 programme involving several of the Action's partners. The project aims to answer open questions related to radon and NORM exposure of humans and the environment and provide a range of solutions for radiation risk reduction that should be widely acceptable to society.

And in 2022 the [NORM-X event](#), the largest international NORM conference co-organised by ENA, will take place in The Netherlands. "This will feature the future of residues in the circular economy and the impact that the Action - and the continuing work of its network - is having," concludes Prof. Schroeyers.

[Read more about COST Action "TU1301 – NORM for Building Materials"](#)



COST, a key player for international cooperation



How did the Universe create the chemical elements that make us and everything around us? What do stars tell us about the building blocks of matter? Such fundamental questions require global research initiatives and international networks that can bridge political and cultural divides and provide planet-sized brain power to properly tackle them.

The European Union sees [international cooperation as a key element of a required global approach to research and innovation](#). And COST provides crucial mechanisms and opportunities to identify the right international partners and build trust to work on such long-term global endeavours.

COST Action ChETEC ([CA16117 - Chemical Elements as Tracers of the Evolution of the Cosmos](#)), pronounced 'Ketek', is an excellent example of how COST initiatives can sow the seeds of truly global collaboration to tackle fundamental scientific questions.

Understanding the evolution of our universe requires inputs and collaboration from a wide range of scientific disciplines from sub-atomic physics to astronomy and computational modelling. And each requires

access to innovative instrumentation whether the best telescopes, the largest nuclear accelerators or the most powerful computers: resources that one country on its own cannot possibly hope to provide.

In 2021, ChETEC's final conference, which was organised both virtually and physically in Lisbon, highlighted the critical importance of international networks in furthering research in these fields. Professor Hendrik

“In tackling these hard problems, international cooperation is vital.”

Prof. Hendrik Schatz, professor of Nuclear Astrophysics at Michigan State University, USA

Schatz from Michigan State University spoke at the conference and is involved in the continuing international collaboration.

"We joined ChETEC when it was already up and running," explains Prof. Schatz. "The field is special involving a range of disciplines and expertise from nuclear physics to astrophysics and extremely advanced computation models. We model entire galaxies and looking to fold in data from accelerators and telescopes – and this involves intense exchange data across these areas. In tackling these hard problems, international cooperation is vital."

Prof Schatz had been the co-founder of the equivalent US network, the JINA Center for the Evolution of the Elements (JINA-CEE), and the interaction with ChETEC played a key role in obtaining funding from the US National Science Foundation (NSF) to initiate a global network of networks.

"This was exactly what we needed," says Prof Schatz. "The NSF funding enabled a formal connection between ChETEC and JINA-CEE. In total there are now nine networks involved in a global collaboration and we are continually looking to expand."

GLOBAL NETWORK

The new network is called the [International Research Network for Nuclear Astrophysics \(IReNA\)](#) and was funded under the NSF's [Accelerating Research through International Network-to-Network Collaborations \(AccelNet\) programme](#).

"ChETEC being part of the IReNA network clearly demonstrates how funding from both the US and the EU can be combined to immense success and strengthen international cooperation," says Prof. Schatz. "Another angle is the impact on funding co-operation between funding agencies. Bringing the NSF and COST together has stimulated an ongoing exchange between the EU and NSF on cooperation - all triggered by ChETEC."

This could translate into joint calls or matching call calendars so that researchers in different continents can synchronize their efforts.

The strong community of expertise and facilities assembled by ChETEC was also key to set-up a starting community for infrastructure integration in the field in Europe, [ChETEC INFRA](#), that is also part of IReNA.

[Read more about COST Action "CA16117 - Chemical Elements as Tracers of the Evolution of the Cosmos"](#)



COST drives inclusive excellence



COST's open and flexible support to networking helps to initiate and nurture collaboration across borders and disciplines in Europe and beyond. This connectivity promotes both excellence and inclusiveness in science, building research capacities and boosting opportunities for all.

There are three main pillars to COST's activities around inclusiveness: geographical with a focus on less research-intensive countries and regions; career stage including support for young researchers; and gender inclusivity.

These activities contribute to the EU's goal to [widen participation and spread excellence under the current Horizon Europe Framework Programme](#). Involvement in COST Actions creates links and experience that can build capacity for successful participation in other transnational R&I programmes such as Horizon Europe.

NETWORKING EXCELLENCE

An example is [COST Action EUROMENE \(CA15111 - European Network on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome\)](#) that led directly to a follow-on Horizon 2020 Twinning project.

Twinning projects deepen networking activities and support excellence by linking an EU research institution looking to build capacity to at least two world-class research institutions from different EU Member States or Associated Countries.

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a disabling condition that can affect all ages. Its cause has been a puzzle, but recent research suggests that the trigger may be viral infection. This observation is of interest as scientists try to understand the origin of so-called 'Long Covid' and develop effective treatments.



Professor Modra Murovska with the part of COST action EUROMENE team at RSU - 13 March, 2020

Professor Modra Murovska of Rīga Stradiņš University (RSU) in Latvia was Chair of the EUROMENE Action. "EUROMENE enhanced coordination of research activities on ME/CFS across Europe, developed common standards, synchronised databases and promoted new research projects," she says.

The Action helped spread good practise on diagnosis of the conditions and understand links with other autoimmune diseases. It also brought Prof. Murovska and her colleagues into direct contact with world-leading research institutions in the field.

"We wanted to increase our research capacity at RSU and through EUROMENE we were able to connect and collaborate with the University of Ferrara in Italy, Ulm University in Germany and the Sheba Medical Centre in Israel that resulted in the [Horizon 2020 Twinning project VirA](#) launched at the end of 2020," explains Prof. Murovska.

VirA aims to promote autoimmune disease research capacity and further boost networking at RSU. Despite the restrictions imposed by COVID-19, the project organised a range of activities during 2021 including secondment of young researchers, expert visits and online workshops and symposia. A face-to-face summer school is planned for 2022.

The EUROMENE and VirA have brought multiple benefits to RSU. "At the level of our university we are improving our general capacity, attracting more high-quality students and trying to establish a Centre of Excellence on Autoimmunity in the Baltic countries," says Prof. Murovska.

"We are also participating in regular seminars organised at Sheba and exchanging knowledge with many other countries on developments in auto immunity. The collaboration should also help with long COVID in terms of diagnosis, treatment and rehabilitation," she concludes.

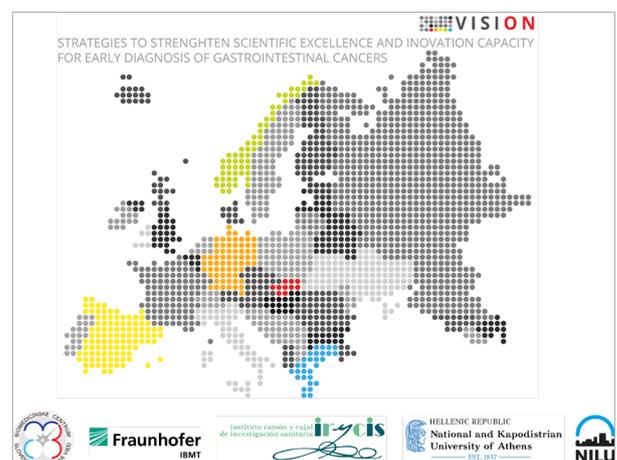
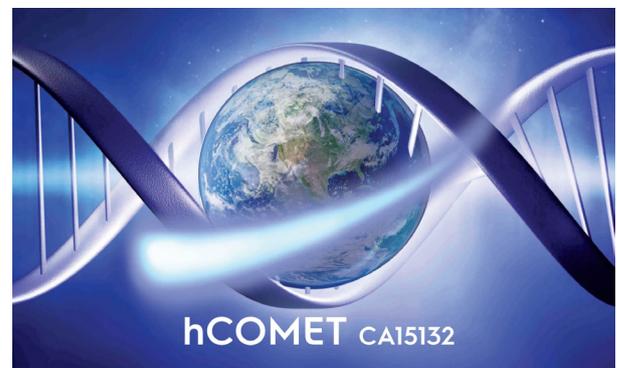
PROPOSAL SKILLS

Dr Alena Gabelova from the Biomedical Research Centre of the Slovak Academy of Sciences in Bratislava tells a similar story. She was a member of the management committee of the [COST Action hCOMET \(CA15132 - The comet assay as a human biomonitoring tool\)](#) and now coordinates [the Horizon 2020 Twinning project VISION](#).

The Action focused on the Comet assay methodology for measuring DNA damage. The Action looked to highlight factors that might affect results and identify common procedural issues. Data from over 20,000 individual DNA damage measurements was compiled and analysed.

"The idea was to develop a Standard Operating Procedure," explains Dr Gabelova. "And a major outcome of the project was the publication of our findings in articles in Nature Protocols."

"COST is a very useful tool for establishing new cooperation and collaborations," comments Alena. "It brings together people with common R&D interests but also can introduce you to partners with very deep expertise in project management and proposal development."



Dr Gabelova had been a partner in several multi-national projects but never a coordinator. The contacts established in hCOMET gave her the skills and capacity to develop and coordinate the successful proposal for VISION.

Competition for EU Framework Programme funding is extremely high and success rates can be low. However, follow-on proposals from COST Actions submitted to Horizon 2020 achieved a success rate of 37% - around three times the average Horizon 2020 success rate.

"VISION is all about the early diagnosis of cancers in the digestive system – a particular area of concern for Slovakia," says Dr Gabelova. "Early detection is key to enhanced patient outcome and quality of life. Our focus is on education through our strategic partnerships with European experts. We will improve the professional skills of our students and researchers so they can implement the latest technologies."

Like VIRa, VISION has been mainly limited to online interactions since its launch in October 2019, but 2021 saw a dozen lecture workshops and a sizeable number of papers published. Face to face training is scheduled for 2022.

"COST is very effective and powerful to help establish the networks you need to progress a career in research."

Prof. Janis Locs, Riga Technical University, Latvia

TEAMS OF SUCCESS

"COST was a real kick to my career," says Professor Janis Locs from the Riga Technical University (RTU) in Latvia. "I first got involved in COST Actions in 2012 just three years after defending my PhD. Through COST I started to establish a network via Short Term Scientific Missions and regular meetings of COST Actions such as [NAMABIO](#)."

Prof. Locs subsequently joined the management committee of [COST Action NEWGEN \(MP1301 - New Generation Biomimetic and Customized Implants for Bone Engineering\)](#) and is now the coordinator of Horizon 2020 Teaming Phase 2 project [Baltic Biomaterials Centre of excellence \(BBCE\)](#).



Professor Janis Locs

"COST is very effective and powerful to help establish the networks you need to progress a career in research," says Prof. Locs. "NEWGEN was a big step for me as I was able to highlight Riga's potential and consolidated my relationships with partners in Germany and Switzerland who joined the Teaming project."

Teaming projects aim to develop a long-term strategic cooperation to create a Centre of Excellence in less research intensive (i.e., Widening) countries, through a coupling process with one or more leading scientific institution. BBCE teams four Latvian partners (RTU, Latvian Institute of Organic Synthesis, Riga Stradins University and the RSU Institute of Stomatology) with the AO Research Institute in Davos and the Friedrich-Alexander University in Erlangen-Nuremberg.

Teaming has two phases. In Phase 1, funding is provided to develop a business plan for the Centre of Excellence in line with the host region's smart specialisation strategy. Phase 2 provides funding to selected Phase 1 proposals to start implementation.

"When the Horizon 2020 Teaming call was published, I was able to contact colleagues I knew through COST and we put together a very complimentary consortium covering all aspects of biomimetics from basic materials research to clinical practise," explains Prof. Locs.

BBCE kicked off its implementation stage in early 2020 and has mostly held online events but a 'Winter School' under the associated Horizon 2020 Twinning project [RISEus2](#) was successfully organised in Riga in September 2021.

"COST is so useful and inclusive," concludes Prof. Locs. "Working with COST provides you with the instruments and skills to successfully develop future collaborative projects."

[Read more about COST Action "CA15111 - European Network on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome"](#)

[Read more about COST Action "CA15132 - The comet assay as a human biomonitoring tool"](#)

[Read more about COST Action "MP1301 - New Generation Biomimetic and Customized Implants for Bone Engineering"](#)



Strengthening academy and industry relations



Enabling Academia and Industry to work together is key to successfully addressing the range of challenges facing our society. However, the two often operate in different ways with differing end goals and establishing a common, successful working understanding can be tricky.

Few businesses, in particular Small or Medium Sized Enterprises (SMEs), have the capacity to deliver innovative results by themselves and, on the other hand, research organisations do not often get the chance to fully test their results in 'real world' applications. Interactions between the two are often complex and require careful management in areas such as intellectual property (IP), knowledge transfer or access to appropriate funding.

COST Action networks provide a safe and fruitful space where Academia and Industry can meet, get to know one another and share knowledge and experience in a trusting environment. In June 2021 COST held [an online COST Connect event involving more than 20 COST Actions on Academia and Industry cooperation](#).

The event highlighted the many reasons for Industry to join Actions from finding potential research partners to maintaining knowledge on current research and emerging topics. In particular, SMEs see COST Actions as powerful networking tools that are strongly academia oriented. The COST Short Term Scientific Missions (STSMs) instrument offer the opportunity to improve their employees' skills and close collaboration helps SMEs learn new methods and ways of working.

For Academia, the benefits of Industry partners include new perspectives and data for testing hypotheses, insights on routes to market, increased chances of receiving European-level grants and a better understanding of the requirements of 'real world' products and solutions.

The COST Innovators Grant, launched at the end of 2019, can enhance the pace and success of breakthrough innovations, building bridges between COST's scientific research outcomes and marketable products, solutions and services.

SUSTAINABLE



COST Action RESTORE – Training School Vienna 2020

Most COST Actions include at least one SME participant, and many include ten or more. However, [COST Action RESTORE \(CA161114 – Rethinking Sustainability TOwards a Regenerative Economy\)](#) that ended in 2021 was ahead of the field with 28 SMEs involved.

The number of SMEs involved was not the only unique feature. “It was one of the first COST Action to research sustainability in the built environment,” claims Action Chair Carlo Battisti. “And it was the first Action to engage with a process to offset its CO2 emissions, reducing and completely offsetting them in the end. As one of our core topics was how to establish a carbon -neutral built environment it would have been illogical to ignore the carbon emissions linked to our meetings and other activities.”

RESTORE strived to cover all sustainability aspects of the built environment including environmental, economic and social angles. By the time it ended in 2021 the Action included 40 different competences and had grown to a network of some 160 practitioners and researchers including participants from most European countries plus the US and New Zealand.

“With so many partners from different disciplines and cultures our first challenge was to find a common

language for sustainability,” says Mr Battisti. “And we took a holistic approach: not just achieving carbon neutrality, but also covering issues such as loss of biodiversity too. We looked to provide a paradigm shift to deliver built environments that are environmentally positive across multiple indicators.”

Over its lifetime RESTORE delivered five training schools for professionals and researchers, ten conferences and workshops, more than 30 STSMs, and a massive scientific communication activity including eight books and a range of research publications. The knowledge gained in RESTORE is being continued through the activities of the [Living Future Europe association](#) and the Action’s members.



Mr Carlo Battisti – Chair of COST Action RESTORE, at Budapest conference, 2018

“The Action has helped close the gap between research and the practitioners on the ground,” says Mr Battisti. “There is now a huge network of professionals that can take advantage of the results.”

“The academic side has better understanding of the relevance of their research to the market, while the commercial side has better understanding of the technologies that are available and the current research that may become commercially relevant,” he concludes.



RESILIENT

In modern society we often take our communication services for granted. But when disaster strikes, we really need those networks to be available and functioning correctly. The [COST Action RECODIS \(CA15127 - Resilient communication services protecting end-user applications from disaster-based failures\)](#) brought together researchers from academia and industry to develop a set of techniques and recommendations to improve resilience in communication networks and make them more resistant to disruptions.

"Disastrous disruptions can follow natural events, such as earthquakes, or technology failures either from accidents or due to a malicious attack," explains Professor Jacek Rak of Gdansk University of Technology who chaired the Action.

"We had a significant level of industrial involvement from the start," says Prof. Rak. "Ranging from major telecoms operators to network equipment providers. In total some 200 members were involved from 31 countries."

While delivering its objectives to propose methods to defend networks and set out best practise design guidelines for network operators some 140 STSMs were arranged between industrial and academic members.

At the end of the Action a final Training School was held in late 2019 in Brussels that attracted 90% of the participants from leading telecom operators across Europe.

The knowledge gained during the Action led to the publication in 2020 of a '[Guide to Disaster-Resilient Communication Networks](#)' book edited by Jacek and RECODIS Vice-Chair David Hutchison with contributions from 130 Action members.

And the work of the Action continues. "COST Actions are very good instruments for enhancing cooperation for further initiatives," says Prof. Rak. "So far RECODIS members have submitted over 20 new joint project proposals of which 11 have been successful."

HIGH PERFORMANCE



Dr Chiara Pernechele is Vice-Chair of [COST Action EsSENce \(CA19118 - High-performance Carbon-based composites with Smart properties for Advanced Sensing Applications\)](#) and works for Dallara an Italian automotive engineering firm that aims to design and manufacture the fastest and safest race cars in the world.

EsSENce is developing an innovation hub at European and International level for advanced composite materials reinforced with Carbon based (nano)materials that also can incorporate sensing capabilities.

"In the COST Action we are able to work directly with researchers to discuss design applications in terms of materials," explains Dr Pernechele. "Dallara needs high performance materials with added functionalities such as embedded sensors to collect data, for example, on aerodynamics to enhance product quality and improve performance through design."

**"COST Actions
are very good
instruments
for enhancing
cooperation for
further initiatives."**

Prof. Jacek Rak, Gdansk University of
Technology, Poland



The Action had to operate under Covid restrictions, so most training events have been conducted via webinar during 2021 although STSMs have been successfully arranged. "There is a strong connection between training and education and industry in the Action," comments Chiara. "We have produced a series of videos on different aspects of our work that is available to all."

"Before 2015 Dallara did not have a strong collaborative research tradition," concludes Dr Pernechele. "But we have become known through COST Actions and many possibilities have opened up. We are currently involved with four European research projects."

[Read more about COST Action "CA161114 – Rethinking Sustainability TOwards a Regenerative Economy"](#)

[Read more about COST Action "CA15127 - Resilient communication services protecting end-user applications from disaster-based failures"](#)

[Read more about COST Action "CA19118 - High-performance Carbon-based composites with Smart properties for Advanced Sensing Applications"](#)



Towards a Sustainable Europe



The European Union aims to create a sustainable Europe by 2030 through its [European Green Deal: Europe's new agenda for sustainable growth](#). This transition to a low-carbon, climate-neutral, resource-efficient, and biodiverse economy should bring benefits for all. But to achieve Green Deal objectives and align with the United Nations 2030 Agenda with its 17 Sustainable Development Goals will require radical transformation of many aspects of society – and time is short. Fortunately, COST is on the case.

PLANTS

Plants are essential parts of our ecosystem, but we often know surprisingly little about the rarest and most threatened species, and even less about their conservation status. Climate change and rural development can bring about rapid change in habitats that cause accelerated decline in species, [COST Action Conserveplants \(CA18201 - An integrated approach to conservation of threatened plants for the 21st Century\)](#) is working to improve plant conservation in

Europe by establishing a network of scientists and other stakeholders including plant taxonomists, ecologists, conservationists, biologists and social scientists.



Dr Živa Fišer- Chair of COST Action Conserveplants

“The network is taking a broad view on conservation with a focus on herbaceous flowering plants in Europe,” explains Action Chair Dr Živa Fišer from the University of Primorska in Slovenia. “Our aim is to increase our

knowledge on threatened plants from many different aspects such as their pollinators, how their seeds germinate and their specific biology. The biology of some common species of plant is still not well understood so we need to identify the critical factors, which push certain plants to the brink of extinction.”

The Action is working to harmonise conservation protocols across Europe and to update the methodologies that different authorities use to define their 'red lists' - the species most at danger. “This is an area of great divergence across Europe,” says Dr Fišer. “Some areas have very old lists and some do not have lists at all. We will hold an in-person Training School in Montenegro in March 2022 to teach participants how to apply the plant categories with a focus on countries without a current red list. The school is already oversubscribed.”

POWER



The transition to zero-carbon energy sources is an essential element to achieve a sustainable Europe. Wind and solar power have made major advances and

are widely implemented across Europe. However, the potential of other energy resources such as wave energy is yet to be tapped.

[COST Action WECANet \(CA17105 - A pan-European Network for Marine Renewable Energy\)](#) aims to promote the large-scale deployment of Wave Energy Converters (WECs). “For the large-scale deployment of marine renewable energy technologies, an interdisciplinary approach is necessary,” says Dr Vicky Stratigaki of Ghent University in Belgium who is Chair of the Action. “The Action pools together diverse sources of expertise cross-cutting the environmental, social and economic dimensions of marine energy projects.”

A major issue is to increase confidence of potential investors by reducing (non-)technological risks and related uncertainties. Significant bottlenecks need to be addressed such as installation practices and procedures. “The development of arrays is a key factor to achieve an optimal installation size that is attractive to the energy sector,” Dr Stratigaki continues. “Research needs to re-focus on techno-economic perspectives, which considers the full life-cycle costs of the technology.”

During 2021 WECANet has been moving ahead with around 30 STSMs and a Round-Robin testing campaign was completed. “Different laboratories from across the WECANet network tested the same WEC device to assess experimental reproducibility,” explains Dr Stratigaki. This will develop a reliable database for validating advanced numerical models.

PRODUCTION

Humans have been making, manipulating and discarding textiles for millennia: what can we learn from past practice to inform a future sustainable textiles industry?

That is the essential question for [COST Action EuroWeb \(CA19131 - Europe Through Textiles: Network for an integrated and interdisciplinary Humanities\)](#). The Action brings together scholars from across the human sciences including fashion, art and design to identify expertise across time in sustainable textile practices.

Dr Agata Ulanowska from Warsaw University is chairing the Action. “Textiles act like a prism to explore and understand economic, social and cultural competences of societies in the past. Innovation in textile production has been central to many industrial revolutions that have profoundly changed society,” she explains.

The Action follows multiple aspects such as the use and reuse of textiles in various contexts, raw material use, historical technological and organisational innovations, and the symbolic relevance of textiles. "Past textile production used a range of fibres," says Dr Ulanowska. "Such as nettles and tree bark using methods that may not have harmed the tree. These strategies we need to consider now."

A major finding of the work is the role of recycling and reuse. "In the past textiles were used and reused constantly – literally until the material itself disintegrated," says Dr Ulanowska. "'No waste' was the watchword."



PACKAGING

Food packaging plays multiple roles: it must protect the food, communicate to customers, and ensure high food quality, safety and optimal shelf life. COST Action [CIRCUL-A-BILITY \(CA19124 – Rethinking packaging for circular and sustainable food supply chains\)](#) is going beyond the state of the art to address the major technical and non-technical barriers to implementing sustainable food packaging solutions for future circular food supply chains.

"The network is truly focused on the full food chain," says Action Chair Professor Milena Corredig of Aarhus University. "Our members have lots of expertise on materials, including new biobased materials, but we also need to understand the barriers to implementation and the impact from a consumer point of view. One of the big issues is post-consumer waste and how to ensure that circularity has a fair and equitable socio-economic basis."

The Action acts as a hub to tackle the many technical issues, such as new methodologies to measure microplastics in the environment and the recycled

content of packaging, through international and multidisciplinary teams. The real impact, however, is its ability to provide a European-wide status-quo of food packaging and suggest and develop best practices for future circular packaging solutions. "Future circularity will require a holistic, multi-disciplinary approach and CIRCUL-A-BILITY provides the springboard for its implementation," states Dr Philip Scholten Science Communication Officer for the Action.

PEOPLE

At the end of the day sustainability must be about people. And the road to sustainable societies must be inclusive: leaving no one behind.

[COST's youth network - COST Action RNYN \(CA18213 - Rural NEET Youth Network: Modelling the risks underlying rural NEETs social exclusion\)](#) – is looking at the factors that affect young, rural NEETs (Not in Employment, Education or Training) and how their inclusion can contribute to sustainable development in Europe's rural regions.



Dr Francisco Simões, Chair of COST Action RNYN

"Our focus is on how young people can return and develop in rural areas," says Dr Francisco Simões of the Lisbon University Institute and Chair of the Action. "We need to help improve the capabilities of rural communities to retain the talent of their youth which means diversifying the rural economy."



“Future circularity will require a holistic, multi-disciplinary approach.”

Dr Philip Scholten, Bloom Biorenewables, Belgium

Mobility is one issue and in 2021 Action members contributed to a special edition of Sustainability '[Lessons on Building More Sustainable Rural Societies: Youth and Mobility](#)' that looked at how different interventions help to increase NEETs inclusion and therefore the sustainability of rural communities.

Sustainable farming is a key element of the Green Deal for Europe. “Our contribution is to help turn policy into practise; to combine societal development with the Green Deal,” concludes Dr Simões. “For this reason, the Action created a new Working Group on the issue of Rural NEETs and sustainability in October 2021.”

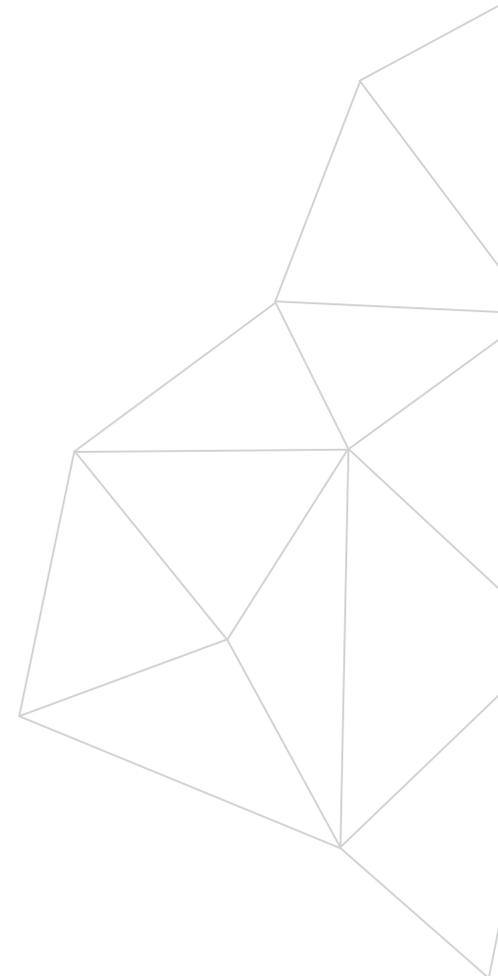
[Read more about COST Action “CA18201 - An integrated approach to conservation of threatened plants for the 21st Century”](#)

[Read more about COST Action “CA17105 - A pan-European Network for Marine Renewable Energy”](#)

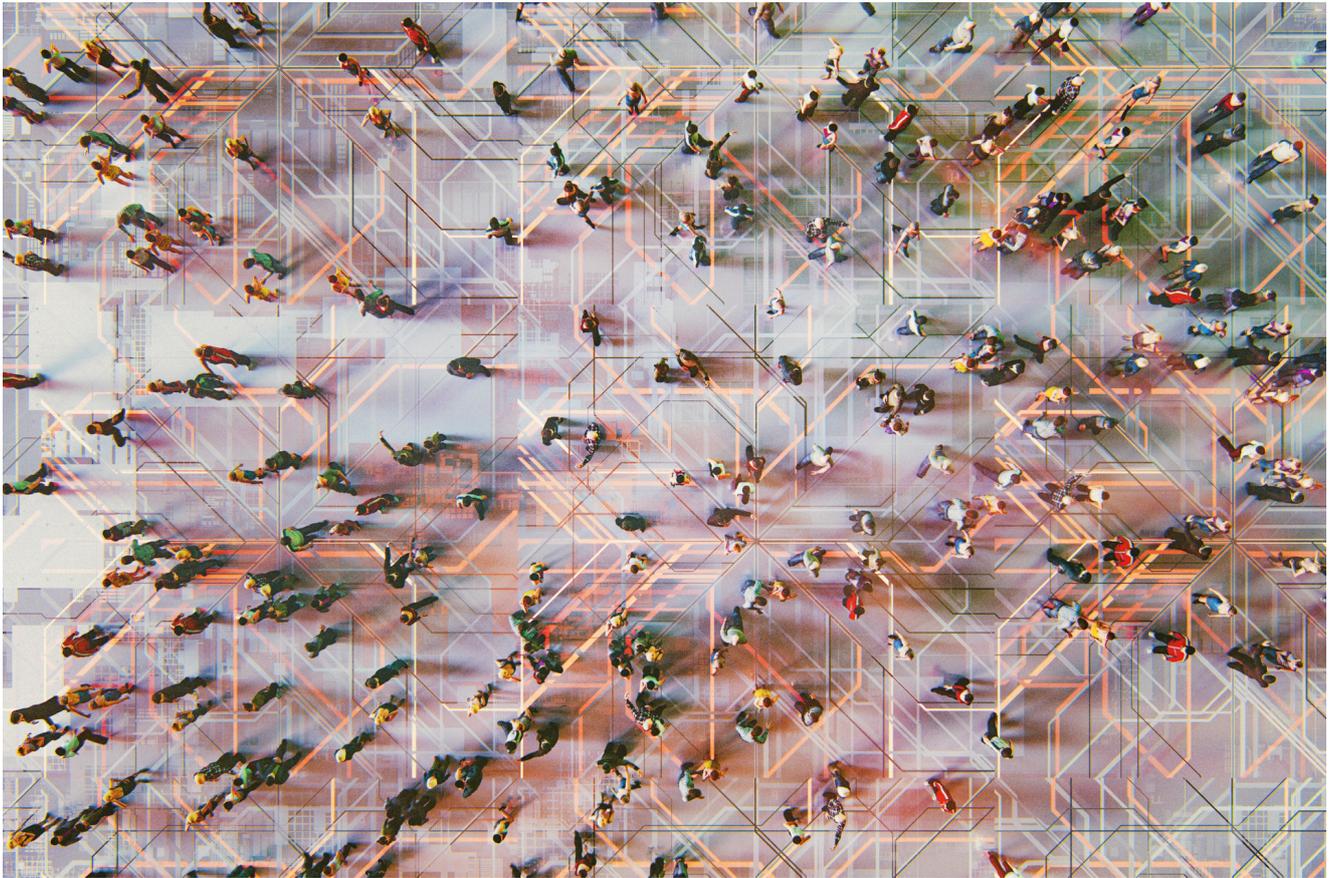
[Read more about COST Action “CA19131 - Europe Through Textiles: Network for an integrated and interdisciplinary Humanities”](#)

[Read more about COST Action “CA19124 – Rethinking packaging for circular and sustainable food supply chains”](#)

[Read more about COST Action “CA18213 - Rural NEET Youth Network: Modelling the risks underlying rural NEETs social exclusion”](#)



Interdisciplinary in COST Actions



"Fostering interdisciplinary research for breakthrough science" is one of COST's strategic objectives and the flexible nature of COST Actions provide a fertile environment to bring together researchers and projects that cross the borders of formal disciplines. This allows for innovation, integration and cross-fertilisation of concepts, methods, and approaches.

MOSQUITO MENACE

In tropical regions, *Aedes* mosquito species, such as the Tiger Mosquito, cause more than 100 million cases of viral diseases every year that result in thousands of deaths.

"These mosquitos can carry very nasty diseases such as dengue, yellow fever, and Zika," says Dr William Wint of Oxford University, a Working Group Leader on [COST Action AIM \(CA17108 - Aedes Invasive Mosquitoes\)](#). "With increasing trade and travel, several species have arrived in Europe since the 1970s and they have now spread across western Europe."

The invasive species pose a significant public health risk which needs to be effectively and coherently addressed across Europe. Mosquito-borne diseases are already circulating in Europe: West Nile virus became endemic over the past 20 years and Chikungunya has already caused two outbreaks resulting in hundreds of cases in Italy.

"The COST Action covers the whole process from understanding and monitoring where the mosquitos are to best practise in controlling them," explains Dr Wint. "It embraced a broad church of disciplines including entomologists, environmental engineers, agriculture and representatives from public health, commercial and civil society sectors."

The Action has made extensive use of questionnaires to understand how the threat of the invasive species is being approached by different authorities. "We now have a good idea of how things are organised in Europe: who does what and where the gaps are," says Dr Wint.

In terms of controlling the species assessing quality control is important. "It is important to establish

guidelines to ensure that control of the species it done – and done correctly,” comments Dr Wint.

In 2021 AIM held its 3rd Annual Conference as a hybrid virtual and in-person event in September in Istanbul and its second in-person Training Workshop in the same month in Valencia.

“AIM has managed to organise three years of continent-wide standardised surveillance, exploiting both conventional entomological and novel citizen science approaches by persuading existing programmes from many countries to harmonise their activities at no cost to the project. This is unprecedented,” concludes Dr Wint. “Our members now have a more coherent and unified approach to the issue which can deliver a bigger impact.”

DIGITAL ARCHAEOLOGY



A digital archivist at the UK's Archaeology Data Service confronted with the task of trying to rescue archaeological excavation data held on a variety of redundant disk formats

Archaeology and digital technologies may seem poles apart, but digital repositories are the main archive for the results of archaeological research that by its nature is not repeatable. However, due to rapid advances in technologies and the high cycle rate for software and data formats digital archives may be vulnerable.

“Making archaeological data open and freely accessible is a priority across Europe, but we are in danger of losing a generation of research data to a ‘Digital Dark Age,’” says Professor Julian Richards of the University of York and Chair of [COST Action SEADDA \(CA18128 - Saving European Archaeology from the Digital Dark Age\)](#). “In SEADDA we are working to mitigate this crisis by bringing archaeologists and data management specialists together to share expertise and create appropriate sustainable resources.”

The Action is working to ensure that precious digital data is actively curated and preserved for posterity. “An interdisciplinary approach was needed to fill a gap between the archaeologists and information scientists,” continues Prof. Richards. “We needed to jointly develop digital preservation methods that align with the FAIR principles of Findability, Accessibility, Interoperability and Re-usability and share best practice across Europe.”

Methods and technologies have been established but the big challenge is ensuring that data is reusable over the long term. “We have lots of data that could be re-used rather than digging new sites,” states Prof. Richards.

The Action works closely with the [Horizon 2020 project ARIADNEplus](#) which brings together a network of data repositories in Europe and the two efforts are complementary.

“COST is the perfect mechanism to get that cross-disciplinary and inter disciplinary networking going,” says Prof. Richards. “By definition it is open, and you are able to reach out to others, define problems and identify what best practice should look like.”

Support and training for early career researchers is a major part of SEADDA activities and has continued despite Covid in 2021 with virtual STSM visits taking place.

COMMUNICATING WITH TECHNOLOGY

The interface of digital technologies and the humanities – in this case languages and linguistics – is also the subject of [COST Action LITHME \(CA19102 - Language In The Human-Machine Era\)](#).

Cheap wearable devices could soon provide an immersive, high-resolution view of a visually augmented world. LITHME has two aims: to prepare linguistics and associated disciplines for these developments and facilitate a long-term dialogue between linguists and the technology developers.

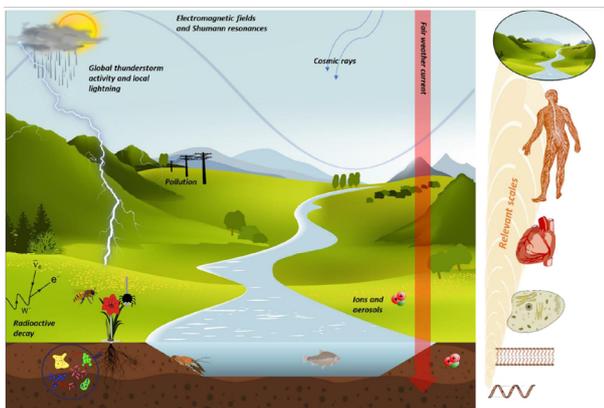
Vice-Chair of LITHME, Dr Sviatlana Höhn from the University of Luxembourg explains that connecting linguists with technology producers will enable a better understanding of how the technology could be used. Language technologies are entering a new era where machine learning and AI can facilitate human communication. This requires a deep understanding of both languages and the technologies. All aspects of human communication need to be addressed in the complex algorithms being developed and this requires a continuing dialogue.

The flexible nature of COST Actions is extremely useful Sviatlana believes. "COST facilitates connections between different research areas and accelerates research," she says. "The open nature of the Action is important."



Dr Sviatlana Höhn sees positive and negative aspects to the Covid situation in 2021. "The pandemic has been difficult but also gave us opportunities to find alternative ways to network and we have been able to call upon a wider spectrum of speakers for our virtual workshops."

ELECTRIC ATMOSPHERE



Conceptual diagram illustrating various atmospheric electric phenomena that have demonstrated links with various levels of biological organization. From Hunting, et al. Challenges in coupling atmospheric electricity with biological systems. *Int J Biometeorol* 65, 45–58 (2021)

The electric field in our atmosphere varies from 100 to several thousand volts per metre and results from a global electric circuit extending from the Earth's surface into the lower ionosphere. A better understanding of a diverse range of environmental processes could be achieved through improved insights on this phenomenon.

"COST is the perfect mechanism to get that cross-disciplinary and interdisciplinary networking going"

Prof Julian Richards, University of York, United Kingdom

Professor Konstantinos Kourtidis of the Democritus University of Thrace is Chair of [COST Action eLECTRONET \(CA15211 - Atmospheric Electricity Network: coupling with the Earth System, climate and biological systems\)](#). "The processes interacting with the field range from earthquakes, clouds and climate to sun-earth interactions, air pollution and lightning. And there is emerging evidence that the field may also interfere with biological processes," he explains.

The Action, that concluded in 2021, aimed to improve the coordination of research efforts and construct a bigger picture of atmospheric electricity and its environmental impacts.

"The action was very interdisciplinary including physicists, climate scientists, solar-terrestrial scientists, biologists, and even medical doctors," says Konstantinos. "The Action started with a small group of 15-20 members – mainly physical scientists - but by the end of the Action we had 90 members of which 20 were biologists or doctors."

"COST's flexibility was a great asset," he continues. "Our interactions and exchanges with different disciplines helped to understand different fields and was of tremendous benefit to all. It enabled us to couple things together and explore completely new directions."

The main outcome was the creation of a continuing network to coordinate and exchange measurements of the atmospheric field on a global basis. The Action also produced a series of publications on biological interactions, delved into the field of earthquake

precursor signals and has developed new standardised instrumentation that is being commercialised and should enable a denser monitoring network.

[Read more about COST Action "CA17108 - Aedes Invasive Mosquitoes"](#)

[Read more about COST Action "CA 18128 - Saving European Archaeology from the Digital Dark Age"](#)

[Read more about COST Action "CA19102 - Language In The Human-Machine Era"](#)

[Read more about COST Action "CA15211 - Atmospheric Electricity Network: coupling with the Earth System, climate and biological systems"](#)



Empowering young researchers

COST empowers the next generation of researchers by enabling their active participation in COST Actions and encourages them to take leadership positions. Five young researchers share their experience of the COST Programme and explain how participating in COST Actions led to career opportunities: Dr Urszula

Stachewicz, Dr Kareen Elsayad, Prof. Martin O'Halloran, Dr Raquel Conceição and Dr Tanja Knific.

[Watch the video](#)



[Watch the long version of the video](#)

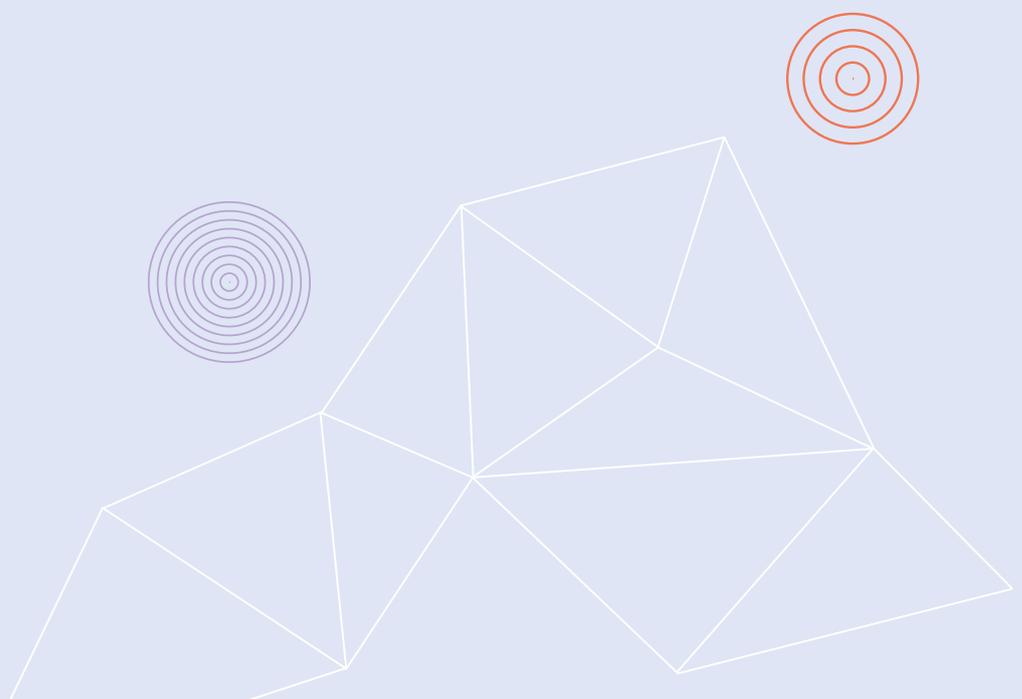
Key figures of 2021



Financial overview

COST is financed as a Coordination and Support Action (CSA) in the form of multiannual Specific Grant Agreements within a seven-year Framework Partnership Agreement (FPA) under Horizon Europe. In 2021, the budget dedicated to COST was coming from two Horizon 2020 Work Programmes, namely Work Programme Part 13 (Europe in a changing world – inclusive, innovative and reflective societies) and Part 15 (Spreading Excellence and Widening Participation). The total contribution of Horizon 2020 for the period between 1 May 2020 and 31 October 2021 amounted to € 40,920,000.

COST is a global framework and its core activity is the networking of researchers and stakeholders from public and private institutions, NGOs, industry, and SMEs. It carries out its activities on a multiannual basis, which means the networks funded by the COST Association – the COST Actions – run for four years and are implemented under decentralised management, namely the COST Grant System.





90%

Percentage of researchers who indicated that virtual networking led to professional development



32%

Percentage of Horizon 2020 spin-off proposals that received funding

289

Running Actions in 2021

31

Average number of COST Members per Action

6

Average number of non-COST countries per Action

€3.9M

Average value of approved spin-off projects per Action

22 638

Number of proposers in 2021 COST Open Call

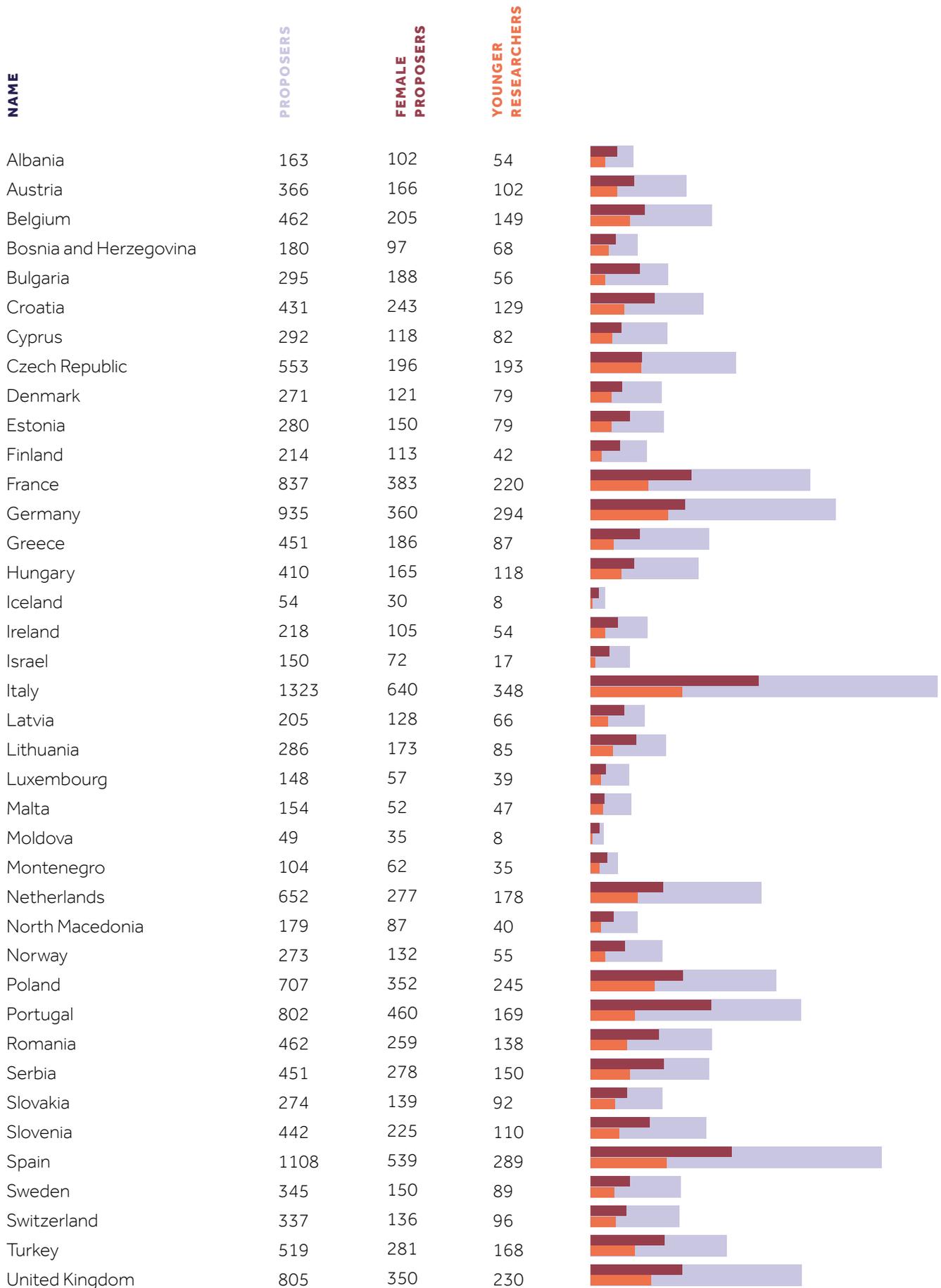
1 162

Number of SMEs involved in COST Actions

Country participation



Proposers profile per country



Events



17/03/2021

International Congress 'Engineering, Environment and Materials in Process Industry'



Dr. Suzana Gotovac Atlagić, COST Scientific Committee Member from Bosnia and Herzegovina, joined the 7th edition of the International Congress 'Engineering,

Environment and Materials in Process Industry', organised by the Faculty of Technology Zvornik, University of East Sarajevo. This congress aimed to promote a wide and constructive discussion on the status and achievements in the processing industry, as well as to help researchers, scientists, and academia discover new directions in research, development, and education. Dr. Gotovac Atlagić presented the COST programme, highlighting the importance and methodology of partnership with ITCs in COST. An info corner was also set up to further raise awareness on the COST Actions and participation opportunities.

[Find out more](#)

31/03/2021

COST Connect on Europe-Africa cooperation



COST organised the first COST Connect on Europe-Africa cooperation with COST Actions on 31 March 2021 to strengthen the development of research networks between continents.

As the internationalisation of research is growing in importance, this workshop provided a valuable opportunity to echo the experiences from ongoing Actions involving African partners. At the same time, the event explored the challenges these researchers encountered, and highlighted the outcomes and benefits of joining COST Actions from different perspectives. The open nature of COST Actions offer key benefits to European and international researchers and innovators. A quarter of African countries are already involved in one or more of the 290 running COST Actions.

[Find out more](#)

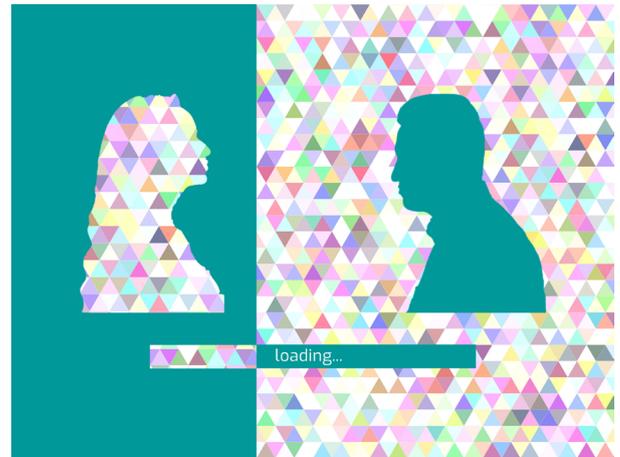


29/04/2021

COST Connect on Gender Equality

The first ever COST Connect on advancing gender equality in research and innovation was organised, bringing together a wide diversity of ambassadors of gender equality, including researchers and innovators from COST Actions and European Union policy stakeholders. This event was planned with the view to address the challenge and to benefit from the experience and expertise of the participants active in the field. Participants discussed the main structural barriers that prevent women from pursuing a career in R&I; the gaps in policy approaches that are currently in place; what can be done to make research careers more attractive to women researchers and to better support them in their career progression.

The workshop contributed to the ongoing debate on this topic and offered a platform for discussion and networking between participants.



[Find out more](#)

Media



Reaching the world



670

articles in mainstream
online news & media



831

articles in specialised
magazines and
scientific reviews



1501

total articles

* source: Meltwater

670 articles mainstream online news & media

TIMES  MALTA

BBC

EL  MUNDO

 **EurekAlert!**

DELFI

HABERLER.COM

 SAPO

SCIENCE | BUSINESS

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 RTV
SLO

ANSA

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COST ACTION: EVOLUTION OF READING IN THE AGE OF DIGITISATION (E-READ)

What is deep reading and why it does good for the brain - Reach 64.7M

[O que é a leitura profunda e por que ela faz bem para o cérebro - BBC News Brasil](https://www.bbc.com/portuguese/health-57844444)



COST ACTION: EUROPEAN ENERGY POVERTY: AGENDA CO-CREATION AND KNOWLEDGE INNOVATION (ENGAGER)

80 million European households struggle to stay warm. Rising energy costs will make the problem worse - Reach: 151M

<https://edition.cnn.com/2021/09/30/business/europe-energy-poverty/index.html>



COST ACTION NETWORK ON PRIVACY-AWARE AUDIO- AND VIDEO-BASED APPLICATIONS FOR ACTIVE AND ASSISTED LIVING (GOODBROTHER)

The good 'Big Brother', from Alicante: the project to respect the privacy of the elderly - Reach: 29.6M

https://www.elespanol.com/alicante/vivir/20210917/gran-hermano-alicante-proyecto-respetar-privacidad-ancianos/612439713_0.html



COST ACTION: EUROPEAN NETWORK OF VACCINE ADJUVANTS (ENOVA)

Adjuvants: the unsung heroes of vaccines - Reach: 18.3M

<https://theconversation.com/adjuvants-the-unsung-heroes-of-vaccines-156548>



