



MAKING RESEARCH OUR STRENGTH

A leader in research and innovation,
the **Luxembourg Institute of Science and Technology (LIST)**
works in the fields of materials, environment and IT.

LUXEMBOURG
INSTITUTE
OF SCIENCE
AND TECHNOLOGY



How it started

LIST was created from the mutual desire of the Public Research Centres Gabriel Lippmann and Henri Tudor, both established in 1987, to join forces and to focus their efforts on targeted research topics with the aim to achieve a more **critical mass**, and consequently enhance the **international visibility** of research in Luxembourg, as well as to give a fresh momentum to the **research potential** in the country. The goal is also to develop the national RDI system in order to facilitate companies' access to public research.

This major decision, which was taken by the board of directors of the two centres in April 2012, was voted by the Chamber of Deputies on October 16th, 2014 therefore restructuring public research in Luxembourg. LIST started its activities on **January 1st, 2015**.

LIST's main figures

- A budget of approximately **EUR 64 million***
- Contract research: **EUR 10.5 million***
- Competitive research: **EUR 14.5 million***
- **630** employees, $\frac{3}{4}$ of whom are researchers
- About **70** PhD students
- Nearly **forty** different nationalities represented
- **350** scientific publications referenced
- A portfolio of **50** patent families

The expertise of LIST's researchers is deployed in close to **300** research projects, **30%** of which are conducted within European programmes.

* 2015 Objectives of the Performance Contract signed with the Luxembourg State for 2015-2017

The Luxembourg Institute of Science and Technology (LIST) is an **RTO (Research and Technology Organisation)** active in the fields of materials, environment, and IT.

Our mission is twofold:

- contributing to Luxembourg's reputation through our participation in several targeted research areas among the best RTOs,
- significantly participating in the country's socio-economic development.

To this end, we participate in several national and European competitive research programmes. Our researchers disseminate their results through scientific publications in internationally renowned journals. They also capitalize their results by filing patents and transferring them to key players in the private or public sector. This enables Luxembourg to be **acknowledged as a centre of excellence in research and innovation** and thus attract foreign investors and high-level researchers.

Thanks to our activities in applied research and technology transfer, we support all companies, whether large groups or SMEs, in their innovation projects. The objective is to enable them to **enhance their competitiveness** in regional, national, and international markets. Our work has different degrees of innovation: "incremental" when a product or service is improved in a continuous way; or "disruptive" when innovation enables a company to make a significant leap in its development after investing a few years earlier.

Furthermore, we also contribute to the **setting up of new companies in Luxembourg** through the development of innovative technology and expertise.

Lastly, we offer our scientific support to **national policy** making in our research areas in order to forecast and support societal changes.

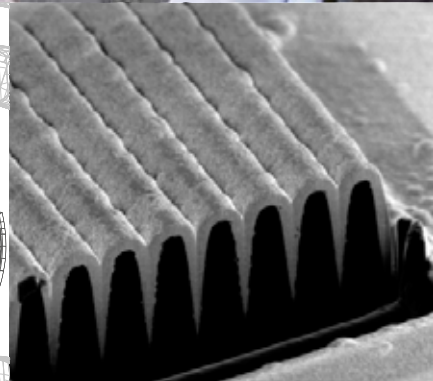
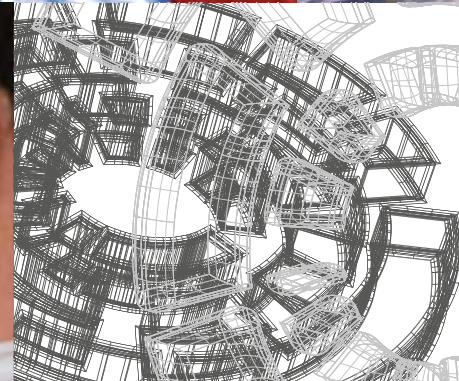
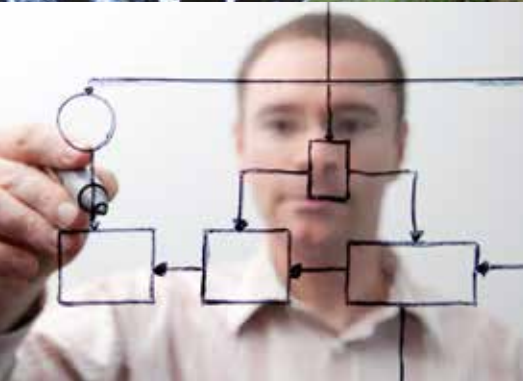
WHO WE ARE

WHAT WE DO

We conduct **interdisciplinary research** in **targeted research areas**, which have a sustainable impact on Luxembourg's economy and society.

This involves us working **across the entire innovation chain**:

- Fundamental and applied scientific research, knowledge and competences development;
- Experimental development, incubation and transfer of new technologies, competences, products, and services;
- Scientific policy support to the Luxembourg government, businesses and society in general.
- Doctoral and post-doctoral training, in partnership with universities.



OUR RDI DEPARTMENTS AND THEIR FIELDS OF EXPERTISE

ENVIRONMENTAL RESEARCH AND INNOVATION (ERIN)

- Water security and safety
- Plant Science and biotechnologies
- Life cycle sustainability and risk assessment
- Analysis and visualization of environmental scientific data

MATERIALS RESEARCH AND TECHNOLOGY (MRT)

- Nanomaterials and nanotechnologies
- Composite materials

IT FOR INNOVATIVE SERVICES (ITIS)

- Decisional knowledge dynamics
- Trusted service systems
- Service engineering with impact

OUR PARTNERS

We specifically target those **sectors which significantly contribute to Luxembourg's economic diversification** and, in particular, the manufacturing industry, construction, logistics and mobility, ecotechnology, valorisation of agro-resources, space, IT services as well as the public and healthcare sectors.

We work in collaboration with **different partners**: RTOs, universities, large industrial groups, SMEs, public bodies, etc, **who are in line with our research focus**.

We also participate in selected national, European, and international **networks**, both **professional and academic**. Sharing know-how and experience, acquiring new knowledge, as well as pooling and sharing the resources which we gain from these networks, directly benefit the companies with which we collaborate.



WORKING TOGETHER

Several levels of partnership are possible, including:

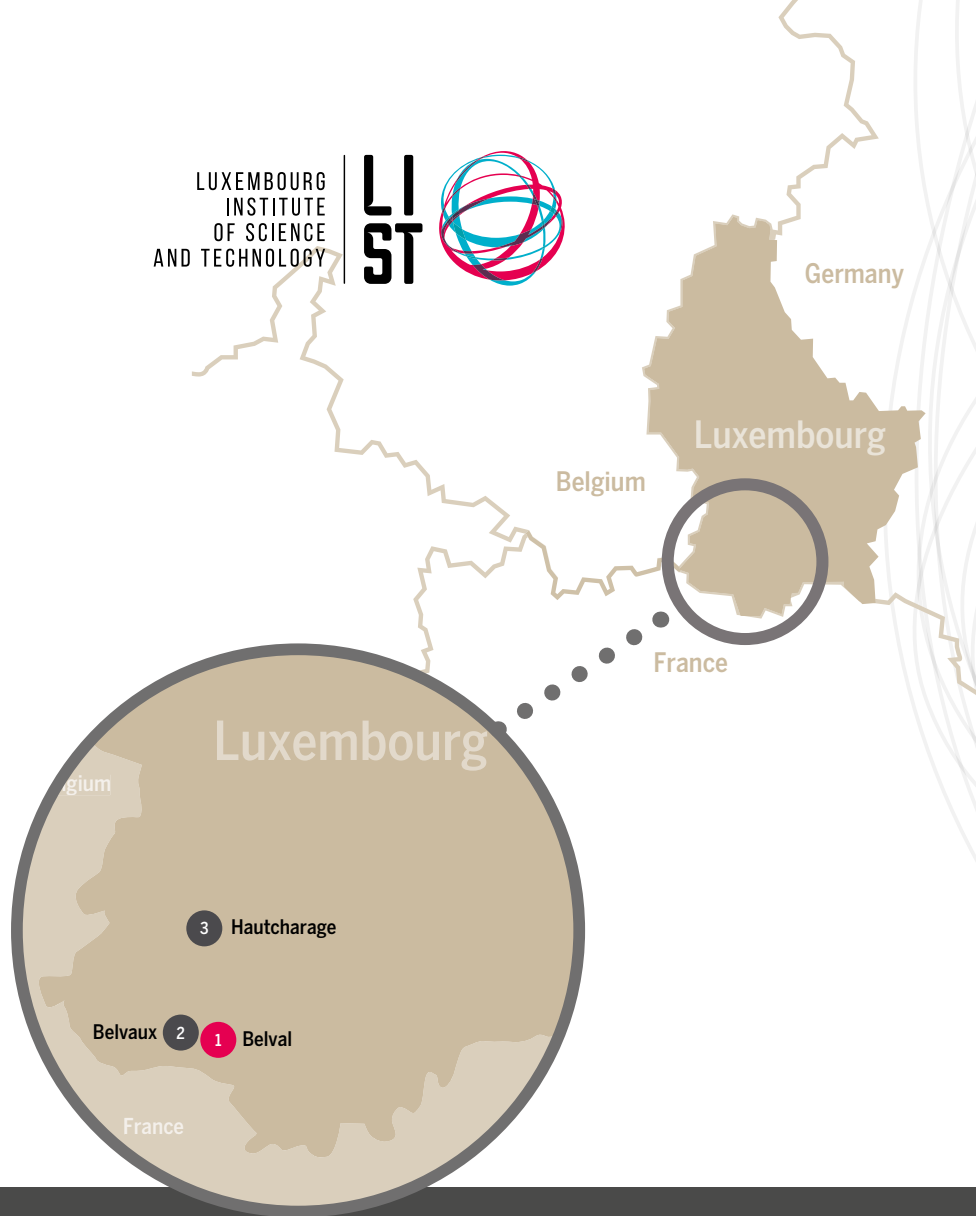
- **Collaborative research** through national and European research programmes, which we engage in with various partners (SMEs, major corporate groups, research centres, universities, professional associations, groups of companies, administrative bodies, etc.), therefore with complementary know-how and expertise, to tackle mutual research and innovation issues together. There is a joint financial and risk-taking involvement and the results are shared.
- **Contract research** which enables a customised solution to be found for a company's RDI needs. This type of partnership is aimed at both SMEs which do not have the resources required to conduct research and large corporate groups which wish to outsource a part of their RDI, while retaining ownership of the results.
- **The hosting of researchers** within the framework of public-private partnerships (PPPs) which can be of two kinds: making highly qualified staff available to a company (PhD students, post-doctoral researchers, or research engineers) and hosting at LIST employees from a company who want long-term training on a new technology and within a scientific environment.
- **The provision of services** enabling our customers to access our **technology platforms** for their own research and innovation projects.

Services also include high-level professional training through which we pass on our expertise and know-how to companies and public organisations.

OUR TECHNOLOGY PLATFORMS

- ▶ Analysis and advanced characterisation of materials
- ▶ Mechanical and material-ageing tests
- ▶ Genomics, proteomics, and metabolomics analysis
- ▶ High Performance Computing (HPC)
- ▶ Creative Studio

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Our addresses

- 1 Headquarters, Belval Innovation Campus
Maison de l'Innovation**
5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette
- 2 Belvaux site**
41, rue du Brill
L-4422 Belvaux
- 3 Hautcharage Laboratory Annex**
5, rue Bommel, Z.A.E. Robert Steichen
(former Z.I. Bommelscheuer)
L-4940 Hautcharage



Access maps can be found on www.list.lu/contact

To contact us

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