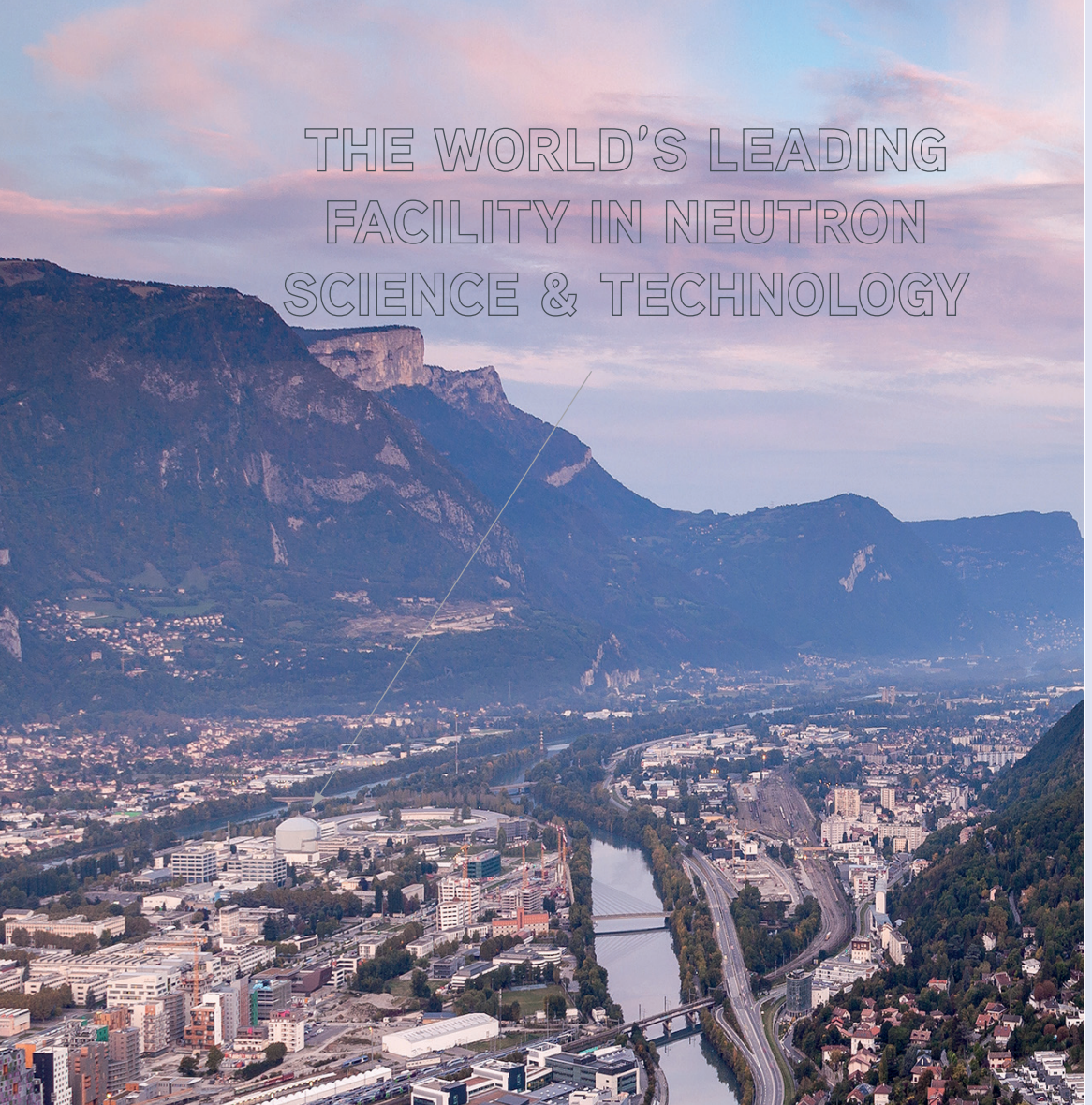
NEUTRONS
FOR SOCIETY

INSTITUT **LAUE LANGEVIN**



THE WORLD'S LEADING FACILITY IN NEUTRON SCIENCE & TECHNOLOGY

The Institut Laue-Langevin (ILL) is a user facility welcoming scientists from all around the world to perform cutting edge experiments fostering progress in a variety of scientific and technological domains. Producing the most intense beams of neutrons in the world, it offers a unique tool for probing the heart of matter. The ILL plays a leading role in scientific research, innovation and education and has been the acknowledged world leader in its field for almost 60 years.

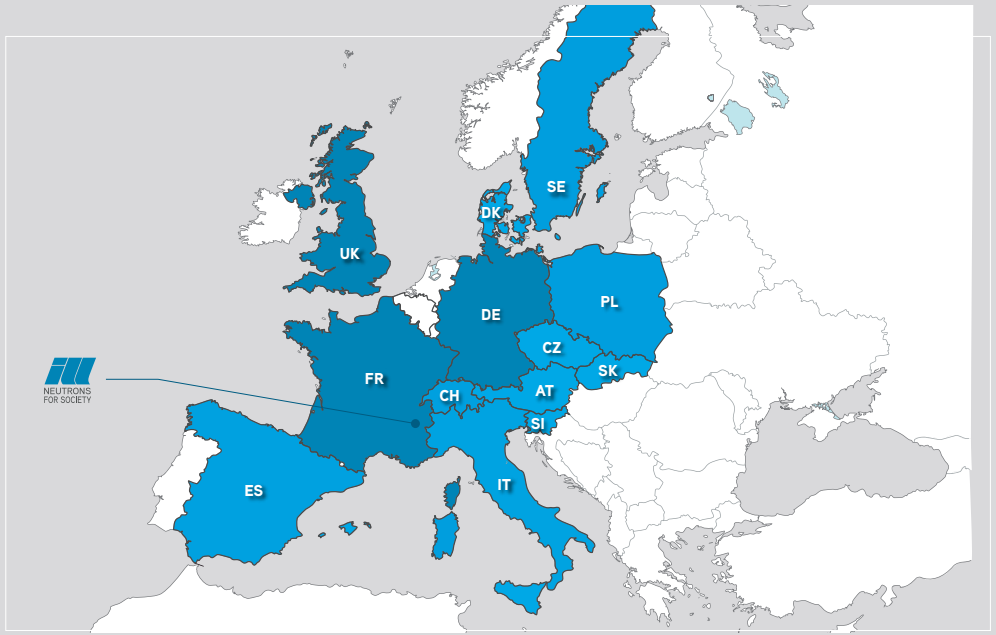
ILL AT A GLANCE

A major European project, the ILL was founded in Grenoble in 1967 by France and Germany, joined a few years later by the UK. Today, 13 countries fund the ILL for their research communities.

Every year, more than 1400 researchers, mainly from member countries but also from 50 other countries around the world, are selected by expert committees to visit the ILL to carry out over 1000 cutting-edge experiments.

The ILL contributes to scientific advances in a variety of disciplines, including physics, chemistry, biology, and material science, helping to push the boundaries of knowledge. Beyond its contribution to fundamental research, the ILL is constantly helping to shape technological solutions to improve the world we live in.

The ILL has a central role in shaping the European neutron landscape in a collaborative and complementary way.



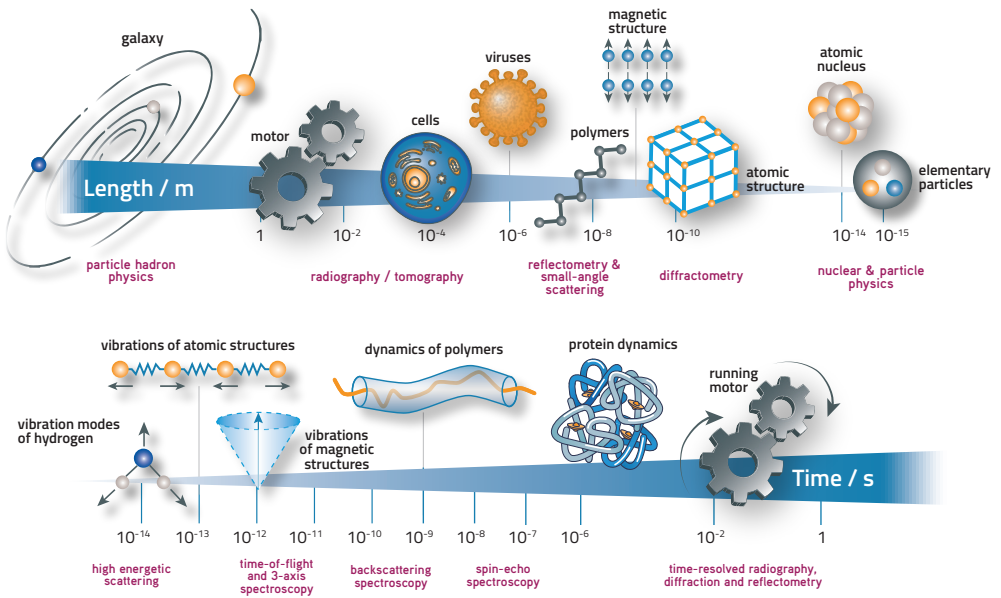
ASSOCIATE COUNTRIES

France, Germany and the United Kingdom contribute with roughly 75 % of the ILL's budget.

MEMBERS COUNTRIES

provide around 20 % of the ILL's budget, the remaining being assured by own income.

Austria, Czech Republic, Denmark, Italy, Poland, Slovakia, Slovenia, Spain, Sweden and Switzerland.



NEUTRONS: GREAT EXPLORERS OF MATTER

From fundamental research to tackling the major challenges of the 21st century, neutrons play a key role in the European science and technology ecosystem.

Alongside other tools for the characterisation of matter, such as X-rays, nuclear magnetic resonance and infrared and Raman spectroscopy, neutrons make an invaluable contribution to our knowledge of materials and our understanding of the processes at work on different time and length scales.

Neutrons' unique properties make them a powerful tool for unlocking the secrets of matter.

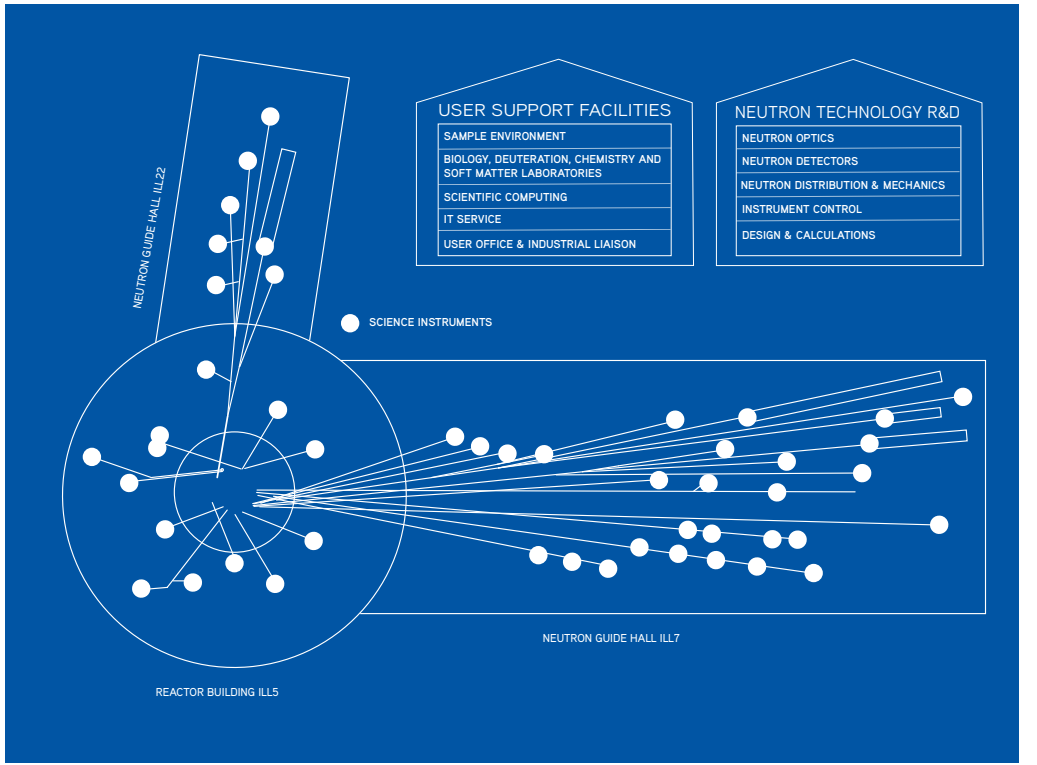
A UNIQUE FACILITY

The secret behind the ILL's modern and highly optimised infrastructure is the constant upgrade of its facilities and instruments.

The completion of the Endurance programme in 2024 brought to a close two decades of continuous investment in scientific infrastructures, instruments and services, bringing the ILL to its highest performance level ever.

The ILL now has a suite of 43 state-of-the-art neutron instruments which is unparalleled in the world. The programme leveraged the ILL's technical expertise in critical areas such as neutron optics, detectors, samples and their environment, instrument control, and data analysis software.

Major technical developments achieved at the ILL are made available to the wider neutron community.



NEW SCIENCE FOR INNOVATION

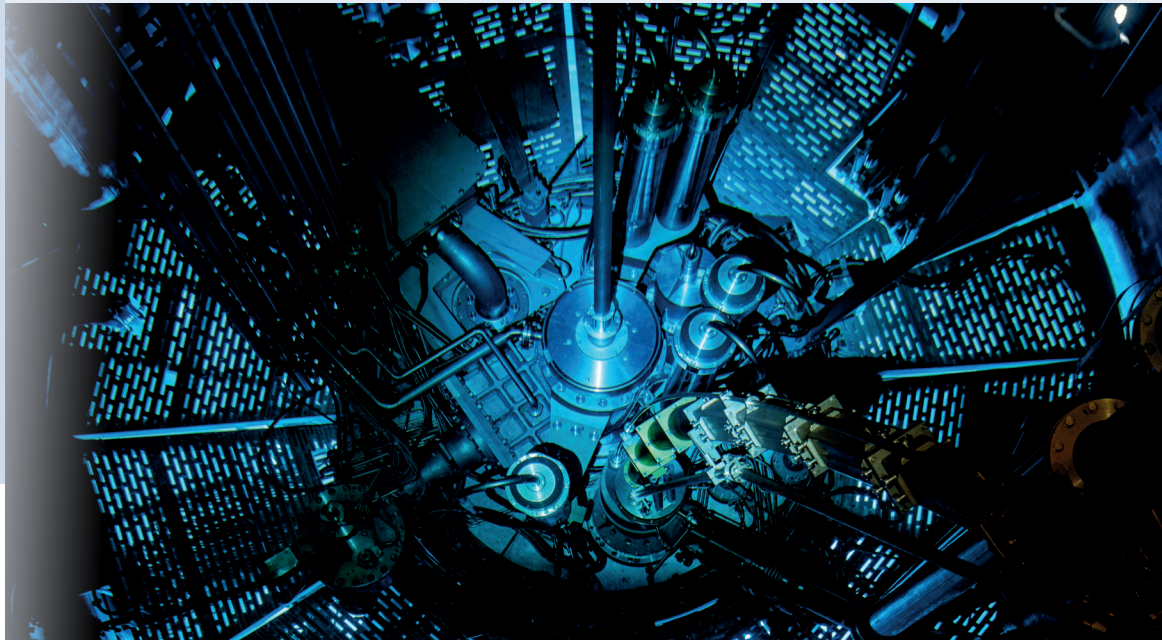
While applied research can help provide answers to the societal challenges of today, innovative discoveries and new knowledge are key to addressing the challenges of tomorrow and transforming society in the future.

Industry is a key partner in delivering innovative solutions for new materials, devices and processes close to market to directly address such challenges.

Since the year 2000, more than 170 companies, including Airbus, AstraZeneca, BP, Carlsberg, IBM, Nestlé, L'Oréal, Philips, Procter & Gamble and Rolls Royce, have performed over 700 experiments at the ILL. Together with thousands of other industry-related experiments conducted, this has resulted in over 650 scientific publications with industry.

MEDICAL RADIOISOTOPES

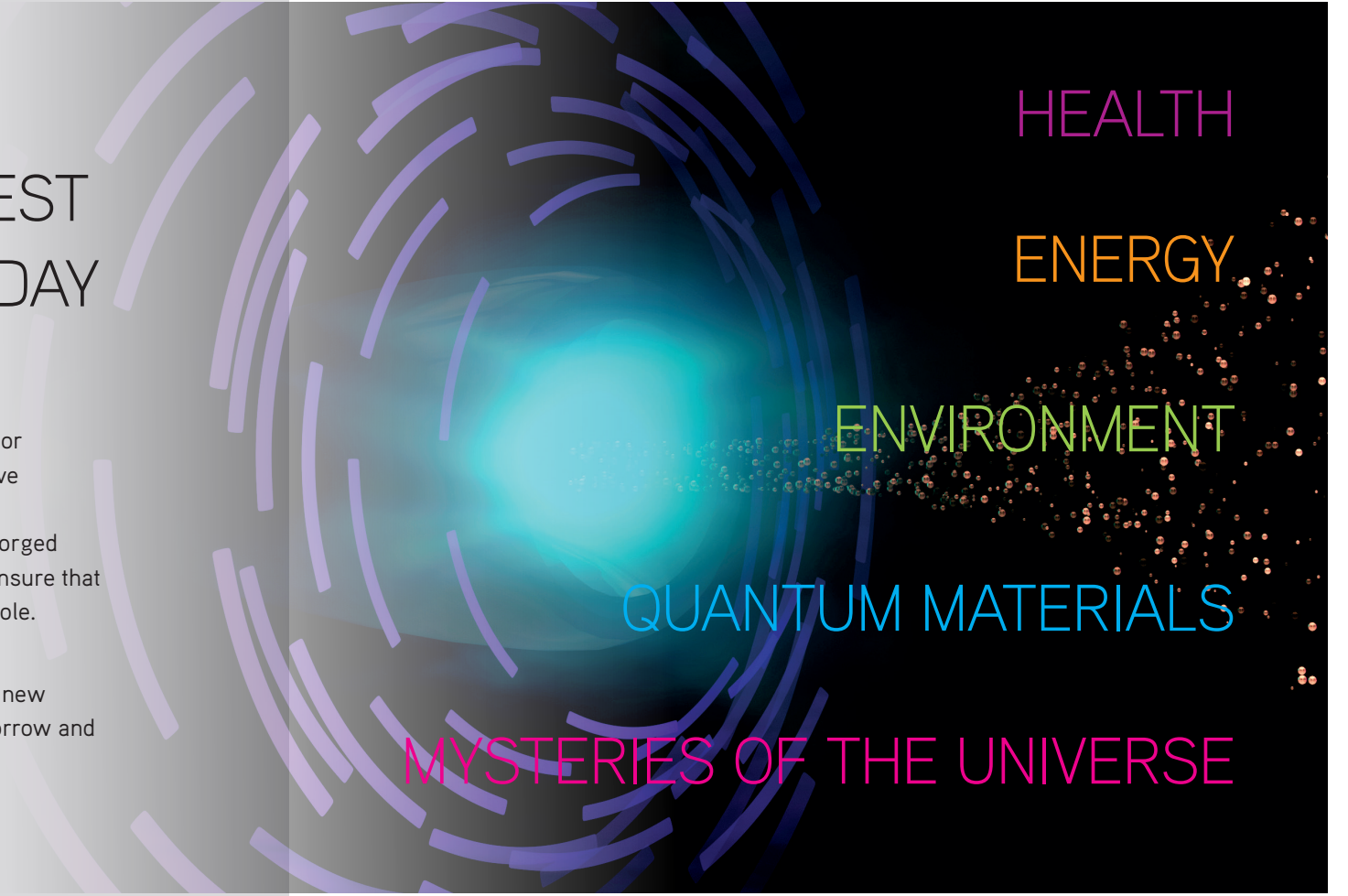
The radioisotopes produced by the ILL's high-flux reactor are vital ingredients in radiopharmaceuticals used to treat certain types of cancer, and several pharmaceutical companies are working on a daily basis with the ILL. Europe is the world's largest supplier and user of medical radioisotopes, and long-term operation of high-power and medium-power research reactors plays a vital role to secure the supply.



TACKLING THE BIGGEST CHALLENGES OF TODAY AND TOMORROW

Resolutely in touch with the world around it and the major societal issues of today and tomorrow, the ILL helps drive significant advances in the fields of health, energy, the environment and quantum materials. The partnerships forged with academic institutions and industry are helping to ensure that innovations developed at the ILL benefit society as a whole.

While applied research can help provide answers to the societal challenges of today, innovative discoveries and new knowledge are key to addressing the challenges of tomorrow and transforming society in the future.



COMING TO THE ILL

The ILL is situated in the European Photon and Neutron (EPN) Campus in Grenoble, France. Today, the EPN campus also hosts the ESRF-European Synchrotron, EMBL-European Molecular Biology Laboratory and IBS-Institut de Biologie Structurale.

Users | https://www.ill.eu/users

Neutrons can be a useful tool in a huge variety of science fields and the ILL is there to support users - experienced as well as newcomers, from academia or from industry - in all the steps of this journey.

The user pages on our website provide information and contacts that will help you identify the techniques and instrumentation that could best match your needs. You may then directly contact the scientists who will act as your ILL local contacts, providing support from proposal preparation through experiments to publication.
Need more details? Reach out to: **user-office@ill.eu**

In the standard beamtime access scheme, proposals can be submitted anytime, with biannual deadlines followed by peer evaluation. Other access request modes are available, including EASY for short measurements, DDT for urgent experiments or INDU for proprietary beamtime. **https://www.ill.eu/industry**
For any questions, feel free to contact: **industry@ill.eu**

European projects | https://www.ill.eu/european-office

In collaboration with other European research infrastructures and academic and industrial partners, the ILL is involved in European projects in different scientific domains including materials science, clean energy and healthcare. The ILL EU Office is responsible for monitoring current and future work programmes to identify the most suitable funding opportunities. The team assists ILL scientists in the preparation and coordination of research proposals. For more information on possible grant collaborations, please feel free to contact **europe@ill.eu**

Training | https://www.ill.eu/phd

Working with leading universities in France, Germany, the UK and member countries, the ILL recruits a large number of interns, apprentices and PhD students every year. The ILL also has a clear focus on helping young scientists step into a career in research as post-doctoral researchers. The ILL Graduate School permanently hosts around 50 PhD students from the member countries and beyond.
For further details, contact **igs@ill.eu**

A unique place to work | https://www.ill.eu/careers

The ILL counts on a staff of over 500 people from 30 different countries. Whether they have a scientific or technical background - physics, neutron science, IT, electronics, mechanical engineering - or work in support roles, they all contribute to the success of scientific research that is fully in tune with the needs of society. Working at the ILL is the opportunity to work in the multicultural environment of a cutting-edge international scientific facility located in one of the most dynamic and innovative cities in the world, in the heart of the French Alps. For assistance, please email: **recruitment@ill.eu**

Visiting the ILL | https://www.ill.eu/visits

While the ILL is devoted exclusively to research activities, as a nuclear facility it is a sensitive site, requiring special access rules. Guided tours for specific groups are nevertheless possible. Get in touch at **communication@ill.eu** for more information.

NEUTRONS
FOR SOCIETY

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DESIGN Virginie Guerard