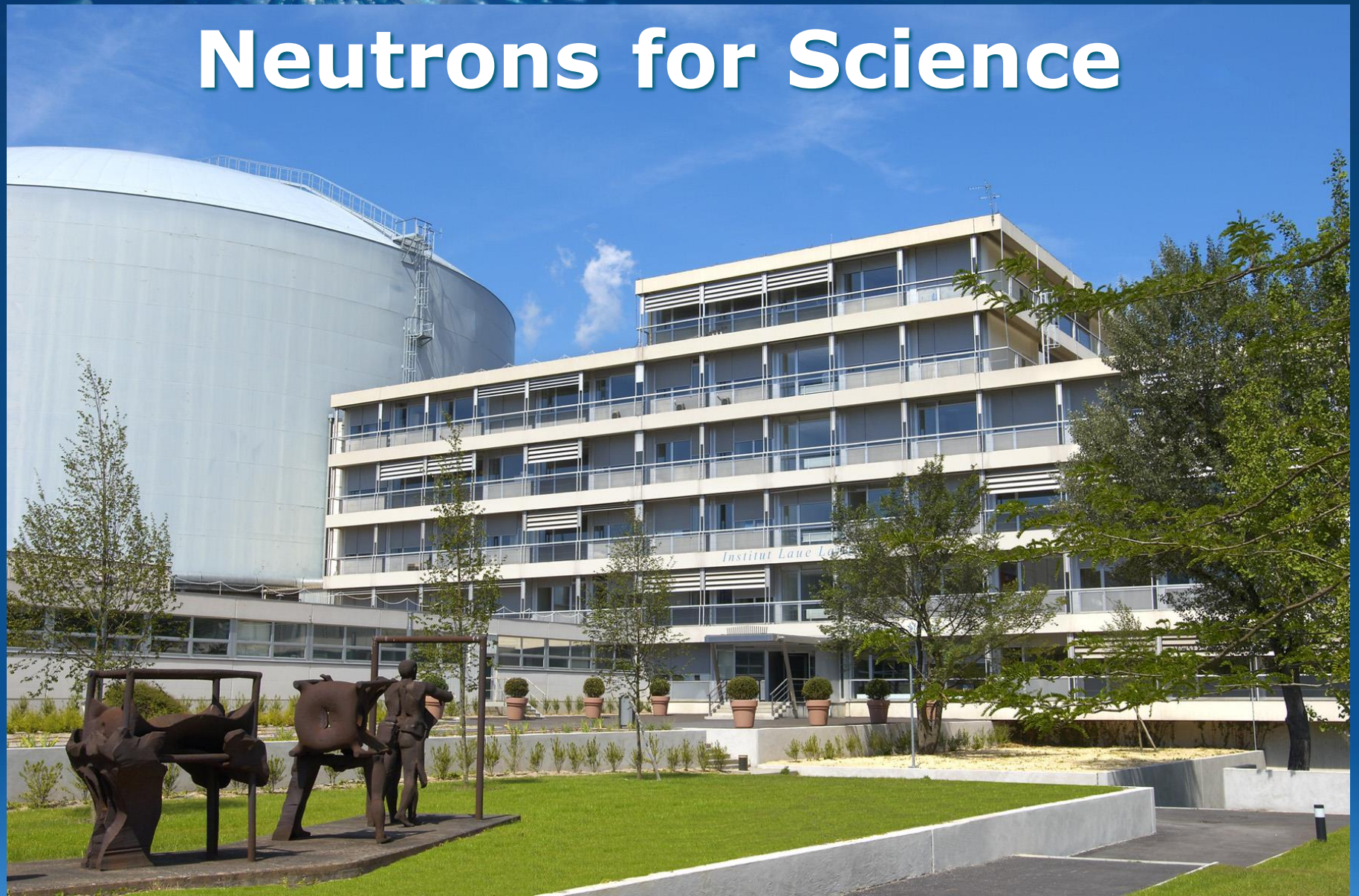
ILL
Neutrons for Science



Institut Laue-Langevin – founded in 1967

World leader in neutron science and technology

NEUTRONS FOR SCIENCE®

After more than 40 years, we are still number one

Neutron sources:12 in Europe, 6 in North America, 5 in Asia and Oceania

The ILL is the most intense neutron source in the world, at the service of international scientists to carry out scientific research at the frontiers' of modern science.

Science at the ILL

850 experiments/year

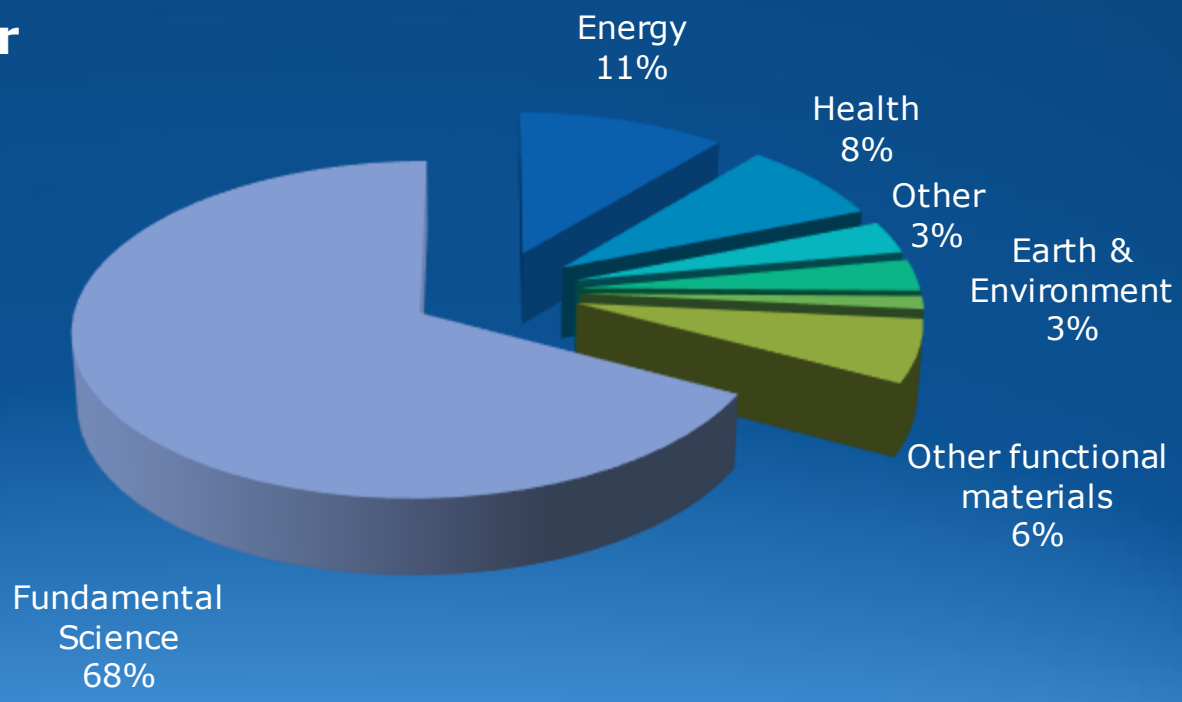
2000 users

38 countries

28 instruments + **10** CRG

650 publications/year

Societal impact



Neutrons, a powerful probe

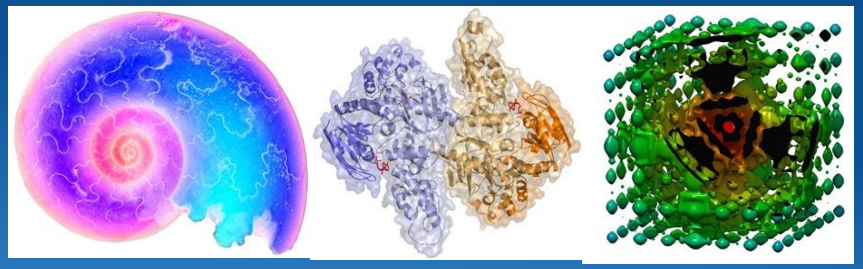
NEUTRONS FOR SCIENCE

The properties of matter and materials are largely determined by their structure and dynamics at the atomic scale - *distance between atoms ~ 1 Å = 1/100 000 000 cm*

The wavelength of the neutron is comparable to atomic sizes and the dimensions of atomic structures, which explains why neutrons can « see » atoms.

Therefore neutrons are an ideal tool to understand the world around us, telling scientists:

Where is which atom?
How does it bind?
How does it move?
What surrounds it?



The Millenium Programme

2001-2014

During this period we have

- built or upgraded **14 instruments;**
- replaced or renewed a great part of our neutron guides, making them 'twice as bright';
- improved our technical devices, from cryostats to magnets, new polarised optics and a new electronic instrument control system…

Today : the Endurance programme

Today we are setting our sights on a more distant horizon, that of 2030. Our goals:

- preserve our position of leadership by drawing on our strengths
- offer new possibilities in the fields of magnetism, materials science, soft matter, biology and particle physics

Endurance
Setting the pace