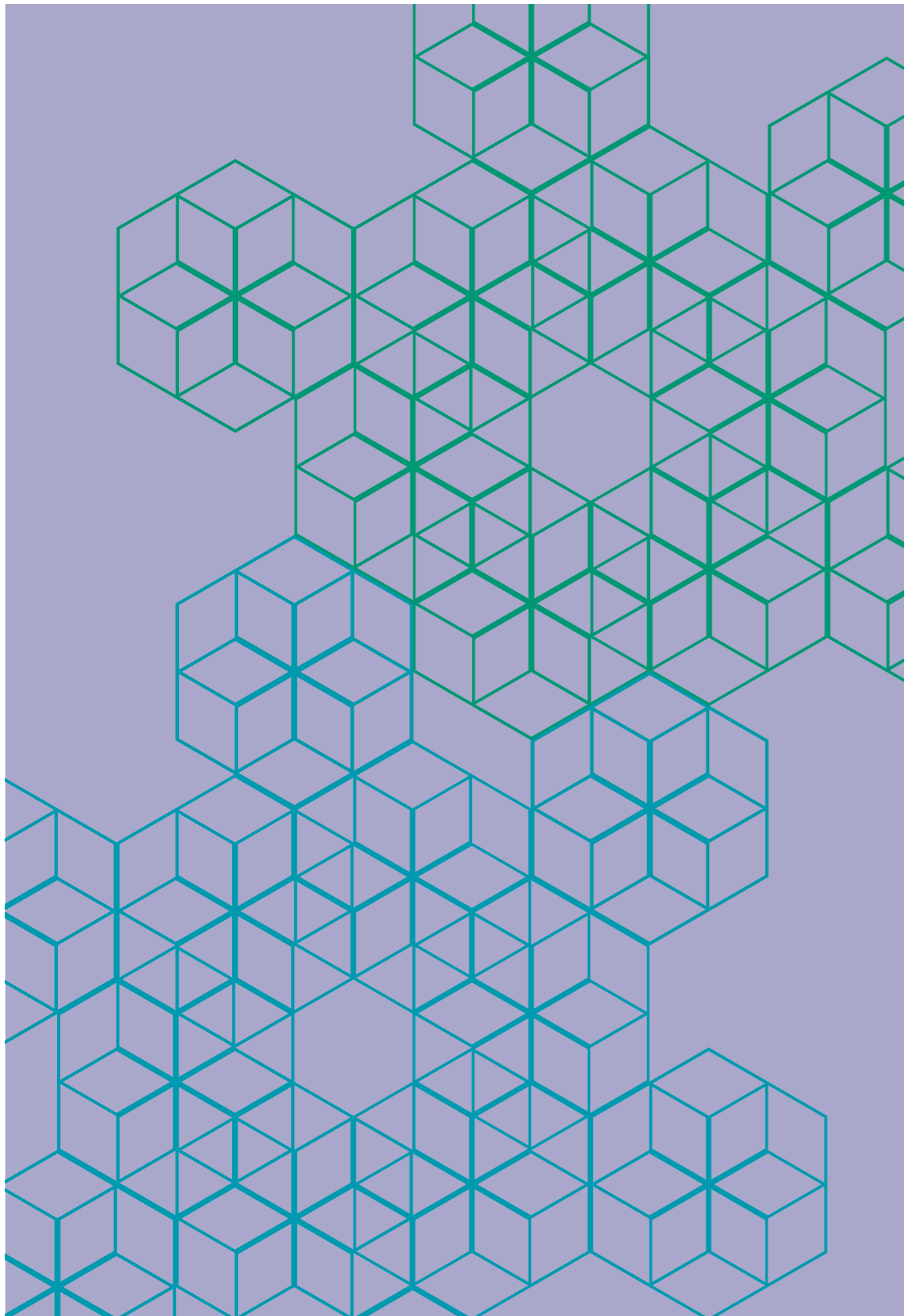


Annual Review **2017**



CERN & Society



Word from Anne Richards,
CERN & Society Foundation Chair

DEAR DONORS AND PARTNERS,

2017 marks the CERN & Society Foundation's fourth year of activity, with a growing number of beneficiaries and partners worldwide. In only a short period of time the CERN & Society Foundation has made a difference to the lives of thousands worldwide and we are proud of everything we have achieved so far in the service of science. We owe this increasing impact to all of you - our invaluable donors and partners - for your continuous support, and are grateful for your unfailing engagement.

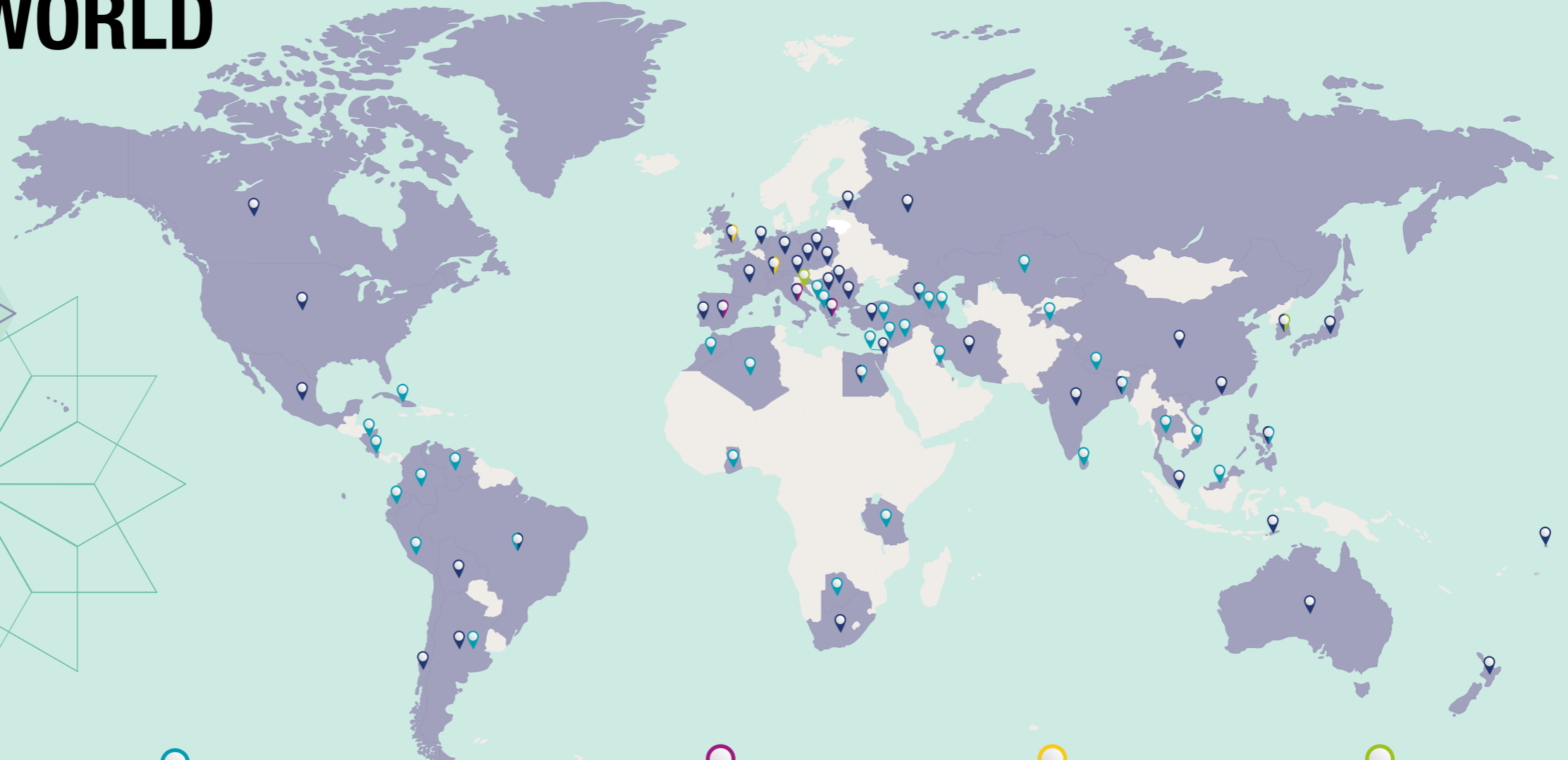
With our mission to spread the CERN spirit of scientific curiosity, for the inspiration and benefit of society, in 2017 we decided to emphasise what we consider to be our core expertise, that of empowering youth through scientific and technological training. In identifying youth and education as our priority, we are focusing our efforts on bringing more young people worldwide closer to science and technology, while continuing supporting the CERN & Society project portfolio in its entirety. On the following pages, you can find more details on a selection of projects that have benefited from your commitment over the past year.

This year has also seen some significant developments, which will help us serve our local and international communities and ensure we have the necessary agility to undertake our most ambitious project so far: the Science Gateway, an iconic education and visitor centre close to the Globe of Science and Innovation as the reference point of scientific, public engagement and outreach activities in the wider Geneva region.

In 2018, this next chapter in the history of the CERN & Society Foundation will begin to take shape and we are counting on our donors and partners to embark on this new adventure together.

Thank you for your help in spreading CERN's spirit of scientific curiosity.

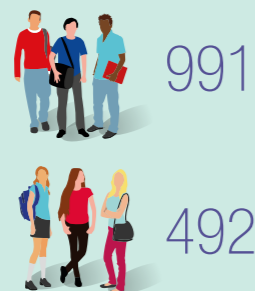
OUR REACH AROUND THE WORLD



BEAMLINE FOR SCHOOLS COMPETITION

Engaging high-school students in real experimental particle physics research at CERN.
180 proposals were submitted by **1 485** students.

Gender distribution:



NON-MEMBER STATE SUMMER STUDENTS

Giving the next generation of scientists the skills to contribute to the development of their communities.
39 students fully supported for 8 weeks

Gender distribution:



CERN NATIONAL TEACHER PROGRAMMES

Equipping teachers to empower students and the future of science through their own scientific education.
90 teachers supported

Gender distribution:



COLLIDE

Artist residency programme bringing together artists and scientists to support artistic innovation and openness to fundamental research.
2 residencies granted

Gender distribution:



ACCELERATE

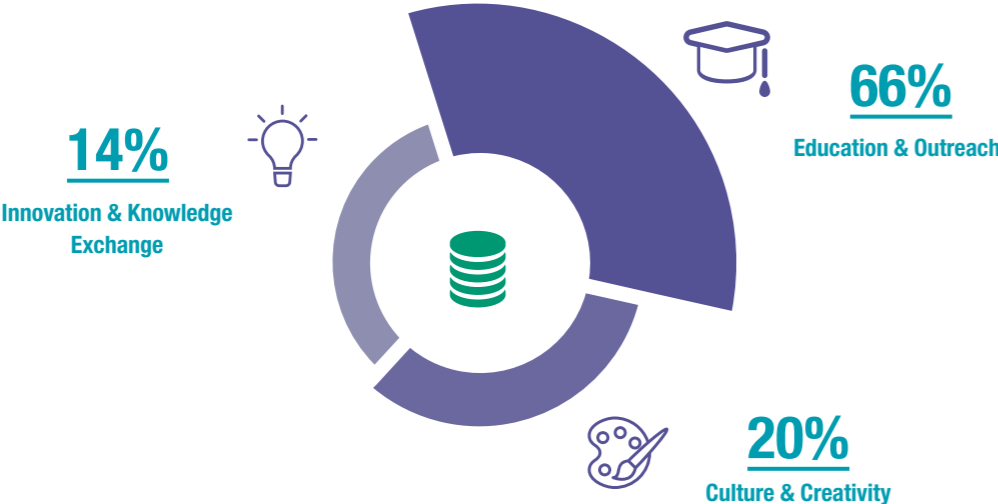
Country-specific, one-month artist residency award accelerating creativity between culture and science.
2 residencies granted

Gender distribution:



THE IMPACT OF YOUR DONATIONS SINCE 2014

2014 - Year of establishment of the CERN & Society Foundation



“WINNING THE BEAMLINE FOR SCHOOLS COMPETITION
OPENS SO MANY DOORS TO A KNOWLEDGE OTHERWISE
INACCESSIBLE TO ME. I FEEL INCREDIBLY PRIVILEGED
TO BE GIVEN THIS OPPORTUNITY.”



ALONSO CORRALES (23), Costa Rica
Non-Member State
Summer Student 2017



DENISA LOGOJAN (19), Canada
Beamline for Schools
Competition 2017

“THE PROGRAMME ALSO GIVES YOU THE OPPORTUNITY TO BE AMONG
DIFFERENT CULTURES, PEOPLE FROM ALL COUNTRIES. I LOVE HOW IT
DOESN'T MATTER WHERE YOU'RE FROM, WE'RE ALL HUMAN, AND WE
INTERACT AND LEARN FROM EACH OTHER.”

OUR DONORS

NUMEROUS DONORS AND PARTNERS GENEROUSLY SUPPORTED THE
CERN & SOCIETY FOUNDATION IN 2017. THANK YOU FOR YOUR CONTINUOUS
AND VERY VALUABLE SUPPORT.

FOUNDATIONS & ORGANISATIONS

- American Astronomical Society
- Arts Council Korea
- Fondation pour la lutte contre le Cancer et pour des recherches Médico-biologiques
- Fondazione Silvio Tronchetti Provera
- Foundation for Art and Creative Technology (FACT)
- Fund Ernest Solvay,
- managed by the King Baudouin Foundation
- Motorola Solutions Foundation
- Fundación AQUAE
- Arconic Foundation
- Kontejner
- Pro Helvetia
- Science and Technology Facilities Council
- Simons Foundation International, Ltd
- The Austrian Federal Chancellery

COMPANIES

- Julius Bär Group Ltd
- Bekamat GmbH
- Google Inc*
- Kale Holding S.A
- National Instruments Switzerland*
- Pestalozzi Attorneys at Law Ltd*
- SubC Control
- Uniqa Assurances S.A.

INDIVIDUALS:

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- Alessandro Lanci
- Alexander von Gluck
- Alexandra Stone
- Ana Godinho
- Andreas Watterott
- Andrew Armstrong
- Andrew Sowa
- Andrey Skvortsov
- Ange Vaty
- Anthony Harsant
- Bernard Ross
- Brad Barnett
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- Josué Sehnem
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- Weigand, Nico
- Widar Hellwig
- Wolfgang Langhammer
- Xavier Descarrega
- Yasemin Arik & Akhil Monappa
- Žiga Stegu

We also thank the many donors who supported CERN & Society in 2017 but do not wish to be named.

*partly or fully in-kind

HOW YOU CAN HELP

There are many ways to support the CERN & Society initiatives. No matter how - or how much - you give, your gift will make a difference!

You may choose whether you prefer to support specific initiatives via earmarked donations, or if you want to make an unrestricted donation that can be used to support the immediate and pressing needs of the CERN & Society projects.

CERN provides the large majority of the necessary operating resources for fundraising. A fraction of unrestricted donations are also used to cover processing fees applying to contributions received by credit card or PayPal, and other operating expenditures. Otherwise, all funds go directly to benefiting our projects and increasing their impact.

AREAS OF ACTIVITIES



Education & Outreach



Innovation & Knowledge Exchange



Culture & Creativity

ONLINE DONATIONS

Boost CERN & Society's reach easily and quickly! You can make a secure recurring or one-off online donation at www.cern.ch/donate

AT THE CERN SHOP

If you happen to be around CERN, pay a visit to the Gift Shop. There, you will find authentic LHC Data Tapes available as souvenirs with a contribution of 10 CHF or more. 100% of your donation will go directly in support of CERN & Society projects.

TRUSTS, FOUNDATIONS AND COMPANIES

Help us put science's benefit for society under the spotlight. We have taken important steps forward so far thanks to our partners, but we can do so much more with additional help!

For information about partnership opportunities with CERN & Society, please write to us at: partnerships.fundraising@cern.ch



CERN NATIONAL TEACHER PROGRAMMES

Around the world there is a growing demand for a skilled workforce in STEM (Science, Technology, Engineering and Maths). Passionate teachers who can inspire learning are therefore much needed to engage more students in scientific studies. To meet this challenge, every year CERN organises professional development programmes for teachers in their national language - to keep up-to-date with the latest developments in particle physics and related fields, and experience a dynamic, international research environment. National Teacher Programmes enable teachers to bring science and the latest scientific developments into their classrooms.

2017 NATIONAL TEACHER PROGRAMMES

Last year, thanks to the invaluable help of our partners, the CERN & Society Foundation proudly contributed to several National Teacher Programmes funding **90 teachers** from **Greece, Italy and Spain**. During their sessions, the teachers had the unique opportunity to widen their knowledge of fundamental research in the world's largest physics laboratory, enrich their professional skill set, and create long lasting relationships with fellow teachers and senior scientists which benefit their home countries' education.

"I HAD THE OPPORTUNITY TO UPDATE MY CURRENT KNOWLEDGE, BUT ALSO LEARN MORE ABOUT PHYSICS. I CAN NOW BETTER RESPOND TO MY STUDENTS' QUESTIONS NOT ONLY ABOUT CERN, BUT ALSO ABOUT THE MICROCOSM AND THE UNIVERSE."

2017 GREEK TEACHER PROGRAMME PARTICIPANT

Hear from our donors - Dimitris Afendoulis, John S. Latsis Public Benefit Foundation

"Being strong believers of the interconnection between education and social change, we are proud to be partnering with CERN and the CERN & Society Foundation for the second consecutive year. In this two-year journey, we have been witnesses to their ability to inspire, engage and equip teachers with ambition and educational tools.

For more than a decade, the John S. Latsis Public Benefit Foundation has supported educational initiatives that seek to enhance the overall learning experience of both students and teachers and promote knowledge as a public good. We feel fortunate to be contributing to the CERN Teacher Programme where teachers become students, express their scientific curiosity and then act as disseminators of knowledge to their pupils back home."



CERN BEAMLINE FOR SCHOOLS COMPETITION

Every year Beamline for Schools (BL4S) gives hundreds of young students from all over the world the opportunity to get hands-on with science. Teams of students, led by a tutor, work on a scientific proposal for an experiment they compete to be carried out at CERN, as the prize of the Competition.

Since the first international competition was launched in 2014, BL4S has engaged over 7 000 high school students from all over the world in Science, Technology, Engineering and Mathematics (STEM).

2017 BL4S COMPETITION

Thanks to the generous donors supporting the Competition, valuable steps were made in 2017 to nurture and inspire the next generation of scientists and innovators.

In September, from 180 applications, two winning teams of the 2017 edition, “TCO-ASA” from Fermo, Italy, and “Charging Cavaliers” from Cambridge, Canada, came to CERN for

“WE’RE SO LUCKY TO HAVE BEEN ABLE TO EVEN HAVE A TASTE OF WHAT IT’S LIKE TO CONDUCT EXPERIMENTS AT CERN. AS A SOON-TO-BE PHYSICS STUDENT, THIS IS AN EXPERIENCE THAT WILL PROVIDE ME WITH A LIFETIME OF INFLUENCE.” JACOB LEHMANN (19) CANADA, “CHARGING CAVALIER” STUDENT, BL4S 2017

two weeks to conduct their experiments at a fully-equipped CERN beamline.

The students worked in four shifts each day in the control room and the T9 beam line in the East Hall, while at the same time several volunteers helped them with data acquisition, living for more than 10 days the life of a scientist.

Even after returning to their schools, their experience did not end. Data analysis has continued with the help of the support scientists and teachers, and they were encouraged to write a scientific paper, which could eventually be published in a scientific journal or presented at a conference. Two of our former winning teams have done already.

Hear from our donors: Jasper van Zon, Arconic Foundation Europe

“2017 marked the second consecutive year of Arconic Foundation’s partnership with CERN and the CERN & Society Foundation, as part of the Beamline for Schools student program. Working with CERN and in particular being actively involved in the Beamline for Schools program, we have been greatly impressed by the engagement and enthusiasm of so many students across the globe, on their way to becoming the scientists, engineers, disruptors and leaders of tomorrow.”

Arconic creates breakthrough products that shape industries and solve our customers’ toughest challenges – those that require ingenuity and engineering and technical expertise from the brightest minds. Arconic Foundation supports that mission by helping to prepare tomorrow’s workforce for successful, rewarding careers that advance the future of manufacturing while keeping our communities strong and vibrant.

CERN’s capacity to drive young people’s interest in science and advanced STEM education, and to inspire tomorrow’s science and engineering graduates, complements Arconic Foundation’s mission in the most effective and rewarding way. We believe that education empowers individuals, unleashes an inventive mindset, and opens doors to great careers and a promising future. Together with the CERN & Society Foundation and all our nonprofit partners we are creating rewarding opportunities through education and job training programs. And, we are working to change perceptions of manufacturing to attract top talent to this innovative and competitive field.

Our partners – such as the CERN & Society Foundation – are recognized for their impact, reach and reputation. Together, we are committed to building strong long-term partnerships that produce meaningful results.”



“THIS IS AN ENRICHING AND
STIMULATING EXPERIENCE. CERN
IS GIVING ME A CHANCE TO GET
ME IN THE RIGHT DIRECTION IN
MY FUTURE.” ALBERTO CIFUENTES, COLOMBIA -

NON-MEMBER STATE SUMMER STUDENT 2017

NON-MEMBER STATE SUMMER STUDENT PROGRAMME

The Non-Member State Summer Student Programme aims to reinforce scientific education, targeting a diverse group of students from around the world, being nationals of any State that is not a CERN Member or an Associate Member State*.

Irrespective of gender, race or religion, advanced undergraduate and early graduate students of

physics, computing and engineering are invited to apply for a unique opportunity to join in the day-to-day work at CERN. Offered is an intensive 8-week training during summer where students will be assigned to a CERN supervisor and work on various projects. This hands-on work is complemented by a daily lecture programme.

2017 SUMMER STUDENT PROGRAMME

Last year, thanks to the help of our generous donors, the CERN & Society Foundation was able to give **39 students** from **34 different countries** a full summer scholarship.

Some of the many exceptional benefits the students said they gained in the 2017 programme are:

- undertaking hands-on work and understanding science and technology concepts previously only understood at a theoretical level;
- feeling accepted as equals irrespective of age, gender or nationality within a first class scientific institution;
- meeting fellow students and scientists from all over the world, working side-by-side and learning from each other;
- contributing to research and scientific experiments as members of the CERN community;
- acquiring experience and knowledge useful for their home countries; and
- gaining clarity about their future career path.

*The following 22 countries are Member States of CERN: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, and the United Kingdom. India, Lithuania, Pakistan, Turkey and Ukraine are Associate Member States of CERN. Cyprus, Serbia, Slovenia are Associate Member States in the pre-stage to Membership.

Hear from our donor: Marilyn and Jim Simons, Simons Foundation International, Ltd.

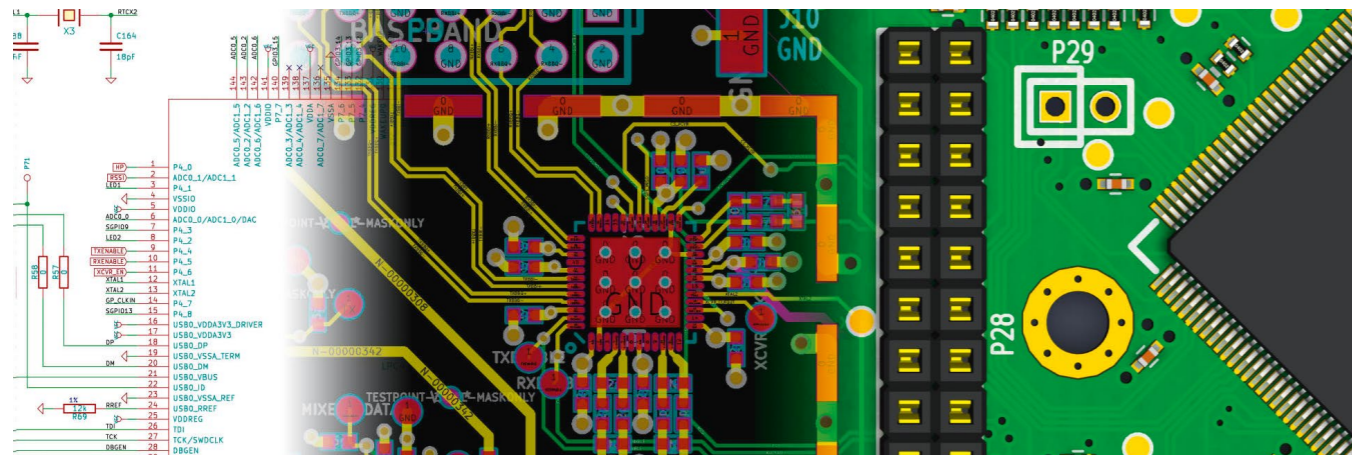
“Supporting the CERN & Society Foundation’s Summer Student Programme for young scientists speaks to our long-term commitment of investing in the scientific talent of the future. When young people have hands on opportunities to work in outstanding scientific institutions, alongside accomplished researchers and faculty, they experience the creative and passionate pursuit of ideas, and the curiosity that motivates scientists. This is often a career-defining experience, allowing young scientists to imagine career paths they might not have considered beforehand. Bringing a diverse group of young scientists from around the world, especially from developing countries, and connecting them with the CERN community will play an important role in their academic careers; moreover, it may help address the talent crisis many countries face worldwide.”

The Simons Foundation International, Ltd. was established in 2011 to support basic research in science and mathematics at outstanding institutions around the world. The Foundation also supports selected education and outreach initiatives in the discipline of science and mathematics.

Hear from our donor: Stephen Loader, Science and Technology Facilities Council

“The UK Science and Technology Facilities Council is delighted to support the CERN Summer Student Programme. As part of our portfolio of activities from the UK Global Challenges Research Fund, we are keen to enable students from low and medium income countries (LMICs) to experience life at CERN so that it inspires them and positively influences their future careers. The students benefit hugely from the CERN experience, whilst their country benefits in the longer term as they hopefully decide on a career in research, thereby strengthening their country’s future research capability.”

PASSIONATE ABOUT OPEN SCIENCE



KICAD DEVELOPMENT

Promoting open access to information and design is one of CERN's key philosophies. This is why a small group of devoted developers have spent the last 5 years working on the improvement of KiCad, an efficient tool for designing open-source hardware. KiCad benefits from a wide community of users that actively contributes time and money to its development. In 2017, **more than 150 hours of development** were made possible thanks to individual online donations to the CERN & Society Foundation. This support, as well as the hours of hard work, meant CERN developers were able to build in many new and useful features to the software to facilitate and increase the impact that this technology has on people's professional lives.

ZENODO

Sharing research findings has advanced science throughout history. Sadly today, data are rarely shared when publishing scientific results. This is why we value Zenodo. Zenodo was born at CERN with the EC's OpenAIRE project. Zenodo taps into CERN's long-standing tradition and expertise in how to share and preserve scientific knowledge for the benefit of all. Zenodo aims to address the need to make the publishing, sharing, and long-term stewardship of scientific data and software a reality for all researchers. Zenodo is a free, open, dependable repository that allows researchers to share and preserve their research outputs of any size or format, and from any science. Thanks to the generous support received from donors to the CERN & Society Foundation, 2017 was a record year for Zenodo. **A six-fold increase in data volume and a two-fold increase of visitors** was achieved in comparison to 2016. With this, Zenodo has become **the world-leading platform to register Digital Object Identifiers for research software.**



ARTS AT CERN

"TODAY, ARTISTS FROM ALL OVER THE WORLD ARE INVITED TO CERN, THROUGH OUR PROGRAMMES, TO EXPLORE NEW IDEAS AND WORK ALONGSIDE PARTICLE PHYSICISTS AND ENGINEERS. I AM THRILLED TO PROVIDE THESE OPPORTUNITIES IN THIS UNIQUE ENVIRONMENT WHERE ARTISTIC PRACTICE ACQUIRES A NEW DIMENSION AND UNDERSTANDING".

MÓNICA BELLO, CURATOR AND HEAD OF ARTS AT CERN.

Arts at CERN promotes dialogue between artists and particle physicists. The programme fosters the creation of new expert knowledge in the arts by extending artists' practice in connection with fundamental research.

At CERN we believe that particle physics and the arts are inextricably linked - both are ways to explore our existence. The two fields are natural creative partners for innovation, research and development.

Arts at CERN has several strands:

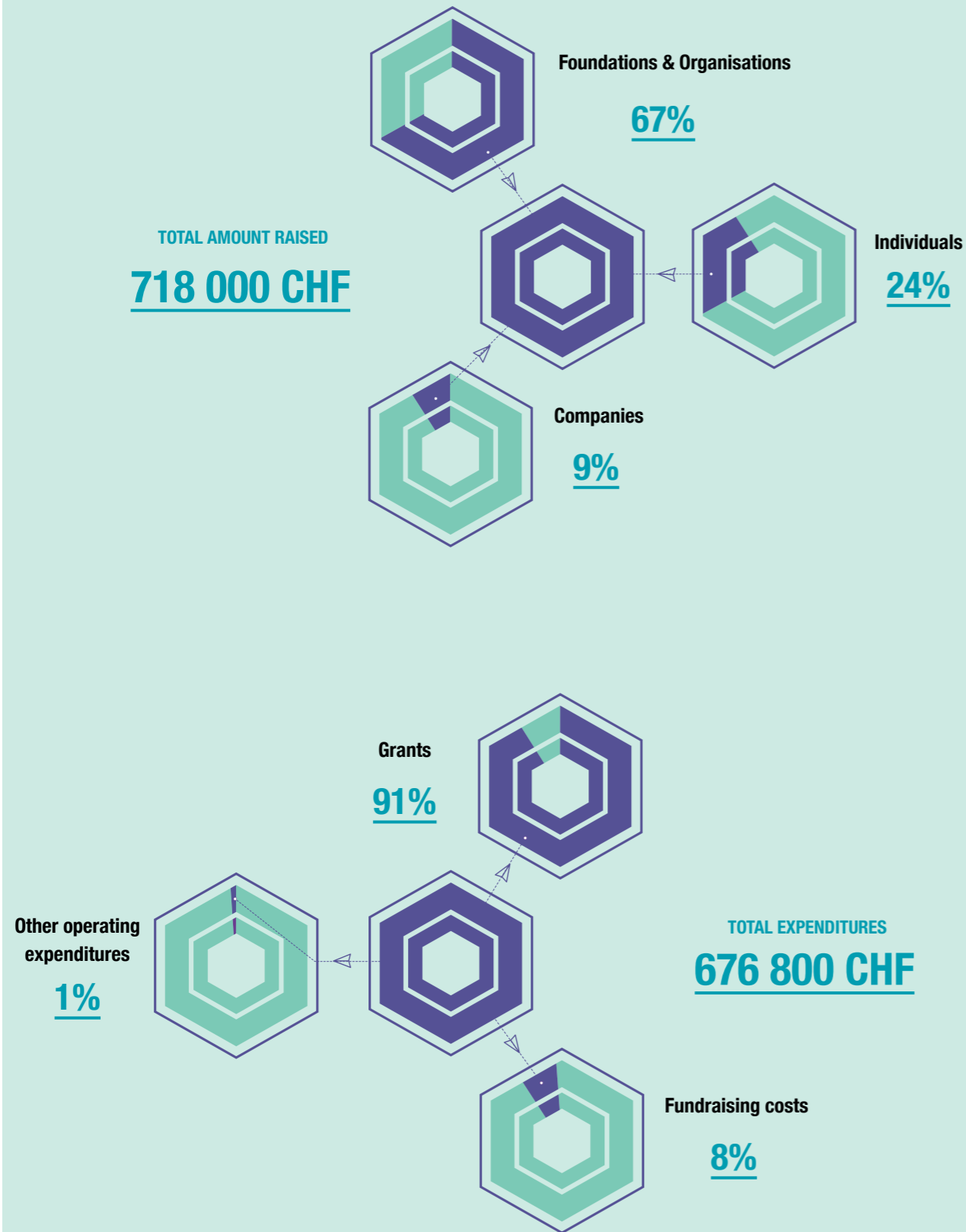
- Collide International Residency Award (a 3 months residency)
- Collide Geneva & Collide Pro Helvetia Residency Award (a 3 months residency)
- Accelerate Residency Award (a country specific, 1 month residency)
- Guest Artists visits

In 2017, ARTS AT CERN awarded four residencies at CERN for Collide Pro Helvetia, Collide International, Accelerate Korea and Accelerate Croatia. In addition, we welcomed eight guest artists to the CERN laboratory.

"I WOULD LIKE TO EMLACE A FORMAL LANGUAGE, A DESIGN PRINCIPLE OF OBJECTS THAT CORRESPONDS WITH THE WAY THAT PARTICLES ARE SEEN, DESCRIBED AND CHARACTERIZED BY SCIENTISTS."

LAURA COUTO ROSADO, COLLIDE PRO HELVETIA RESIDENCY AWARD 2017

FINANCES



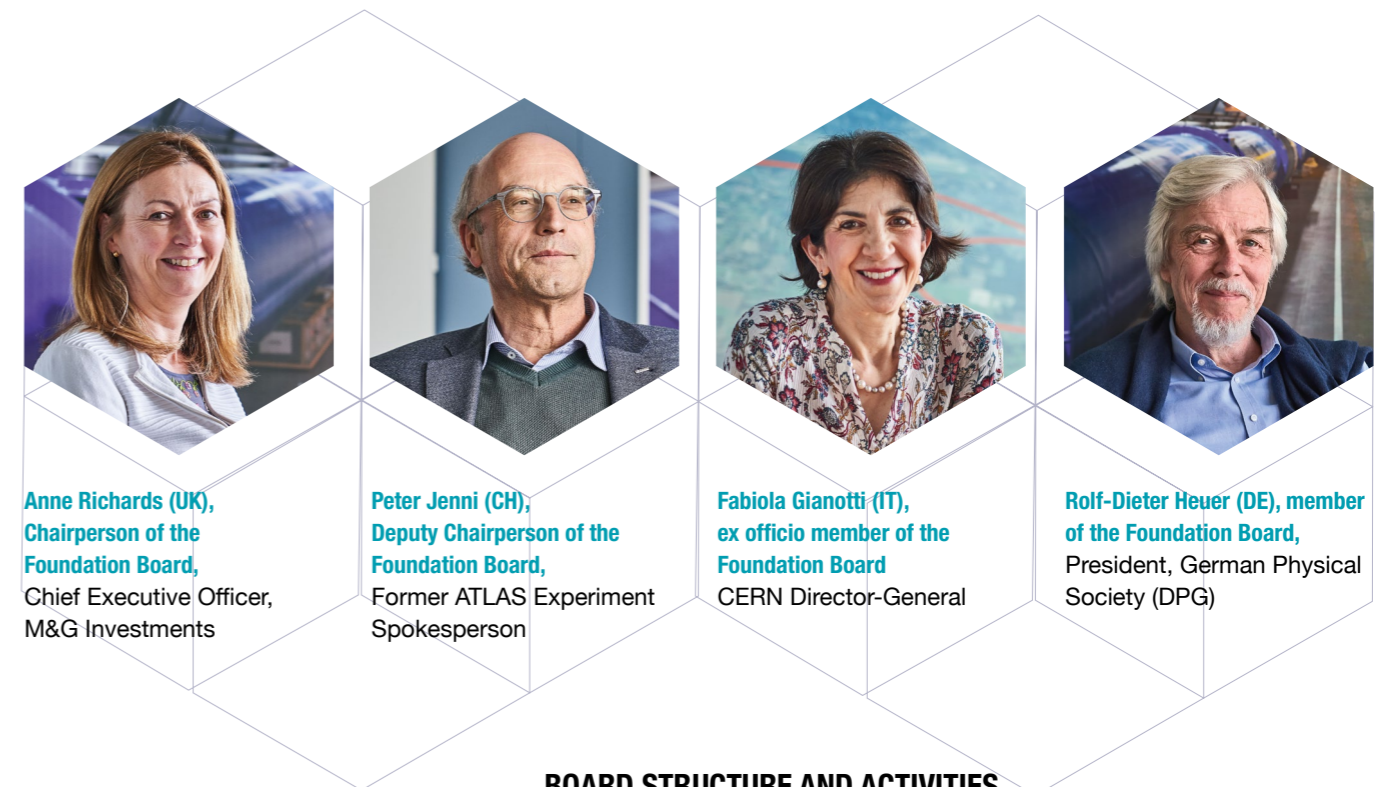
From 1st January 2017 to 31st December 2017

CERN & SOCIETY FOUNDATION BOARD

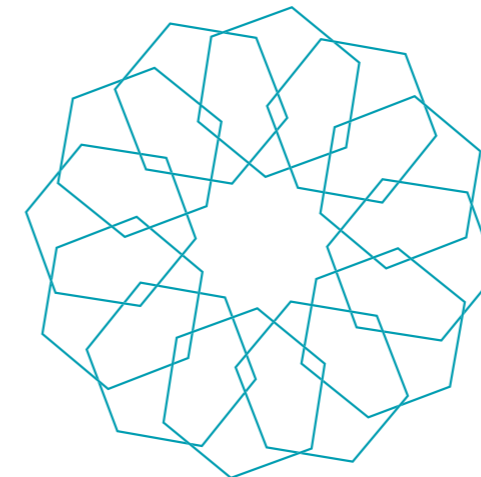
The Foundation is an independent not-for-profit entity. The purpose of the CERN & Society Foundation is to support and promote the dissemination, to the widest extent possible, the benefits of CERN's mission.

The core governance structure of the CERN & Society Foundation is the Foundation Board.

During 2017, the CERN & Society Foundation Board had four members.



BOARD STRUCTURE AND ACTIVITIES



The Foundation's Articles of Association allow for a maximum of nine and a minimum of three Board members, including the Director General of CERN ex officio, and one member designated by CERN. The Foundation's Board members hold board meetings throughout the year, at approximately four-monthly intervals. The Board is responsible for the overall direction, management and administration of the Foundation, and its assets, and takes decisions according to the provisions set forth in the Articles of Association on all matters concerning the Foundation. The Board also makes decisions on strategy and policies for the Foundation.

The CERN Partnerships & Fundraising unit provides administrative and fundraising support of the CERN & Society Foundation.



CREDITS

CERN Partnerships & Fundraising

Would you like to support CERN & Society
or learn more about our work?
Please get in touch with us. We look forward
to getting to know you.

Partnerships.Fundraising@cern.ch
www.cern.ch/giving

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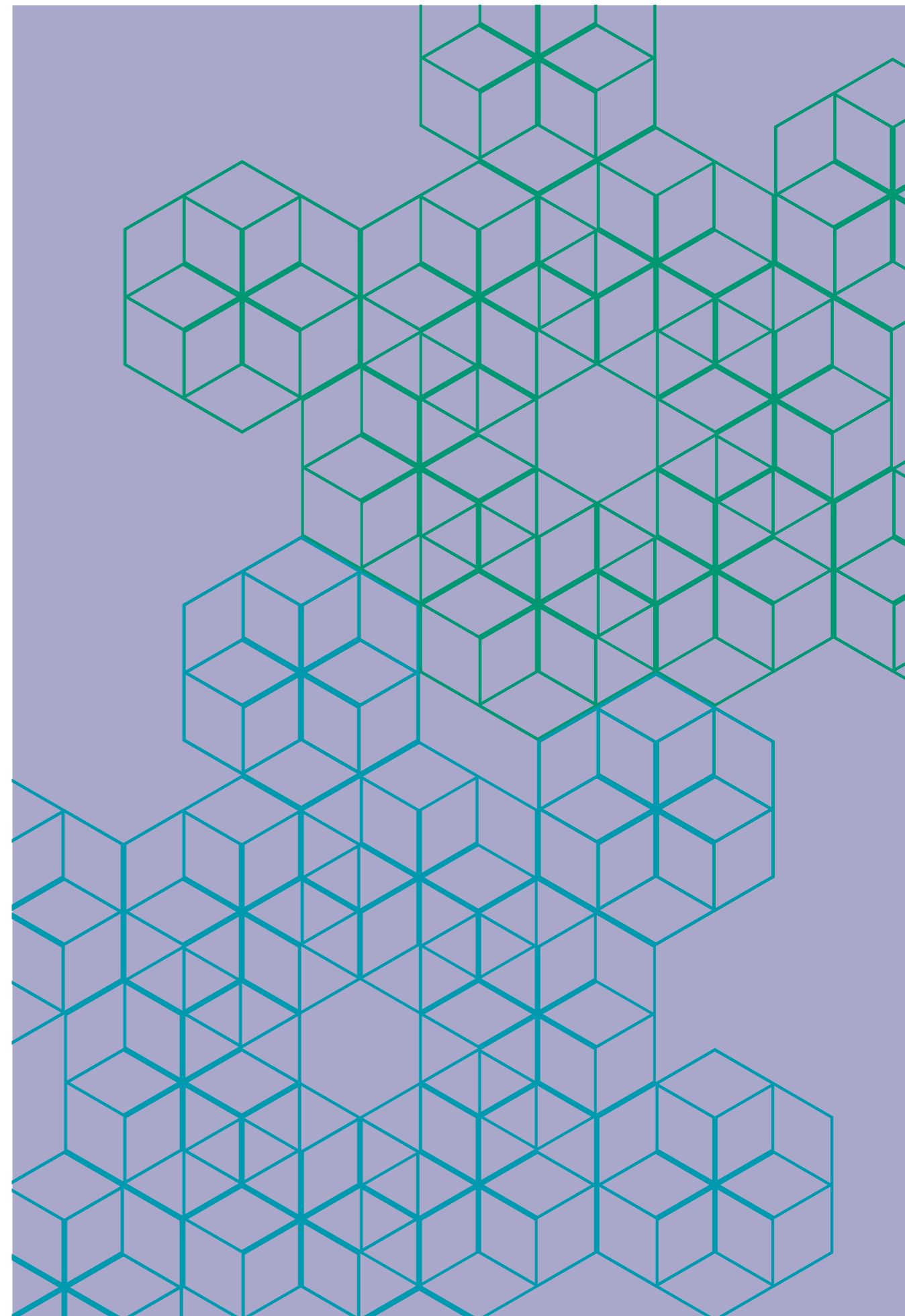
Graphic design and layout:
CERN Graphic Design
and Visual Identity service

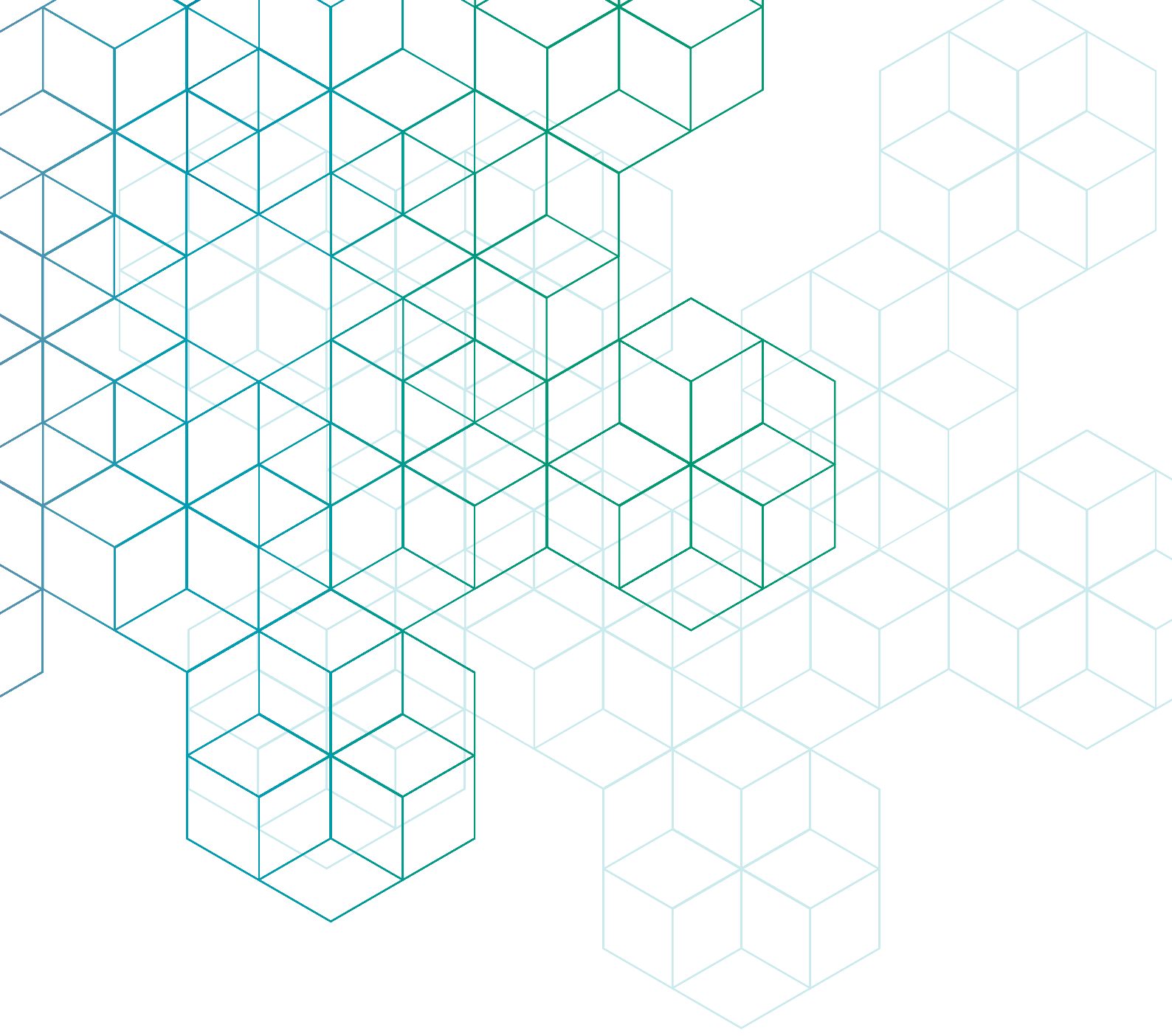
Photography:

CERN (p. 3, p. 6, p. 8, p. 9, p. 10,
p. 11, p. 12, p. 13, p. 15, p. 17)

Shutterstock (p. 4, p. 5)

Marek Roszko and Martin d'Allens p. 14





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