LEAPS

League of European Accelerator-based Photon Sources

www.leaps-initiative.eu
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Large-scale research infrastructures are the cornerstone of the European Research Area, promoting innovation and growth and attracting the best minds to Europe from around the world.

LEAPS, the League of European Accelerator-based Photon Sources is a vital part of Europe's scientific and technology capabilities supporting Europe's objectives for a green and digital transition.

The Infrared to hard X-ray light beams that LEAPS offers bring new knowledge and innovation, contributing to bio preparedness, driving the scientific response to climate change and international competition, strengthening Europe's technological sovereignty.

THE LARGEST NETWORK OF RESEARCH INFRASTRUCTURES IN EUROPE CONTRIBUTING TO EUROPEAN GLOBAL LEADERSHIP

A NETWORK OF SYNCHROTRONS AND FREE ELECTRON LASERS IN

10 countries

16 institutions

19 facilities

LEAPS actively collaborates with Analytical Research Infrastructures in Europe (ARIE).

LEAPS facilities are open science pioneers.

OUR ACTIVITIES IN NUMBERS

>300 operating Experimental stations

>30.000 user / year from all EU and beyond

>1 million hours beam time / year

>7.000 publications / year

55.000 Protein Data Bank entries supporting health industry

Materials for Energy
Life-science - Pharmacy Food
Information Technology
Environment **Materials**

FUNDING (reference period 2021-2027)

800M€ (yearly) operational budget

1,6B€ (over this period) investments

1,5B€ (over this period) upgrade programs (partly already funded)

LEAPS ASSURES EUROPEAN TECHNOLOGICAL SOVEREIGNITY

Strategic positioning in the value chain for Health; Climate neutral technologies; Quantum computing/ technologies; European Chips Act.

LEAPS IS BOOSTING INNOVATION AND TECHNOLOGY IN THE ERA

LEAPS-INNOV H2020 piloted cooperation with more than 50 European industrial partners (see back page). Impact demonstrated by socio-economic studies; **>10** spin off companies; Roadmap clearly demonstrating smart specialization.

LEAPS PROVIDES A HIGHTECH EUROPEAN TRAINING AND EDUCATION PLATFORM

International Conferences, PhD programs & Summer Schools.

LEAPS SUPPORTS EUROPEAN COLLABORATION

Each LEAPS facility welcomes 30-50% non-local users.

LEAPS CONTRIBUTES TO EUROPEAN SCIENCE DIPLOMACY

Strong scientific partnerships: SESAME Jordan and Canadian Light Source; Light for Ukraine (Ukrainian users); Africa, Americas.

SUSTAINABLE EU FUNDING WOULD TAKE US CLOSER TO OUR OBJECTIVES OF

Developing new instrumentation and innovative technologies, based on established roadmaps, together with industry and user communities by upscaling LEAPS-INNOV.

Supporting strategic access programs focused on European priorities.

Supporting users from Widening countries.

Co-funding early-stage researchers.

Co-funding high-level Chairs in Widening countries.

LEAPS as a strategic partner of European science diplomacy.

Enhanced EU support for LEAPS facilities will have a major impact on European scientific leadership, technological sovereignty and innovation capacity, education and cohesion.

LEAPS CONTRIBUTES TO GROUND-BREAKING FUNDAMENTAL RESEARCH.

Find a sample of LEAPS scientific contribution here:

LEAPS-INNOV

- Jointly develop urgent key technologies for LEAPS facilities
- Transfer knowledge and technology within LEAPS and to interested companies at an early stage
- Exchange of facility experts with industry throughout the development process
- Develop models for production plans and technology transfer
- Speed up the innovation process for LEAPS facilities and industry
- Create viable markets through joint developments and standardization of academia and industry

→ Shorten development times through collaboration and specialization

→ Reduce costs

→ Enhance commercial exploitation through open innovation

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101004728.

EXPANDS

Since 2019, the European Open Science Cloud (EOSC) Photon and Neutron Data Service (ExPaNDS) project including, 10 LEAPS and LENS national facilities work together to make their data more open and FAIR. Many LEAPS partners have already adopted its main outcomes such as the FAIR data policy framework and self-assessment, the common metadata schema, the OAI-PMH endpoint for data catalogues or the PaN training platform.

This project receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857641

PANOSC

The Photon and Neutron Open Science Cloud (PaNOSC) is a European project for making FAIR data a reality in 6 European Research Infrastructures (RIs), developing and providing services for scientific data and connecting these to the European Open Science Cloud (EOSC).

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 823852.

REMADE@ARI

ReMade@ARI leverages the development of innovative, sustainable materials for key components in diverse sectors, such as electronics, batteries, vehicles, construction, packaging, plastics, textiles and food on an unprecedented level. It will be the central hub in Europe for all sectors and research areas in which new materials for a circular economy will be developed.

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